



FELLOWS

PAST AND PRESENT

50
YEARS
1962-2012



FELLOWS

past and present

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Foreword

For nearly 40 years, the ESO Fellowship programme has offered opportunities and facilities for recent PhDs in astronomy to enhance their scientific development through close contact with the activities and staff at one of the world's leading observatories. The programme presents a unique bridge between ESO and the astronomy community that the organisation serves. Since its inception in 1977, hundreds of young astronomers have held ESO Fellowships at ESO Headquarters, first in Switzerland and later in Germany, or at the observatories in Chile, and many have gone on to successful astronomical careers in Europe and around the world.

Yet behind the statistics — the many publications, conference talks and observing proposals produced by ESO Fellows — is a remarkable group of individuals whose personalities and backgrounds are as diverse as their scientific accomplishments. Since 2003 short self-penned profiles of ESO Fellows have been regularly featured in *The Messenger*, allowing these young researchers to reflect upon their astronomical careers in a more informal context. All 90 profiles are collected here.

This booklet celebrates the many faces of ESO's Fellowship programme over the past decade and paints a picture of ESO as seen by these young scientists.

We would like to thank Jeremy Walsh for editorial work and Kristine Omandap and Mafalda Martins for the layout of this booklet.

Eric Emsellem
Bruno Leibundgut
Michael West

January 2013

Fellows

Aurore Bacmann

I have been a Fellow at ESO Garching since March 2002. Before that, I completed my PhD thesis with Philippe André at CEA-Saclay near Paris, France, and spent two years as a postdoc at the University of Jena, Germany, working in the group of Thomas Henning. My area of research is star formation, mostly the early prestellar stages, before stars are formed within dense cores. This stage is particularly important since it represents the initial conditions of gravitational collapse and star formation. During my PhD, I used the instrument ISOCAM aboard the ISO satellite to determine the density structure of pre-stellar cores.

After my PhD, I started studying the chemistry of these cores, chiefly molecular depletion and deuteration, with collaborators from the Bordeaux and the Grenoble Observatory in France. This has been my main subject of research here at ESO. To carry out these projects, I use mostly (sub)millimetre telescopes. Additionally I work on the structure of circumstellar matter around Herbig Ae/Be stars, using polarimetry, and I am also interested in their chemistry.

Since I arrived at ESO, I have been involved in the development of the interferometer ALMA, working with Stéphane Guilloteau (IRAM/ESO). The main goal of this task is to look into the bandpass calibration of the system and determine the frequency response of the instrument. It is extremely motivating to be taking an active part in such a major and ambitious project, all the more so



Aurore Bacmann

because ALMA will be very relevant to the research I am doing.

(Printed in *The Messenger*, 111, p. 44, 2003)

Fellowship period: 2002–2003
Location: Garching
Current Institute: IPAG, Grenoble

Maria-Rosa Cioni

I have probably been an astronomer since the autumn of 1990 when I started at the University in Bologna, although the bed sheets of my childhood were covered planets and stars. After graduating I moved to the Leiden Observatory in the Netherlands where I obtained my PhD. This first highly positive experience abroad exposed me to an international and active scientific environment that could find no better match afterwards than by coming to ESO.



Maria-Rosa Cioni

I study asymptotic giant branch stars (AGB), their evolution and variability properties in resolved galaxies: the Magellanic Clouds and other galaxies in the Local Group. I am actively collaborating with my former supervisor Prof. Harm Habing and our most recent paper shows the metallicity gradient in the Magellanic Clouds from the ratio of carbon- and oxygen-rich stars. My work, so far predominantly photometric, is evolving into spectroscopy using the FLAMES instrument. At the same time I am following up AGBs in northern galaxies from the La Palma observatory.

I am presently in the middle of my ESO Fellowship and I feel proud of being among the people who work at and for the observatory and provide the resources that improve our knowledge of what is above us. I have found both in Garching and Chile, where I enjoy spending part of my time, a very friendly group of colleagues and new collaborators. I have learned how to support astronomical activities in Paranal. In particular using the UVES instrument and FLAMES in the near future.

During my free time, though there is always more work than time, I enjoy the rich social life in Munich, practise various sports and am (now) learning German.

(Printed in *The Messenger*, 111, p. 44, 2003)

Fellowship period: 2001–2004
Location: Garching
Current Institute: University of Hertfordshire

Ivo Saviane

I arrived at ESO in April 2001, from the UCLA. I was previously a postdoc in Padova, where I also received my PhD in 1997. During that time I think I made, with the Padova and IAC groups, an important contribution to the question of the relative ages of Galactic globular clusters (GC). Dwarf spheroidal galaxies also attracted my attention, and with another Padova group we helped to establish the idea of extended star formation histories (and discovered the old population of Leo I). I was also one of the creators of the Virtual Planetarium educational website, at the



Ivo Saviane

Padova Observatory. I am enjoying the La Silla environment very much, which offers the possibility to interact with a multidisciplinary group of people, and to contribute to instrument development (in particular, upgrading FEROS in the near future). Moreover, the ever-increasing number of students and visitors makes ESO/Chile a good and stimulating working place.

Now I am leading a project to test the luminosity–metallicity relation of dwarf irregular galaxies, I am extending the relative age study to the Large Magellanic Cloud clusters (where I discovered a young globular), and the dwarf galaxy group in Padova still likes to have me as a collaborator! During my stay in California I discovered that the Antennae are not so far away as commonly believed (and now I have to convince the referee), and I contributed to the project Hubble Deep Field in a GC, led by the Vancouver group. Some people think I am good at freehand drawing, and a few of my portraits are out there on the internet. I would be very happy if you gave me Old Blue Eyes' *Complete Reprise Studio Recordings!*

(Printed in *The Messenger*, 111, p. 44, 2003)

Fellowship period: 2001–2003
Location: Chile
Current Institute: ESO

Petri Vaisanen

I am a second year ESO Fellow in Chile — and I do not regret accepting this job. To support and use top-notch instruments at the VLT, to learn more about a wide range of observational astronomy, to help visiting astronomers doing exciting science, is all very rewarding. And I still have plenty of time for my own work. In fact, operating the adaptive optics instrument NACO has given new perspectives to my interests. For the third year of my Fellowship I will join the Astronomy Department of the Universidad de Chile. I can concentrate on science and develop new collaborations before starting a job-hunt again.

My main scientific focus has been extragalactic infrared work aiming at acquiring an unbiased view of the formation history of galaxies. It has taken the form of sev-



Petri Vaisanen

eral different projects, including optical and near-infrared (IR) follow-up of ISO-detected mid- and far-IR galaxies using various telescopes. I have concentrated on extremely red galaxies (EROs) and interacting and starburst systems, and recently also on obscured nuclear activity. The plan is to expand this line of research using, e.g., the SIRTf. I am also involved in a “more local” project of studying star formation in galactic molecular clouds using VLT/ISAAC data.

I have missed teaching, which I had done previously in Helsinki (where I finished my PhD in 2001) and Harvard (where I worked as a SAO Predoctoral Fellow for 3 years). However, as part of a campaign to see my own country join ESO, I have written, with others, articles about ESO and astronomy to Finnish newspapers and magazines, given interviews, and hosted journalists visiting Paranal. Exploring the Universe can be great fun — that is something I have thought since a little kid, and it is the idea I hope to get across whether talking to students or the general public.

(Printed in *The Messenger*, 111, p. 44, 2003)

Fellowship period: 2001–2004
Location: Chile
Current Institute: SAAO, South Africa

Stefano Ettori

In October 2001, I started my Fellowship at ESO, after six years spent at IoA in Cambridge (England) doing my PhD and first postdoc in the X-ray Group headed by Andrew Fabian. My area of research is

clusters and superclusters of galaxies, with particular interest on the cosmological implications of their observed properties. To study these objects that are the largest virialised structures in the Universe, I look in the optical (with VLT) and X-ray (through XMM and Chandra) wavebands. These observations allow me to determine densities and temperatures of the hot plasma collapsed in the dark matter halo and to recover the cluster baryonic and gravitational masses. With my collaborators here at ESO, I do this at different redshifts from moderate $z = 0.3$, where the X-ray masses can be directly compared to those obtained from weak lensing analyses, up to 1.2 where few clusters are known through X-ray detection. Of these systems, I have recently used their baryonic mass fraction as cosmological tool to put stringent constraints on the energy constituents of the cosmos.



Stefano Ettori

My duties at ESO are to support the release to the community of the ground-based data of the Chandra Deep Field South as part of the Great Observatories Origin Deep Survey (GOODS) project, to represent the Fellows and Students in the Computer Coordination Group in Garching and to maintain X-ray software for the few of us that are interested in it. I am really enjoying my time here: ESO is a perfect place to work both in terms of hard/software assistance and of motivations, it promotes the interaction with other researchers with several lunch/tea talks, informal discussions and crowded offices (sic!) and is big enough to find anytime the right person to discuss with. For my family and myself, it was a debated

question whether to accept this Fellowship, but now, and also considering the difficulties in changing social life in a country with such a strange language (still originating from Ur-germanic but nothing to do with English...), we think we made the right choice.

(Printed in *The Messenger*, 112, p. 55, 2003)

Fellowship period: 2001–2004
 Location: Garching
 Current Institute: INAF–Osservatorio Astronomico di Bologna

Lisa Germany

Having arrived at ESO Chile in September 2000, I truly feel like one of the veterans of La Silla now. There has been an almost complete turnover of support astronomers since I arrived, and I have met many of the visiting astronomers on several previous occasions! But this is part of the great thing about working at La Silla — you get to talk to astronomers from all over the world, learn about different areas of astronomy and instrumentation, build collaborations, and make new friends



Lisa Germany

I came here straight from my PhD, which I completed at Mount Stromlo Observatory in Canberra, Australia. I was the third person from Stromlo working here at ESO Chile in 2000/2001, and all three of us actually lived in the same house while we were students! I'm one of these supernova people who, along with the gamma ray burst people, are the bane of visiting astronomers (all those Targets of Opportunity stealing valuable telescope

time). My biggest claim to fame during my PhD is my contribution to the discussion about whether supernovae and gamma ray bursts are connected.

I am currently investigating the fields around apparently “hostless” supernovae (i.e. supernovae which did not appear to have a host galaxy) to look for faint hosts and, if they exist, investigate their properties. So far, all the supernovae do appear to have hosts, and in one case, we can still see the supernova itself three years after the event! For a supernova to be visible after such a long time is highly unusual, and makes this particular supernova a very interesting object to study — stay tuned for more on that one!

My other main interest is public outreach and taking science to the people. Before starting my PhD I completed a Graduate Diploma in Scientific Communication and have always wanted to pursue this further. To my great joy, ESO is developing an exhibition to go into the science centre here in Santiago, and I am very happy to be part of the team of people working on that.

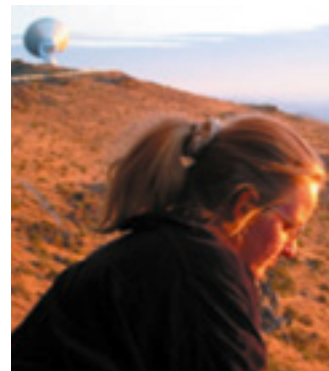
(Printed in *The Messenger*, 112, p. 55, 2003)

Fellowship period: 2000–2004
 Location: Chile
 Current Institute: Swinburne University, Australia

Linda Schmidtbreick

When I performed my first observations in La Silla in February 1997, I immediately fell in love with the place and decided I wanted to work here someday. In September 2001 after finishing my PhD, working for a year at MPIA Heidelberg, and spending two years as a Postdoc in Padova, I indeed started as an ESO Fellow — with duty station La Silla, of course. Although the place has sadly changed due to the closing of the smaller telescopes, I still like the work here very much. The team spirit is exceptional, the exchange with the visiting astronomers is very rewarding, and I like the practical and technical work of telescope and instrument maintenance as counterbalance to pure thinking and science.

For the scientific work I find plenty of time when off-duty. I have always had wide



Linda Schmidtbreick

interests and hence touched several astronomical topics like interplanetary dust, comets, various types of individual stars, structure of the Milky Way, star formation, and some external galaxies.

More recently, I have focused on the study of the Galactic disc via stellar population analysis, and on cataclysmic variables, where I am mainly interested in the accretion process and the outburst mechanisms of the various subclasses. Together with collaborators in Chile and all around Europe, we recently recovered the old nova V840 Oph, which shows an enormously high carbon content, we followed the dust production during novae outbursts in the submillimetre, and while studying the accretion disc of RR Pic, discovered evidence for a so far unique asymmetric wind.

Since I originally studied to become a teacher (Maths, Physics, and Philosophy) the educational work is something I miss at ESO. However, I try to propagate science in public talks and articles, I am working in the Museo Interactivo Mirador (Santiago) project (public astronomy exhibition and workshops) and will hopefully manage to give some lectures at Chilean universities in the near future.

During my free time, I try to express myself in music and painting, I enjoy the great life in Santiago, especially in Ñuñoa or Providencia, the part where I live, and you will always find me with a book close by.

(Printed in *The Messenger*, 112, p. 55, 2003)

Fellowship period: 2001–2005
 Location: Chile
 Current Institute: ESO

Manuela Zoccali

I have been a Fellow at ESO Garching since September 2000. My three years at ESO are about to end, and in September I will start my second postdoc, the Andes Fellowship, at Universidad Católica in Santiago (Chile) and Princeton University (USA). Before coming to ESO I was in Padova, where I obtained my PhD.

For my thesis I worked on an a Hubble Space Telescope survey of Galactic globular cluster (GC) cores, looking for rare populations such as blue stragglers and extreme horizontal branch stars, meanwhile testing stellar evolution models. I also worked on the determination of the initial mass function, and in the problem of absolute and relative GC ages obviously connected with the measure of distances. More recently I moved towards the study of the Galactic bulge, where I determined the stellar initial mass function down to 0.15 solar masses: a power law with an exponent significantly flatter than Salpeter. With extensive near-infrared and optical photometry I recently set new constraints on both the age and metallicity distribution of the bulge.



Manuela Zoccali

Working at ESO also gave me the privilege of working on a new instrument: the VLT fibre spectrograph FLAMES. Joining the FLAMES team and sharing the excitement for its success has been fun. It has also motivated me to move into high resolution spectroscopy, which, I believe, is going to represent the key tool for our understanding of resolved stellar populations.

In my little spare time I like to play guitar, and dream about living by the sea: swimming, scuba-diving, sailing and wind-surfing, all the hobbies that I've been neglecting too much in the last few years.

(Printed in The Messenger, 112, p. 56, 2003)

Fellowship period: 2000–2003
Location: Garching
Current Institute: Pontificia Universidad Católica de Chile

Malvina Billeres

When I had my interview for an ESO Fellowship in Chile, the committee asked me where I would like to work: Paranal or La Silla. I have to confess that I had never been to either of the ESO observatories before, and I thought that my tiny amount of experience wouldn't be enough to work at Paranal, so I answered La Silla. After two and a half years of the La Silla routine, I know that my argument was completely wrong! The Fellows at La Silla do exactly the same job as the staff, with a lot of responsibilities, freedom and interesting challenges.

I think that the most exciting thing at La Silla is that I can touch everything: be part of the difficult task of opening SOFI, pilot the New Technology Telescope with its active optics, do a turn as a Telescope and Instrument Operator (TiO), make tests with the instruments to do my science etc... With all these possibilities, I feel really lucky to be at La Silla!

Before coming to Chile, I spent almost six years in Montreal (Canada) where I did part of my thesis. I had the chance to work in a really good team at the Université de Montréal, on pulsating stars: white dwarfs and mainly subdwarf B stars. During my thesis, I did a lot of fast photometry observations with the Montreal 3-channel portable photometer, LAPOUNE. I went to the Canada France Hawaii Telescope several times, and spent weeks at the Mount Bigelow station in Arizona (amazing to see that observatories are always located in such beautiful places).

Today, although my science is still centered on the study of variable evolved stars (EC14026 and ZZ Ceti), I have broadened



Malvina Billeres

my scientific interests: the search for LPsdBV (a new class of pulsating sdB discovered last year) in the southern skies, the search for luminosity variations in young brown dwarfs, determining the influence of magnetic cycles on measured radial velocity with HARPS. ESO is a perfect place to start new projects thanks to the interaction with all the visiting astronomers.

In addition, the mountains in Chile are almost as beautiful as the mountains in the French alps where I came from.

(Printed in The Messenger, 113, p. 72, 2003)

Fellowship period: 2000–2005
Location: Chile

Valentin D. Ivanov

I started working for ESO in April 2001, after spending seven years in the US, where I got my PhD. This was a new beginning as the ESO Fellowships are different from most other academic positions. Besides the research, we are engaged in duties, and mine are with the Paranal Science Operations. It is a challenge and a blessing. The work requires attention, quick understanding of problems in a broad range of astronomy topics, good knowledge of the instrumentation and observing techniques, and interaction with visitors in various situations. But the work also gives back a lot — the very same things, and they do enrich the great experience of being an astronomer.

When people ask me what I do, I answer — I am a craftsman and a general pur-



Valentin D. Ivanov

pose infrared astronomer. After spending the last two years and a half at ESO, it is even more so. Still, my science interest is concentrated mostly on: (i) Stellar populations in starburst and active galaxies. Since these object often boast ten or more magnitudes of visual extinction, I have assembled a stellar library and a population model for the near-infrared. The absorption features in the *H*-band turned out to be an excellent metallicity indicator. (ii) I lead a collaboration to search for hidden globular and massive clusters in the Milky Way. We are currently engaged on detailed follow-up observations from various telescopes around the world.

Ending on a more personal note: back in my home country, Bulgaria, I am more (in) famous as a science fiction writer. I have published some stories, and they have even brought me some literary awards.

(Printed in *The Messenger*, 113, p. 73, 2003)

Fellowship period: 2001–2003
Location: Garching
Current Institute: ESO

Claudio Melo

My interest in astronomy started at the end of my undergraduate years when I had to choose a topic for my Masters degree. Among the options available, astronomy was by far the most exciting. After that, I went to Geneva where I had the privilege to do my PhD thesis with Prof. Mayor on some aspects of pre-main sequence spectroscopic binaries such as, binary frequency, orbital evolution and angular momentum evolution. This long-

term study (four years) took me many times to the Swiss Telescope at La Silla Observatory where I (like Linda in the last *Messenger*) fell in love with the place, making my application to ESO quite a natural step after my PhD

I started as an ESO Fellow in May 2002 with duties at Paranal Observatory. It has been an amazing experience to work on Paranal — having contact with the new instruments, talking to and assisting visitor astronomers, performing operations, etc. Of course, the real world is certainly more stressful than the place you imagined in your dreams. In spite of this, I am glad to be able to find in Paranal that magic that I experienced in La Silla during my first run with the Swiss Telescope. Another key change in contrast to my thesis years, where I spent most of my time working alone, is the need for team work.

Learning how to work as part of a team on Paranal with people from many different countries and backgrounds has been a hard, but doubtless, an enriching process that I'm glad to be undertaking.



Claudio Melo

From the scientific point of view I'm also very happy with the ESO Fellowship since we still have plenty of time for our research. Currently, I'm still interested in the evolution of angular momentum in both young stars in the pre-main sequence phase and more evolved stars in clusters. In the same direction, together with a few collaborators in different places, I have been working on the connection between angular momentum evolution and light element abundances. I'm also participating in a common project along with the

star-forming people in Vitacura (led by Michael Sterzik) aimed at understanding how spectroscopic binaries form.

One thing that I missed during my years in Geneva and that I still do miss here in Santiago is the sea. Being from a coastal city of Natal (Brazil) makes the ocean not only a place where you go to have some beers or to get tanned, but also makes it your friend. I'm patiently waiting for the day I'll be able to spend more time at the sea again, either watching it or in my sailing boat (for the greatest happiness of my inner Popeye!).

(Printed in *The Messenger*, 113, p. 73, 2003)

Fellowship period: 2002–2005
Location: Chile
Current Institute: ESO

Chris Mullis

I had the pleasure to join ESO Garching in September 2001 directly after completing my PhD at the University of Hawaii. This global shift meant distinct changes in scientific and living environments, but I have found both to be very stimulating and very enjoyable.

Galaxy clusters lie at the heart of my research interests. More specifically, I use X-ray selected groups and clusters of galaxies to study the distribution and evolution of large-scale structure in the Universe. X-ray selection is currently the optimal procedure for building cluster samples with minimum bias and maximum statistical completeness. Working with colleagues in several fruitful collaborations, we have discovered hundreds of clusters largely based on ROSAT data, and we are following these up with dedicated observations with XMM and Chandra.

We probe different redshift, luminosity/mass, and spatial regimes using several independent surveys. For example, in an ongoing observing campaign at La Silla and Mauna Kea, we are completing the first comprehensive X-ray survey for galaxy clusters behind the Milky Way (nearly 200 systems located so far of which ~ 75% are new discoveries). This sample is crucial for making an unbiased census



Chris Mullis

of the mass distribution of material in the nearby Universe. On a different front, we are using deep, multi-colour VLT+VIMOS imaging for a sample of high-redshift, high X-ray-luminosity clusters ($z \sim 0.6$) to investigate the transformation of galaxies as they are accreted along filamentary conduits from the field to the cluster environment.

The exceptional quality of the science community at ESO and the supporting technical resources (hardware, software, and most importantly, people) is very beneficial to my research. Thus I'm very happy to contribute to the observatory's mission through my functional duties. During my first year at ESO, I had the opportunity to work in the Paranal Science Operations group. After spending many quiet nights observing at Keck with only the telescope operator's company, I was initially overwhelmed by the magnitude of the VLT operation.

However, I soon learned that this large footprint is necessary to keep ESO's fantastic array of cutting-edge telescopes and instrumentation running smoothly and continuing to grow. The Paranal experience broadened my technical knowledge and continues to help maximise the effectiveness of my observing programmes. Now completing my second year at ESO, my functional duties are much closer to home (and to a much happier wife) with the Astrophysical Virtual Observatory group at Garching. I am developing a system that will allow astronomers to pursue innovative research made possible by efficiently leveraging the ESO Science Archive with processed X-ray data from the XMM and Chandra

archives. In addition to these responsibilities, I have also served on various committees, organised weekly science discussions, and administered computers to our Fellows and Students.

With all the exciting work to be done, it's a supreme challenge to marshal free time. On the rare occasions that I succeed, my wife and I enjoy hiking and climbing in the Alps and exploring Europe.

(Printed in *The Messenger*, 113, p. 73, 2003)

Fellowship period: 2001–2004
Location: Garching

George Hau

I joined ESO in July 2001. Until June 2003 I was Instrument Scientist for EFOSC2 on the 3.6-metre, whose manual I have rewritten recently (see *News From La Silla*). What I like most about my work is the quality of training received. It is very refreshing to arrive at La Silla every time to know that I will learn something different but invariably interesting. The human factor is also important. I really enjoyed the interactions with the visiting astronomers and to learn about the science they are doing, and to share the excitement when the data arrives!



George Hau

Apart from duties on La Silla, I was a member of the Visiting Scientist Committee in Santiago. In June 2003 I coorganised a Workshop on Resolved Stellar Populations in Vitacura.

Since July 2003 I have been based in Garching with reduced duty. My research is concerned with elliptical galaxy formation at different mass scales from a low-redshift perspective. Although the trend is to go to higher and higher redshifts, I think that a lot can still be learned from nearby galaxies. At the low-mass end of the scale I am involved in a ESO Large Programme on the nature of dwarf ellipticals. In the intermediate-mass regime I am comparing galaxy properties in different environments, such as kinematically decoupled cores and shells, which often provide clues on the past merger history. At the high-mass end of the scale I am leading a collaboration to study the properties of cD galaxy halos. In several cases we found an outwardly rising velocity dispersion profile which shows that the stars in the outer parts of cD halos are responding to the gravity of the cluster as a whole. On an unrelated topic, I am also participating in an all-sky hunt for Local Group dwarf galaxies. So far we have found two dwarfs, but it seems that there isn't a big population of dwarfs in the Local Group which have been predicted in some cold dark matter simulations.

I think that the Fellowship programme is excellent and I would not hesitate to recommend it to anyone who considers applying. It has been fun living in Chile and the experience has been fantastic!

(Printed in *The Messenger*, 114, p. 57, 2003)

Fellowship period: 2001–2004
Location: Garching
Current Institute: ESO

Nuria Huelamo

I joined ESO in November 2002. I was supposed to start my Fellowship in Garching, but decided to move to Chile for a short period of time. I knew the country because I had visited La Silla very often as a PhD student, and I always had the feeling that it was a nice place to live. Professionally speaking I feel I am in the right place: Vitacura is a lively institute full of special people.

As do many Fellows I have my duties in Paranal. From the scientific point of view my experience could not be better: I am



Nuria Huelamo

in touch with sophisticated instruments and it is always fruitful to discuss things with visiting astronomers. Although the work can be stressful, I find the atmosphere amongst the Fellows and the rest of Paranal divisions very good and collaborative, which helps to solve the problems in an efficient way. There is also time to relax and I usually visit the music room with some colleagues.

Before joining ESO I spent three years in Garching where I obtained my PhD. I was working in the neighbouring Max Planck Institute (MPE) and the main topic of my thesis was the study of magnetic activity and rotation in a group of young late-type stars in binary systems. Most of my thesis was based on X-ray and optical data. However, I also had the opportunity to work on adaptive optics (AO) data which I found really exciting. I started to get interested in AO techniques and that was one of the reasons why I asked to be an ESO Fellow: I wanted to work with NAOS-CONICA (NACO). I made the right decision: I am learning something new every day and it is a pleasure to support top scientific research involving this instrument. As a scientist, I am leading different scientific projects with NACO which include the imaging and polarimetry of young stars. Moreover, I am collaborating with the star formation people in Vitacura. This is a very active group with astronomers working in different research fields, providing me with a wider knowledge of different aspects of star formation.

(Printed in *The Messenger*, 114, p. 57, 2003)

Fellowship period: 2002–2006
Location: Chile

Current Institute: Centro de Astrobiología, Madrid

Elena Mason

I arrived at ESO and Chile in September 2001, as a Fellow with duty in Paranal. I have just started my third year of Fellowship which I decided to spend within ESO too, for the simple reason that I am really enjoying both the Paranal and the Vitacura environments. I believe that the time spent at the observatory, despite subtracting working weeks from your own research time, provides you with a competitive knowledge on top instruments, while the contact with colleagues and other scientists gives new ideas and perspectives. I am very happy indeed about this experience.

My research focuses on the world of cataclysmic variables (CVs) where I gained expertise both on short orbital period dwarf novae (DNe), and classical novae (CNe). In dwarf novae I study accretion discs and spectral energy distributions, continuing the research project started during my PhD, while in classical



Elena Mason

novae I am mainly studying their spectroscopic evolution. Working on CNe, I have realised the limitations of current analyses, which lack systematic quantitative studies and/or modelling for a correct measurement of the ejected mass and the shell shape. I have thus started new projects which either make use of new (to me) techniques (e.g., polarimetry) to investigate the asymmetries in the ejected shell, or intend to recover archive data of CN nebular spectra for a consistent determination of ejecta abundances. The expertise gained on Paranal also gave me the chance to get involved in new

projects, while the lively ESO-Vitacura department offered to me chances for new collaborations. Both will help me to broaden my knowledge and working field.

Living in Chile/Santiago one can profit from the Andes mountain range to do high-altitude mountaineering, my major hobby during my university years. Unfortunately my constantly cracking knee did not help me in a healthy active use of my free time.

(Printed in *The Messenger*, 114, p. 57, 2003)

Fellowship period: 2001–2004
Location: Chile
Current Institute: STScI

Markus Nielbock

My first contact with ESO was a visit to the Swedish-ESO Submillimetre Telescope (SEST) on La Silla in 2000 in order to help with the installation and testing of the computer facilities for the planned bolometer array SIMBA.

This matched my scientific background in the early stages of star formation for which I mostly investigate in the millimetre and submillimetre, but also in the infrared regime of the electromagnetic spectrum. The team leader, Lars-Ake Nyman, encouraged me to apply for the ESO Fellowship programme. At that time, I was in the middle of working on my PhD in Bochum (Germany) under the supervision of Rolf Chini, and I really had not thought about postdoc positions, but the prospect sounded very tempting. So, I applied and got the job. But this also meant that I had to speed up and finish the PhD within 2,5 years, since the installation of SIMBA required me to assume this new position on 1 June, 2001.

I began to study physics in Düsseldorf, but then moved to Bochum in order to be able to concentrate on astronomy. I still remember a professor in Düsseldorf claiming that those who had not specialised in physics in grammar school might not be suitable for this college career. Well, this was obviously not true. I found physics in school very boring, and the topics I was interested in were not taught



Markus Nielbock

there. So, I helped myself by reading books like Steven Weinberg's *The First Three Minutes*.

Leaving Europe and going to Santiago for a couple of years was a big step and a personal challenge for me, but definitely a rewarding one. What I liked most was the large variety of scientific disciplines besides astronomy (cryogenics, microwave engineering, software programming, computer system maintenance) I came in contact with, especially at the SEST, where everyone did almost everything. During this period of more than two (until its closure in August 2003), I was also in charge of the operations and data quality management of the newly installed bolometer array SIMBA attached to the SEST millimetre telescope. Also the contact with colleagues, guests and visiting observers was very inspiring.

Despite the amounts of functional work at the observatory, there was ample time to pursue my own scientific interests in ESO-Vitacura. I am mostly interested in the formation of stars, both in the low-mass and the high-mass range. In order to probe the earliest stages of the protostellar collapse and thereby look for protostars, I mainly use millimetre and submillimetre telescopes which made me a bit exotic among the scientists in Santiago. In my PhD thesis I had already reported on the detection of numerous low-mass protostars and determined their physical properties. Recently, I started to concentrate on the higher end of the mass scale with two projects. The first one deals with the investigation of masers in star forming regions. They are of potential value for locating young massive protostars. The

other programme is about the recent first detection of a massive accreting protostar. This is the work of a group of German and Austrian astronomers in which I participate. As a next step, we need to constrain the properties of our find more precisely.

After more than two years living in Santiago, I returned to Bochum in September 2003. But I am looking forward to visiting Chile for observations next year.

(Printed in *The Messenger*, 114, p. 58, 2003)

Fellowship period: 2001–2003
Location: Chile
Current Institute: MPIA, Heidelberg

Nicolas Cretton

I came to ESO Garching at the end of 2001, after a first postdoc at the Max Planck Institute in Heidelberg. I got my physics diploma from Geneva University (Switzerland) before I moved to Leiden (The Netherlands) to work on a PhD project, under the supervision of Profs. Tim de Zeeuw and H.-W. Rix.

My research focuses on the dynamics of galaxies and their dark matter content: central supermassive black holes and large-scale dark halos. Studying unseen components of galaxies is intimately linked to the (dynamical) modelling one applies to the (kinematical) observations. Indeed, an over-simplified model could give the wrong answer regarding the presence of, say, black holes: it would only reveal its own limitations. In that spirit, I have implemented and extended the “orbit” method to model galaxies, originally invented by Martin Schwarzschild. This method makes no *a priori* assumptions about the dynamical structure of the galaxies and is therefore well adapted to the question of dark matter.

Before coming to ESO, my work was almost purely theoretical, although I was modelling real galaxies and not just studying “academic” questions. The pertinence of my models also depends on the quality of the data (spatial and spectral resolution, signal-to-noise, extension, etc) so it was natural for me to try to get more expertise in the observational field. In this way, I was hoping to 1) better understand the obser-



Nicolas Cretton

ations and what they really mean (e.g., can we trust this error bar?) and 2) write better observing time proposals and 3) improve my general astronomy experience to increase my chances of getting a permanent position. Therefore I applied to ESO and fortunately got the job! At ESO, I got involved in the FLAMES group, led by Luca Pasquini. FLAMES is a multi-fibre spectrograph for the VLT which is revolutionising the measurement of discrete stellar velocities, thanks to its multiplex capabilities, its spectral resolution and the collecting power of the VLT. In addition, it has two integral field modes, where integrated spectra can be obtained over all the field of view simultaneously. I really enjoyed the atmosphere in Luca's group, mostly due to the personalities of its members and the success of the instrument!

I am now in my last (third) year as an ESO Fellow and I can say that I have really enjoyed my time here: ESO is a great place to do and discuss science, not only because of all the in-house expertise, but also because it is located right next to two Max Planck Institutes where astronomy research is also done. At ESO, one really has the feeling of being at the right place, where important things happen, where the latest news is discussed and where tons of talks are given each week and plenty of visitors pass by.

Furthermore, Munich is a very nice city, with plenty of nature nearby (lakes, forests, hiking and skiing in the Alps).

(Printed in *The Messenger*, 115, p. 47, 2004)

Fellowship period: 2001–2004
Location: Garching
Current Institute: Lugano High School, Switzerland

Emanuele Daddi

Astronomy entered my life literally by accident. At the age of 15 I broke a leg playing football, and never ending queues waiting in an Italian public hospital forced me to do plenty of reading. With great excitement I realised from a magazine of popular astronomy that a wealth of incredible wonders are out there in the sky, within the grasp of cheap instrumentation that even my own few savings of grandmothers' tips would suffice to buy. One month later the leg was OK, the grandmothers' tips had gone, and I had started exploring the Universe, with stars (uhm...), galaxies (ehi!), nebulae, planets, comets, etc, with a 14 cm telescope (0.03% of each of the four VLTs' collecting area!).



Emanuele Daddi

After 15 more years the passion for the Universe has even increased. In fact, I may say that research in astronomy is my favorite hobby, and I find myself very fortunate that it has become my job. Since December 2001 I have been an ESO Fellow in Garching, thus now in the third and final year of the Fellowship. Before that I had done university and PhD studies in my home town, Firenze, working at the observatory on the Arcetri hill, where Galileo observed at the dawn of modern astronomy.

It was hard to leave the nice Tuscan weather for breezy Garching, but after two years I can say it was worth it. ESO is the best place to be in Europe for those like me who are interested in astronomical observations, as most of the cutting-edge European instrumentation and tele-

scopes are planned, built and operated here. It is a great advantage for research competitiveness to be in daily contact with the most experienced people in the field.

As a change from my early beginnings, my main research field is distant, faint galaxies: those that even after hours of VLT integration sometimes show just a barely significant detection. My duties at ESO are well matched to my own research interests as I am working for the GOODS survey which is releasing deep public data to the community. The final goal of these efforts is to understand how galaxies formed through the ages and thus in some sense to go past searching for our cosmic origins. There are so many big open questions and technical and practical challenges (the speed of light is finite and the Universe perhaps is not), that it sounds like we will never finish making new discoveries in these fields, and space for jobs will hopefully always be there for astronomers to enjoy!

(Printed in *The Messenger*, 115, p. 47, 2004)

Fellowship period: 2001–2004
Location: Garching
Current Institute: CEA Saclay

Poshak Gandhi

After my very first job interview in 2001 (for the Fellowship), I found it difficult to believe that ESO would want to employ me; or that I would agree to come to Chile, very far from my native India. I'm glad that I was wrong on both counts!



Poshak Gandhi and Dieter Nürnberger

The friendly and stimulating environment of ESO-Chile helped to make the transition from student to post-doctoral Fellow easy. The large international staff at the Santiago premises, constant stream of visitors and world-class instrumentation expertise sets the scene for collaborative scientific exchange, always helped along with a glass of excellent Chilean wine.

ESO operations at Cerro Paranal are a good lesson in team-work. Like a restless bees' nest, the united effort of all individuals assures a constant hatching of incredible scientific results. I am a night astronomer for ISAAC and the FORS instruments, as well as the web manager for Science Operations. It is sometimes a challenge to work under the demanding conditions and deliver quality support. But the beautiful vista of the southern sky on a dark night is deeply refreshing.

I am studying obscured active galactic nuclei – supermassive black holes at the centres of distant galaxies that emit huge amounts of energy (typically rivalling ten billion Suns), yet do not show obvious signs of this activity because they are surrounded by a thick veil of gas and dust. X-ray telescopes can penetrate this veil, but follow-up work in the optical and near-infrared regimes, with telescopes such as those at ESO, is vital to truly understand these black holes.

I love the Chilean people's friendliness, but often complain about the food. Meanwhile, we're giving good business to the only Indian restaurant here. Perhaps in the distant future, Chile Chicken

Korma con Choclo will be a “traditional” dish on the menu...

(Printed in *The Messenger*, 115, p. 48, 2004)

Fellowship period: 2002–2006
Location: Chile
Current Institute: ISASA, JAXA Japan

Dieter Nürnberger

Originally, I come from Franconia in the northern part of Bavaria, Germany. In my younger days I was often found stargazing there. Later on, for my studies of physics and astronomy, I enrolled at the nearby University of Würzburg, which is well known due to Röntgen’s discovery of X-rays more than one century ago. In fact, when I was searching for a suitable topic for my Diploma thesis, work related to data taken with the X-ray satellite ROSAT would have been very timely. Instead, I ended up studying the gas and dust emission of circumstellar discs and envelopes around low-mass pre-main sequence stars.

Although I was officially still affiliated to my home university over the next few years, I left Germany in October 1997 to work on my PhD thesis. I joined the Institut de Radio-Astronomie Millimétrique (IRAM) in Grenoble, France, to learn about radio astronomy in general and millimeter interferometry in particular. During that time I had the pleasure of spending several weeks per year as Astronomer-on-Duty at IRAM’s Plateau de Bure interferometer (PdBI). At this remote observatory, located at an altitude of about 2550 metres in the midst of the French Alps, I had some of the most memorable experiences of my life.

Since the time of my PhD thesis, my own scientific work has been focused on the identification and characterisation of intermediate- and high-mass protostars. For that purpose I am using two independent approaches. The first one deals with high angular resolution studies of protostellar candidates, which I had selected from the IRAS point source catalogue. The planned follow-up PdBI observations of the most promising sources would have been crucial for my thesis but were unfortunately severely affected by

two tragic accidents on the Plateau de Bure during 1999.

The second approach and my PhD thesis itself deal with a comprehensive multi-wavelength study of the galactic starburst region NGC 3603. The basic idea is to find evidence for ongoing star formation processes which are triggered and/or revealed by energetic photons and strong stellar winds originating from the OB stars of the central star cluster. As this region is only accessible from the southern hemisphere I was visiting Chile once or twice per year to observe with several ESO facilities, like the Swedish–ESO Submillimetre Telescope (SEST), the 3.6-metre and the VLT’s Antu.

Currently, my curiosity about the formation of high-mass stars pushes me towards the feasibility limits of today’s telescopes and antennae, including the Australia Telescope Compact Array (ATCA) in Narrabri, Australia, and, of course, ESO’s VLT(I) on Paranal, Chile. Thus, in order to keep track of the most recent generation of instruments as well as due to all the positive experiences which I gained at IRAM’s PdBI, it was my greatest desire to continue working at one of the state-of-the-art observatories. In August 2002, when I started my ESO Fellowship in Santiago with functional work on Paranal my wildest dream came true: here I’m able to practice my profession with all my heart, enthusiasm and dedication.

(Printed in *The Messenger*, 115, p. 48, 2004)

Fellowship period: 2002–2006
Location: Chile
Current Institute: Ruhr Universität Bochum

Thomas Dall

Since July 2002 I have been a Fellow at ESO Chile with duties at the La Silla Observatory. It is no coincidence that I asked to be assigned to La Silla: as a PhD student I had a studentship at the Nordic Optical Telescope on the island of La Palma, and there I experienced observatory work first hand, being granted responsibility as Support Astronomer and got involved in all aspects of the observatory work. I was getting my



Thomas Dall

hands dirty — and getting an appetite for more.

On La Silla I find myself in a similar, although bigger, environment. The “hands-on” experience is one of the biggest assets of working at La Silla and cannot be underestimated. I learn a lot all the time, both scientifically from interacting with the visiting astronomers and from a technical point of view by working with the rest of the staff, and by getting ever more involved in different projects. Since April 2003 I have been the Instrument Scientist for the Coudé Echelle Spectrometer (CES) at the 3.6-metre telescope.

The subject of my PhD was pulsations in stars, mainly δ Scuti pulsators. The main complication in the understanding of these stars is that they are very fast rotators — a fact that has falsified all modelling attempts so far. Since I came to ESO my scientific work has shifted a bit. I still study stellar structure, and I am still intrigued by rotation, but my focus is now on late-type active stars, studying the relationships between rotation and magnetic fields. Also symbiotic and cataclysmic variables are now part of my world. The atmosphere on La Silla and the work with the high-resolution spectrographs has fuelled my scientific work as well as given me valuable experience with a broad range of instrumentation, and I am very glad I made the decision to come to work for ESO in Chile.

(Printed in *The Messenger*, 116, p. 46, 2004)

Fellowship period: 2002–2006
Location: Chile

Marina Rejkuba

I became a Fellow at ESO Garching in October 2002 after finishing my PhD at Pontificia Universidad Católica de Chile in Santiago. For duties I opted for Paranal science operations support. This allowed me to learn a lot about all the VLT instruments, to meet visiting astronomers and gain an overview of the science done at the VLT. For that I travel to Chile four times a year and spend 56 days and nights on the mountain. The rest of the time I spend working on my scientific projects in Garching. In this way it is easy to divide the duties and science time and take the greatest advantage of both.



Marina Rejkuba

Life at ESO Garching is very inspiring. The large number of seminars and colloquia and many visiting astronomers ensure that no astrophysical topic passes undiscussed. It is also a place where I can always find an expert to answer my questions and many people to discuss with and share the ideas. During my PhD I studied in detail the nearby peculiar elliptical galaxy NGC 5128, also known as Centaurus A. In this galaxy we determined the recent star formation history in the halo, studied the old stellar populations and discovered many new globular clusters and more than 1000 Mira variable stars. The Mira variables are among the most luminous stars and can be used to determine not only the distance to the galaxy, but also the age distribution of its stars. Now, I still continue working on my pet object, Centaurus A, but also extend the studies of stellar populations to Magellanic Clouds, other Local Group

and more distant galaxies. The central theme of these projects is the formation and evolution history of elliptical and dwarf galaxies.

In my free time I like to read books, learn new languages, or go for a bike ride or a hike in the Alps. In Germany table games are very popular and it is never a problem to gather a keen group of players and spend a pleasant evening chatting and fighting over some board or cards.

(Printed in *The Messenger*, 116, p. 46, 2004)

Fellowship period: 2002–2005
Location: Garching
Current Institute: ESO

Gijsbert Verdoes-Kleijn

I was born and grew up in The Hague in the Netherlands. I chose to study astronomy in the university closest to the sea and my sailing dinghy: Leiden. After my undergrad studies, I moved to the Space Telescope Science Institute (STScI) in Baltimore, USA, to start the first half of my Leiden PhD under the joint supervision of Stefi Baum and Tim de Zeeuw. I studied the centres of radio galaxies using Hubble Space Telescope imaging and spectra. Today, still one of my favorite general astrophysical topics is to find out how different galaxy evolution would have been without active nuclei or, put more bluntly, do AGNs matter?

After my PhD I moved from STScI to ESO in November 2002. I knew a bit about the American “sharp-eyed spider” and I wanted to get to know its European sharp-eyed counterpart. ESO sits in many ways at the centre of the European web of observational astronomy. I also felt quite attracted to the spider’s many legs: with the Fellowship system, ESO provides plenty of opportunities to gain experience and expertise not only in astrophysics, but also in fields such as instrument and software development, outreach, and organisational matters. My functional duties started in the Science Verification team for the VIMOS instrument. This also led me to start working on something new. For possible verification projects, I asked myself what the



Gijsbert Verdoes-Kleijn

“redshift-machine” VIMOS could do for the “redshiftless” Universe. This eventually led, via a regular proposal, to a nice VIMOS project on globular clusters in Centaurus A and involves a few collaborators in and outside ESO. I am now carrying out functional duties in the department of Education and Public Relations, working on educational projects. It is great fun to be forced to approach astronomy from a completely different angle.

Lastly, as a flatlander by nature, a strong fringe benefit of working at ESO Germany is its proximity to beautiful mountains. Southbound trips provide for very nice recreation over the weekends all year round. To conclude: I am very happy at ESO and can see only one unimportant question. I love to see the alpine skyline on a clear day from the top floor at ESO, but ... where are the sea and my dinghy?

(Printed in *The Messenger*, 116, p. 46, 2004)

Fellowship period: 2002–2005
Location: Garching
Current Institute: Kapteyn Institute, Groningen

Paul Vreeswijk

I clearly remember the first time I saw Paranal Observatory, from the plane between Santiago and Antofagasta (note that you have to be on the side of the Andes to be able to see it). Four tiny telescopes and some surrounding buildings in an ocean of reddish mountainous desert. The perspective changes completely when arriving at the telescope



Paul Vreeswijk

platform on Paranal: an impressive array of four immense telescopes, designed for the sole purpose of observing the night skies in great detail. After a dozen weeks as an ESO Fellow on Paranal, the platform site is still just as amazing as the first time.

Scientifically my main interests are the use of gamma-ray burst (GRB) afterglows as a tool to study high-redshift star-forming regions. GRBs are distant explosions, caused by the deaths of massive stars, and the resulting afterglows in the optical can be a million times brighter than their host galaxies. But only for a few minutes, as the afterglows fade away extremely rapidly. So one has to be very quick to profit from their brightness. This requires different observing strategies from those commonly used in astronomy; most objects in the sky do not change their brightness in zillions of years.

To allow rapid VLT observations of GRB afterglows, an ESO working group recommended to implement the so-called Rapid Response Mode (RRM), the automatic mode of the VLT. As a Fellow and because of my scientific interests, I'm involved in the implementation of this RRM on Paranal. I find this quite exciting: as a GRB goes off and is localised on the sky by a satellite, and, due to the implementation of the RRM, the VLT is now able to automatically start pointing to the GRB, and observe the afterglow within minutes of the GRB explosion. And thanks to high-precision instruments such as UVES, one can obtain detailed properties of high-redshift star-forming regions. So among other superlative statements one can make about the VLT

project, one can add that it is the biggest robotic telescope in the world.

(Printed in *The Messenger*, 116, p. 46, 2004)

Fellowship period: 2002–2006
Location: Chile
Current Institute: Science Institute, University of Iceland

Carlos De Breuck

My interest in astronomy started very early by browsing books in the local library. After finishing high school in Belgium, I decided to study astronomy at the University of Leiden. Moving to a country with different culinary standards/traditions wasn't always easy, but I have found it a very rewarding experience to get to know other places, and to work in an international environment such as ESO. After my undergraduate studies, I continued as a PhD student in Leiden to search for the most distant radio galaxies using new all-sky radio surveys. After a few months, I moved for three years to Livermore, California, which gave me access to the new Keck telescopes. Just before returning to Leiden we found what we were looking for: the most distant known radio galaxy at $z = 5.2$.



Carlos De Breuck

After obtaining my PhD in 2000, I became a Marie Curie Fellow at the IAP in Paris. Spoiled by using large telescopes, I started several observing programmes on the VLT. I also expanded my horizons into millimetre astronomy to observe CO gas and dust in the high-redshift radio galaxies found during my thesis. With the

development of ALMA, the ESO Fellowship was a logical next step in my career. Since I arrived in Garching in September 2003, I have spent most of my time on research, but I have also used the opportunities to get to know ESO better. In particular, I have helped to organise the Journal Club, which is only one of the many weekly talks happening on the ESO-MPAMPE campus. I am also involved in the scientific preparation of ALMA, which will soon become an important tool in my research. Recently, we have set up the European ALMA newsletter to inform the European millimetric community about the construction of ALMA.

(Printed in *The Messenger*, 117, p. 67, 2004)

Fellowship period: 2003–2006
Location: Garching
Current Institute: ESO

Pierre Kervella

During the five years that I spent at ESO, in Garching and then in Chile, it seems to me that I lived several lives altogether. The first one was that of an international student, as I left Paris to start my thesis at ESO Headquarters in Garching. I still remember the first time I arrived in Munich, with just a single suitcase, checking carefully that I was taking the right U-Bahn and bus to reach ESO. Of course, all the German language that I learnt in school had vanished completely from my mind... The VLTI team at this time was quite small, with only five members, while it is now a solid group of more than 20 staff. Overall, my installation went well, and I soon began my work on what was to become VINCI, the test instrument for the VLTI. Over the course of my PhD, I took an active part in the construction of this instrument, from the blank page up to its installation and operation at Paranal. In between, I had the great privilege to see the first fringes of the VLTI with the test siderostats (March 2001) and then with the Unit Telescopes (October 2001) in the control seat of the interferometer.

After the defence of my thesis, a second life started in early 2002, when I moved to Chile to take up duties at Paranal in the VLTI team. Living in Chile is a very pleas-



Pierre Kervella

ing experience, thanks in particular to the kindness of the Chilean people and the beauty of the landscapes. Until the MIDI instrument started operations in 2004, VINCI got more time than initially foreseen to observe the wonderful Paranal sky. It was eventually operated for almost three years. The large quantity of public commissioning data and their good quality allowed me to conduct a number of interesting research projects, among which several made their way to ESO Press Releases (a Centauri, Achernar,...). Today, I feel that my 300 nights at Paranal were very well spent time! I left Chile and ESO in February 2004, to take up a permanent position at the Paris Observatory in France. Working for ESO was a rich and fulfilling experience that I warmly recommend to any astronomer, both from the professional and personal points of view!

(Printed in The Messenger, 117, p. 67, 2004)

Fellowship period: 2004–2004
Location: Chile
Current Institute: Observatoire de Paris-Meudon

Celine Peroux

A few years back, I crossed the English Channel in order to spend my nights gazing at a starry sky as part of undergraduate projects. After completing my PhD at the University of Cambridge in 2001, I worked in Italy before joining ESO in late 2003.

I am curious to understand the global properties of galaxies over large time scales. Rather than studying the light they emit, which fades at large distances,

my approach consists of decoding the imprints that gaseous structures leave in the spectrum of a background quasar. These “quasar absorbers” provide a measure of both the neutral gas and metallicity content of the Universe back to early cosmic times. My work, in particular, suggests that a sub-class of the quasar absorbers, named sub-damped Lyman-alpha systems, are major contributors to the observable baryonic content at high redshift. I have used ESO archive data to build a sample of these systems in order to measure the global metallicity in the neutral gas phase. I am now able to extend this work to higher redshifts thanks to a new set of VLT data. Quasar absorbers are indeed extremely powerful observational tools but, paradoxically, they are also mysterious and their relation to emitting galaxies still remains to be clearly established.



Celine Peroux

As part of my contribution to the organisation, I am involved in making the pipeline-reduced UVES science frames available to the community. In parallel, I am supporting the X-shooter project, the first of the second generation of VLT instruments. The way new ideas and global astrophysical issues are debated with both locals and visitors makes ESO a very unique place to me. The only problem is that the way the building is laid out means I still have trouble finding my office coming back from the bathroom...

(Printed in The Messenger, 117, p. 67, 2004)

Fellowship period: 2003–2006
Location: Garching
Current Institute: LAM, Marseille

Nicolas Bouché

I arrived at ESO Garching in September 2003 as a postdoc under a joint MPA/ESO contract funded by the European Community Research Training Network (“The physics of the intergalactic medium”) just after graduating from the University of Massachusetts. Since I was little — when Halley’s comet last came around to be precise — I wanted to become an astronomer. Given that I grew up in Belgium I knew about ESO and its state-of-the-art facilities. It was thus a great privilege to start my career at ESO Headquarters. Of course my interests as a professional astronomer took me as far as you can from comets. I now study galaxy formation and distant galaxies at redshifts of two to three. More specifically, my thesis was centred on using cross-correlation techniques to measure (and put constraints on) the mass of a class of high-redshift gas clouds, damped Lyman-alpha absorbers.

I was very fortunate that during my stay at ESO, many Fellows worked in my field, namely, the field of quasar absorption line systems. This vibrant environment led to new collaborations, many, many helpful discussions and new friendships. I also benefited greatly from the institutions around ESO, the Max-Planck-Institut für Astrophysik and the Max-Planck-Institut für extraterrestrische Physik where I just started a three-year contract. These three institutions are at the forefront of European astronomy, are leading many cutting-edge experiments and it’s a great pleasure to be part of it.



Nicolas Bouché

Even though, when the fog rolls in for two months at a time, it's like living in a submarine, Bavaria is a beautiful region with many possibilities centred on the Alps or just in Munich.

(Printed in *The Messenger*, 119, p. 55, 2005)

Fellowship period: 2003–2004
Location: Garching
Current Institute: IRAP, Toulouse

Eric Depagne

I am at the moment right in the middle of my four-year contract as a Fellow in Chile. I have my duties at Paranal where, as a night astronomer, I do the observations on Unit Telescope 2 (FLAMES, UVES and FORS1).



Eric Depagne

Paranal is an incredible place to see. After a two-hour drive from Antofagasta, in the middle of the desert, you can see the four telescopes on top of the beheaded mountain. Then, you enter the Residencia. And you feel as if you are in the jungle! So much humidity, compared to outside!

My scientific work is the understanding of our Galaxy's childhood. There are mainly two ways to do this. Either you look at very distant extragalactic objects, or you look at very old Galactic ones. That's what I do.

Some low-mass stars have atmospheres that are not evolving with time. Thus, by studying the chemical composition of these atmospheres, we have quite direct access to the material from which these

stars were formed. As we suppose that these stars were formed very early after the Big Bang, the chemical composition of these atmospheres puts strong constraints on the Big Bang and supernova models. And one striking thing concerning these atmospheres is that at that time, we have been able to detect half of the elements of the periodic table — elements from hydrogen to uranium!

(Printed in *The Messenger*, 119, p. 55, 2005)

Fellowship period: 2003–2007
Location: Chile
Current Institute: AIP, Potsdam

Markus Hartung

It's fascinating to sit in the control room, piloting a world-class cutting-edge telescope! A single mouse click and 400 tonnes are moved to point to the new target. Between the active optics giving the 8-metre primary dish its optimum shape and a deformable mirror counter-steering 500 times per second to correct atmospheric turbulence in real time we finally recover spacelike resolution. And the more you look into the details, the more you are amazed that all these systems work reliably together to comprise one of the sharpest eyes with which to explore the Universe.

This is about the thrill of being a Fellow at the VLT. You probably won't believe that being a Fellow is all fun and games. Well, I admit that the work can be very demanding and stressful, and after a long shift there can be friction. Paranal science operations seems ultra-organised — rules and regulations everywhere. One might forget that they are not there to bother but to help people work together successfully — no doubt about their positive pay back! When I take care of visiting astronomers as part of my Fellow's duties, it is a pleasure to see most of them leaving happy and impressed by the observatory. The team spirit is great, and I really enjoy the privilege of working with such ambitious people from all over the world.

I started as an ESO Paranal Fellow with my duty station in Santiago in June 2003. Before, I had been working on my PhD at the MPIA in Heidelberg and had strongly



Markus Hartung

contributed to the CONICA project. The marriage of this versatile infrared camera with the NAOS adaptive optics system took place in Paris. I spent one year there integrating the instruments before they were shipped to Paranal and commissioned at the fourth VLT telescope. When I joined ESO, I had already worked for several months at Paranal. Then, I did not get a chance to explore Chile, but I hoped in my heart that I would return to catch up with it. And here I am now — with my wife and my (Chilean) son, born last December in Santiago — it's been a truly exciting experience!

(Printed in *The Messenger*, 119, p. 55, 2005)

Fellowship period: 2003–2007
Location: Chile
Current Institute: Gemini Observatory

Jochen Liske

For my PhD I decided to be adventurous and exchanged the homely shores of the river Rhine (Bonn) with the sandy beaches of the South Pacific. At the University of New South Wales in Sydney, Australia, I worked on my beach volleyball skills as well as the intergalactic gaseous structures called "quasar absorbers", which provide a wealth of information on the physical conditions in the early Universe, studying large-scale structure, the radiative environment of powerful quasars and weighing the "normal" matter content of the Universe.

At the end of my PhD in 2001 I moved to the misty shores of the Firth of Forth (Edinburgh) to explore a different area of



Jochen Liske

research and to begin work on the Millennium Galaxy Catalogue, a large-scale survey of local galaxies. When trying to understand how galaxies evolve with time we need to compare today's galaxies with those in the early Universe. It is particularly important to be able to distinguish the various constituents of galaxies as they are believed to be the result of different formation processes. The Millennium survey provides a detailed picture of (cosmologically speaking) nearby galaxies and hence forms the "today" part of the above comparison.

Last year I moved to the banks of the Mühlbach (ESO) where I am continuing my work both on quasar absorbers and galaxy evolution. I am also supporting SINFONI, a new VLT instrument currently being commissioned. Recently, I got involved with a working group who are considering the use of the Overwhelmingly Large Telescope (OWL) for an experiment designed to literally watch the Universe change its expansion speed over the timescale of a decade or so! Crazy? Possibly, but great fun! This is the sort of thing that makes ESO a fascinating place Here you get to see the wheels of astronomy turn and watch the future take shape.

(Printed in The Messenger, 119, p. 55, 2005)

Fellowship period: 2003–2006
Location: Garching
Current Institute: ESO

Martin Vannier

I joined ESO in June 2003, as a Fellow with duty on the VLTI in Paranal. Before

this, I had had a first encounter with ESO/Chile during a six-month traineeship in 1997. I remember that I enjoyed as much being in the action of a big observatory as having a taste of Chile. I then worked for a year at the European Space Agency on the future Gaia satellite. After this experience, I chose a scientific PhD, with still a large part of innovative technology, rather than an engineering career.

I did my PhD in Nice on colour-differential interferometry, a technique combining high-angular resolution and spectroscopy, which allows one to measure small displacements of the photocentre with wavelength. This mode is becoming operational at the VLTI, first with MIDI (10 microns), and now with the near-infrared instrument AMBER. Among many possible applications, the most ambitious is the spectroscopy of hot extrasolar planets. This requires extremely good instrumental stability and precise monitoring of atmospheric effects. Part of my PhD was to translate these requirements into specifications for the AMBER instrument.



Martin Vannier

Therefore, it was as much a logical step as an exciting possibility to come and follow the progress of the VLTI for my postdoc. Since the arrival of AMBER last year, I have worked on data processing methods to reach the challenging goal of measuring a few 10 000th of a fringe, the required precision for detecting a "hot Jupiter" exoplanet. I am also interested in other scientific applications of interferometry: stellar binarity, symbiotic stars, velocity fields of emission-line stars, ... I see ESO as a unique and exciting place to work. Certainly, the international

diversity of its participants and the ambition of its current projects contribute to making my Fellowship a very positive experience.

(Printed in The Messenger, 120, p. 53, 2005)

Fellowship period: 2003–2007
Location: Chile
Current Institute: Laboratoire Lagrange, Nice

Martin Zwaan

Born a few metres below sea level, I initially felt more comfortable with low-altitude radio telescopes than optical telescopes on high mountaintops. Consequently, my PhD work in Groningen was based primarily on radio surveys of the neutral hydrogen 21 cm line. After finishing up the thesis, I moved to Melbourne, Australia, where I worked on HIPASS, a "blind" extragalactic 21-cm survey covering more than half the sky. These kinds of surveys provide interesting anchor points for observations of neutral hydrogen via absorption lines from a time when the Universe was much younger. One of my main scientific interests is therefore to deduce a consistent picture from these two sets of information and understand the evolution of gas in galaxies.



Martin Zwaan

Late 2003 I came to Garching. One of my reasons for applying for the ESO Fellowship was to venture more into spectral ranges corresponding to wavelengths shorter than the width of the page you read this on. The first step is to millimetre wavelengths. For my functional work I am involved in ALMA and I am looking

forward to using this instrument to study galaxy gas components that are chemically more complicated than neutral hydrogen. Secondly, using optical wavelengths, I am trying to learn more about faraway galaxies that hold the gas that gives rise to the absorption lines.

Working at ESO means being at the astronomical barycentre of Europe. It really feels that way when you have to decide if you want to attend the seventh interesting science talk in a week. But not only scientifically, also personally the move to Garching has been a very positive experience, especially because I became a father only two months after arriving here.

(Printed in *The Messenger*, 120, p. 53, 2005)

Fellowship period: 2003–2006
Location: Garching
Current Institute: ESO

Cédric Foellmi

After my studies in Geneva and my PhD in Montréal, I moved to ESO and La Silla. Like many others, I was fulfilling a dream. I was not only visiting La Silla, but actually working there! Long *turnos* provide this very peculiar feeling of a little community of specialised workers whose goal is to observe the sky every night. And the people in La Silla are really great. As much as the sky.

I was immediately attached to the New Technology Telescope (NTT). These were hard and great times. I was still finishing my PhD, and having duties at the NTT in the “old” control room: cold, very dry, moving all night. Tough. However, I was not only learning how ESO operates, but also how to become an efficient observer on large telescopes. “Efficient” here means having a strong vision of the variety of astronomical objects and phenomena, and a detailed knowledge of instruments and techniques. This proves to be of the greatest importance for my research.

Research is the other part of the Fellowship, and actually the most important for me. Greatly enhanced by a unique experience of the “backstage” of telescope



Cédric Foellmi

operations, I can conduct my research freely at Vitacura. Even in the context where none of my colleagues is directly working in my field. Of course, not everybody is aware of the great interest Wolf-Rayet stars might represent ... But I am slowly making more and more people aware of it! And I realise after these years the advantages of being an ESO Fellow: in Vitacura there are simply all the “instrument scientists” of all the ESO instruments! And the Fellowship is three years in Chile. It gives precious time to start serious collaborations, and develop a coherent research programme. Friends, coherence and sense. Isn't it what we all are looking for? Some lucky ones are looking at the beautiful southern sky.

(Printed in *The Messenger*, 121, p. 69, 2005)

Fellowship period: 2003–2007
Location: Chile

Margrethe Wold

I arrived at ESO in the winter of 2003. I had been working as a postdoc at the Spitzer Science Center at Caltech in Pasadena, so arriving in cold Garching was quite a dramatic change from warm and sunny California. From early on, I had a deep interest in science, not just astronomy, but several different topics like archaeology, ornithology and particle physics. In the end, I decided to study astronomy, even though I first started an engineering education at a technical university.

My astronomy career started at the University of Oslo where I did my masters

degree. During this period, I went on frequent observing trips to the 2.5-metre Nordic Optical Telescope on La Palma, and hence got observing experience fairly early. To pursue my PhD, I moved to the University of Stockholm. My PhD concentrated on clustering of galaxies around quasars, but I also worked with weak gravitational lensing by clusters of galaxies. I still find weak gravitational lensing a very fascinating technique to measure the masses of the largest bound structures in the Universe.

During my postdoc at the Spitzer Science Center I started a programme to study the centres of nearby radio galaxies, in particular to measure their black hole masses. For this, I used the historic 5-metre Hale telescope on Mount Palomar. During my time here at ESO, I have continued this project using both the New Technology Telescope and the 3.6-metre telescope. Being interested in what is going on in the centres of galaxies, I am now using the new mid-infrared VLT instrument, VISIR, to study gas in the centres of active galaxies.



Margrethe Wold

Never did I dream that my interest for astronomy as a kid would take me to so many different places in this world, and would allow me to meet so many interesting people. This is still an adventure for me!

(Printed in *The Messenger*, 121 p. 69, 2005)

Fellowship period: 2003–2006
Location: Garching
Current Institute: Institute of Theoretical Astrophysics, Oslo

Gaël Chauvin

After studying microelectronics and nuclear physics for five years to become an engineer, I finally changed my mind and decided in the autumn of 1999 to join the small world of astronomy. With a Master of Astrophysics obtained in Grenoble (France), I started a thesis based on a double scientific approach: stellar physics and instrumentation.

A first part of my work was then dedicated to the study of the environment of nearby stars, to search for planetary discs and substellar companions. As this implies searching for very faint objects close to bright stars, I got involved into the development of high-contrast and high-angular-resolution instrumentation. I joined the group integrating and testing the adaptive optics (AO) system of the NACO instrument, now installed at the Paranal Observatory. Later on, with the NACO commissioning and the defense of my thesis, I naturally came to Chile in December 2003 in order to start an ESO Fellowship position.

Within the Paranal Science Operation Group, I now work mainly with infrared instruments (coupled to AO). This position offers me the great opportunity to develop constantly an important observing and instrumental experience. This is necessary for my own astrophysical work, now focused on the direct detection of exoplanets and brown dwarf companions and the study of their fundamental physical parameters, the chemical properties of their cool atmosphere, as well as their origin of formation.

This experience also offers me the great chance to fulfill a personal dream, to live abroad, immersing myself in a foreign culture and knowing other people.

(Printed in *The Messenger*, 123, p. 66, 2006)

Fellowship period: 2003–2007
Location: Chile
Current Institute: IPAG, Grenoble

Emmanuel Galliano

Six years have passed since I arrived in Chile. Time has flown by so quickly and I



Emmanuel Galliano (left) and Gaël Chauvin (right)

almost never felt that I had to leave Latin America to return to Europe. It must be because I feel I still have a lot to learn from the people of this side of the world: they probably know better than any other folk how to connect with their emotions.

Thanks to ESO, I could discover the magic of Latin America while fulfilling a professional dream, to be an astronomer. In 1999, I came to Chile for the first time to participate in the Denis Survey, thanks to Pascal Fouqué. I consider it a privilege that I could start learning astronomical observation with a “small” 1-metre telescope, having everything under control. I then started a PhD project with Danielle Alloin at ESO/Santiago. During three years I mainly tried to clarify the distribution of dust and molecules around active galactic nuclei (AGN).

At that time, operations with the interferometer of the VLT were about to start. The community was hoping that the VLTI would finally prove the existence of one of the key pieces in the AGN model: the so-called dusty torus. A new and exciting field in my research area was about to take off, and this would happen at ESO. This motivated my application for a Fellowship in the VLTI team. For two years my duties on Paranal have now been to make starlight interfere, with the most advanced technology available. I am broadening my observing skills in the most fascinating way.

In Santiago, I can focus on my favourite research topics: active galactic nuclei and the still mysterious embedded clusters: these are bright sources, only visible in the infrared, and thought to be the

ancestors of globular clusters. Nothing but the cutting-edge infrared technology offered by the VLT allows these objects to be studied. I guess this project has a nice future since ESO gives me the opportunity to spend my fourth year at La Universidad de Chile, where I can apply for Chilean VLT observing time.

(Printed in *The Messenger*, 123, p. 66, 2006)

Fellowship period: 2003–2007
Location: Chile
Current Institute: Observatório Nacional, Brazil

Andreas Lundgren

I arrived in Chile as an ESO Fellow in September 2004 and I was immediately thrown into the buzzing APEX project, which back then still had one year left to inauguration.

Even if I have worked with data in most wavelength regimes, my scientific work is mostly based on millimetre and sub-millimetre data. More specifically, I am interested in the distribution, kinematics and physical properties of the molecular gas in spiral galaxies. In my thesis I concentrated on the nearby barred spiral galaxy M83, and this galaxy is still the core of my science.

I was born in Sweden, and I did my undergraduate studies in Gothenburg, and graduate studies at the Observatory of Stockholm. During my PhD years I made several observing trips to the Swedish–ESO Submillimetre Telescope (SEST), and I really enjoyed visiting La Silla. Therefore it



Andreas Lundgren

was an easy decision to make when I was offered the opportunity to take a sabbatical year from my PhD studies 2002–2003 in order to work at SEST.

SEST and APEX are similar in many aspects, but some things are very different. When we operate APEX from the base station in Sequitor, some 70 kilometres from the site, the work is very much like sitting in the SEST control room with the dark curtains down. But when we go to Chajnantor in order to carry out morning or daytime observations (Since APEX is a radio telescope, it can be used 24 hours per day) the differences becomes vivid-Andreas Lundgrenly clear: Sitting in a container at 5100 metres altitude, and while observing, sniffing oxygen. Outside there is nothing but rock and sand, and one of the driest atmospheres on earth.

(Printed in *The Messenger*, 124, p. 41, 2006)

Fellowship period: 2004–2006
Location: Chile
Current Institute: Joint ALMA Observatory

Vincent Reveret

Since I started to study physics, I have always been interested in optics and all the incredibly different ways to detect light. After graduating in applied physics in England, I did my PhD in Saclay near Paris. I specialised in the development of a new kind of detector for submillimetre astronomy, the so-called large bolometer arrays (the equivalent of CCD cameras for submillimetric range). That was a pleasant time: a very good team spirit associated with the successful develop-

ment of a totally new kind of detectors. I thought I could never find such a nice lab again. I was wrong.

After the defence of my thesis, I decided to see the other side of submillimetre astronomy, going from the development of detectors in the lab, to their use in an astronomical observatory. I arrived in Chile in May 2004 to work at the APEX telescope near San Pedro de Atacama. APEX is one of these new-generation telescopes, like ALMA or the HERSCHEL satellite, that are leading the “revolution” in submillimetre astronomy. Even if working conditions at APEX can be difficult (oxygen molecules are very rare up on the telescope site!), I love going there because of San Pedro’s beauty and the excellent working atmosphere in the team.



Vincent Reveret

With the next arrival of a large bolometer camera (called LABOCA), APEX will be one of the most powerful submillimetre telescopes in the world. We know that many astrophysical hot topics can benefit from APEX capabilities, like star formation for example. This is one part of my research: I study the relationship between intense ultraviolet fields coming from OB associations and the conditions of star formation inside long columns of gas (sometimes called elephant trunks). I still work in instrumentation, even if now I focus more on simulations to prepare for the next generation of bolometer cameras that maybe we will see on APEX one day ...

(Printed in *The Messenger*, 124, p. 41, 2006)

Fellowship period: 2004–2006
Location: Chile
Current Institute: CEA Saclay

Rubina Kotak

Although I spent the first two years of my life in the south-western corner of Tanzania, I grew up near the equator, in Kenya. Having obtained my Masters degree from Canterbury (Kent), I decided that it was time to venture somewhere a little more exotic. Hence I moved north, to southern Sweden to start a PhD at Lund Observatory.

Here I worked on time-resolved spectroscopy of cool white dwarf pulsators with a view to simultaneously tapping their asteroseismological potential and constraining the properties of the convection zone in a novel way. Having (temporarily) exhausted all the targets that could be observed in this way, using the largest (optical) telescope on the planet, it was time to move on. So I found myself at Imperial College London, working as part of a concerted European effort to decipher the physics of thermonuclear supernovae (SNe). Partly as a result of the numerous side projects that sprouted out of this, two of my current preoccupations are the characterisation and use of circumstellar matter surrounding SNe to determine the nature of the progenitor star(s), and whether core-collapse SNe are able to produce significant quantities of dust at all redshifts.



Rubina Kotak

I arrived at ESO-Garching less than a year ago and am still negotiating my way around the intriguing maze of corridors, doors, and dead ends, navigating using images, e.g., of the Horsehead Nebula, a necessity! My duties at ESO include working in the PR department which is

both fun and stimulating. Being at ESO gives that child-in-a-sweetshop feeling: lots of interesting talks, experts in every field, and a general feeling of being at the hub of events and decisions that will shape the future for decades to come. My time at ESO is sadly coming to an end, but I'm looking forward to taking up a staff position at Queen's University, Belfast. Definitely time to invest in umbrellas!

(Printed in *The Messenger*, 125, p. 58, 2006)

Fellowship period: 2005–2006
Location: Garching
Current Institute: Queen's University, Belfast

Dominique Naef

I completed my PhD thesis in the Geneva extrasolar planets search group late 2003. During my PhD years, I participated in so many observing runs at the Swiss telescope at La Silla that making a postdoc in Chile became quite an obvious choice. In spring 2004, I moved to ESO-Chile with a Swiss grant. During my first postdoc year, I worked in the La Silla Science Operations team where I was mostly involved in the support of the HARPS spectrograph. Later in 2004, I applied successfully for an ESO Fellowship.



Dominique Naef

I started this second postdoc in spring 2005 at the Paranal Observatory. At Paranal, I mostly work with the UT2-Kueyen telescope and I am attached to the FLAMES support team. A large part of the Fellows' duties consist in executing service-mode observations. I really enjoy it since it gives me the possibility to learn

a lot about fields in astronomy that are very far from my favourite ones. Supporting visiting astronomers during their observing runs at Paranal is also a task I really appreciate because it gives me a unique opportunity to get direct feedback from ESO users. Moreover, very stimulating scientific discussions are not rare during these visitor runs.

My main scientific interests are the detection and characterisation of extrasolar planets and brown dwarfs. I am involved in several planet search programmes using various ESO and non-ESO facilities: HARPS at the 3.6-metre telescope, CORALIE at the Swiss 1.2-metre Leonhard Euler Telescope, FLAMES at VLT-UT2 or NACO at VLT-UT4. I also participate in programmes aiming at the characterisation of transiting exoplanets using ground-based facilities (e.g., FORS1 at VLT-UT2) and space-based telescopes (e.g., HST or XMM). The main goal of all these research activities is to understand how planets form around stars.

(Printed in *The Messenger*, 126, p. 55, 2006)

Fellowship period: 2005–2009
Location: Chile
Current Institute: Observatoire Astronomique de l'Université de Genève

Andrés Jordán

I studied physics at the Universidad de Chile in Santiago, where I was born and raised. I then moved to Rutgers University in the US, where I obtained my PhD under the supervision of Pat Côté. During this period I started working on the ACS Virgo Cluster Survey, a project in which I have been deeply involved since.

After finishing my PhD in 2004, I moved across the pond to take up my Fellowship at ESO Garching. At ESO I have continued and expanded the work I started during my PhD I am now concentrating my efforts on the ACS Fornax Cluster Survey, a project which I lead and which extends our Virgo HST observations to the Fornax cluster of galaxies. I am currently particularly interested in the properties of the inner regions of galaxies, which are teeming with supermassive black holes and nuclear star clusters.



Andrés Jordán

While at ESO I have had the experience of working in a very stimulating environment. I have witnessed the development of the Extremely Large Telescope (ELT) with all its intricate dependence on scientific and political issues. In passing, I have also learned to value things in a new ESO currency: an ELT mirror segment. During the last few years I have had the opportunity to work closely with students, Fellows and staff, and to teach at the NEON school. It is seldom that in one place one can experience such a broad array of aspects of life as an astronomer, from teaching, to the development of the next large European astronomical project.

My days at ESO are sadly coming to an end, and in September I will move to the Harvard–Smithsonian Center for Astrophysics to take up a Clay Fellowship. One more summer for Biergarten!

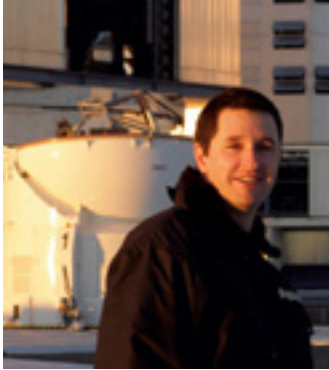
(Printed in *The Messenger*, 127, p. 73, 2007)

Fellowship period: 2004–2007
Location: Garching
Current Institute: Pontificia Universidad Católica de Chile

Paul Lynam

Midway through a Chile-based Fellowship, I share my time between Paranal Science Operations and trying to understand the environments and properties of giant galaxy formation.

Aged seven, I witnessed a spectacular green fireball roll above the evening twilight horizon, dropping sparks and swinging flickering shadows silently across the



Paul Lynam

ground. While trying to learn about this event, I became enchanted by the images of nebulae and galaxies and it became my ambition to be a regularly observing “Gentleman Astronomer”, like the Irish Earls of Rosse.

The local astronomical society fostered my interest until university studies in observational astronomy and applied physics, followed by a space science master’s thesis assessing the danger of meteoroids to spacecraft.

En route to a PhD, I performed sensitive photometry of giant elliptical galaxies in an all-sky survey of ROSAT-selected clusters at various worldwide observatories. The resulting measurements are used as motion indicators in peculiar velocity surveys. Any coherent motions of these objects are called cosmic flows and potentially reveal huge mass concentrations, great attractors, which must gravitationally induce the flow. If detected, large-scale flows challenge modern cosmology and confuse our current idea of an accelerating Universe.

My interest in observing the populations of galaxy clusters continued while based at the Max Planck Institute (MPE) in Garching, before developing software for the ESO Imaging Survey at the neighbouring ESO Headquarters.

With the opportunity to work at Paranal, my childhood ambition was fulfilled: like the Earls of Rosse, I regularly observe with the most advanced telescope of the age. The forefront science, the scale of operation, the team maintaining the elegant nocturnal ballets of this engineering

masterpiece in a hostile environment, all contribute to Paranal’s special appeal.

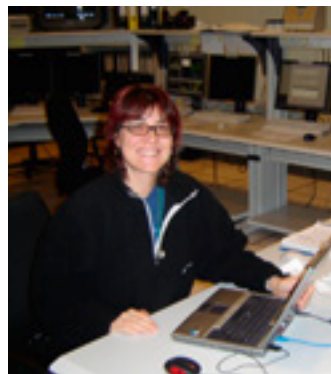
(Printed in *The Messenger*, 127, p. 73, 2007)

Fellowship period: 2004–2008
Location: Chile
Current Institute: Lick Observatory

Maria Messineo

I have been an ESO Fellow since September 2004. I am interested in studying the morphology and evolution of the Milky Way. Although it is well established that our Galaxy is a barred spiral galaxy, the properties of each Galactic component — Disc, Halo, Bulge, central Bar — are still poorly constrained. It is difficult to properly map the large-scale morphology of the Milky Way, mainly because we observe it from inside the Disc and because light absorption from interstellar dust strongly hampers an unbiased view of its stellar content.

Like Archimedes, I grew up on the ancient and wonderful island of Sicily. I started to study astronomy at the University of Bologna where I graduated in the spring of the 1997 with a master’s thesis on Galactic globular stellar clusters. I did my PhD research in Leiden studying the distribution of stars in the inner regions of our Galaxy as a direct probe of the gravitational potential.



Maria Messineo

During my PhD I went observing with the IRAM 30-metre telescope in Spain several times as well as with the Heinrich Hertz Telescope in Arizona, with the ESO

3.6-metre and the CTIO 4-metre telescopes in Chile. I always enjoyed my time at the telescopes very much, and so it was obvious that when I joined ESO I would perform my functional work as a support astronomer on Paranal. At Paranal I mostly work with the UT4-Yepun telescope and operate both of the infrared detectors: NACO and SINFONI. I really enjoy observing and supporting visiting astronomers during their runs, and each time I learn a lot, both scientifically and technically, and receive valuable feedback concerning my research.

Currently I am investigating the spatial distribution of young stellar clusters in the Milky Way using SINFONI data. The aim of this project is to better understand the current star formation in our Galaxy, as well as the locations of spiral arms. From next July I will continue to work on this topic at the Rochester Institute of Technology (USA): more science to carry out and a new world to discover!

(Printed in *The Messenger*, 128, p. 75, 2007)

Fellowship period: 2004–2007
Location: Garching
Current Institute: MPIfR, Bonn

Laura Parker

I arrived at ESO in late 2005 after completing my PhD work at the University of Waterloo in Canada. I am generally interested in all questions related to the formation and evolution of galaxies, as well as understanding the fundamental cosmological parameters which govern the evolution of the Universe. My research focusses on the link between luminous galaxies and the dark matter halos in which they reside. I study the amount and distribution of dark matter using weak gravitational lensing, and to date my work has focussed mainly on galaxy and galaxy-group-sized structures.

Since arriving in Garching I have continued my work in weak lensing — which is a leading technique for understanding both galaxy evolution and fundamental cosmology. I am enjoying working in such a stimulating scientific atmosphere, particularly the many seminars and the lively discussions at morning coffee. The diver-



Laura Parker

sity of research carried out by ESO researchers is something that is hard to match anywhere else. For my functional work I joined the ESO survey team which oversees the planning and execution of public surveys (for the VST and VISTA). My research makes use of large imaging surveys so this project is a perfect fit to my interests.

I will be sad to leave Garching (and the biergartens) behind but I am excited about moving onto the next chapter in my career. I will join the faculty at McMaster University as an assistant professor in late 2007.

(Printed in The Messenger, 128, p. 73, 2007)

Fellowship period: 2005–2007
Location: Garching
Current Institute: McMaster University, Hamilton

Steffen Mieske

My fascination with astronomy started very early in life. At the age of 14, I wrote a 200-page science fiction novel — which nobody except my best friend and I has ever read. At about the same time, I made a very daring bet with the same friend regarding our future professions, the stake being 100 Deutsche Mark. He bet that he would become a boarding-school teacher, and I bet I would become an astronomer. Both of us have won the bet.

At Bonn University I studied physics between 1996 and 2001, and my fascination for astronomy continued. During the last year of my undergraduate studies

I spent ten months in Chile at the Astronomical Institute of the Pontificia Universidad Católica. I pursued my PhD work at Bonn University between 2002 and 2005, supervised by Michael Hilker and Klaas S. de Boer. During this time I spent another 22 months at Universidad Católica, my Chilean thesis advisor being Leopoldo Infante. Back in Germany, three days before Christmas 2004 I was notified of being selected as an ESO Fellow. What a nice present! I started my Fellowship in August 2005.

My scientific interests focus on extragalactic globular clusters and dwarf galaxies. I am particularly interested in the transition region between these classes of objects, represented by the so-called ultracompact dwarf galaxies. Furthermore, I study the peculiar velocity field in the nearby Universe and the faint end of the galaxy luminosity function.



Steffen Mieske

For my functional duties, I am assigned to the User Support Department, where I support service mode runs for WFI, FEROS and VIMOS. While working for ESO I have gained invaluable insights into many aspects of running the world's most advanced ground-based observatory. Personally, I have been very much impressed by the momentum gained for the E-ELT development since I started at ESO two years ago. I am looking forward to an exciting last year of my Fellowship.

(Printed in The Messenger, 129, p. 75, 2007)

Fellowship period: 2005–2008
Location: Garching
Current Institute: ESO

Julia Scharwächter

While observing stellar constellations in minus-degree German winter nights, I became interested in the physical background of night-sky phenomena. When I discovered that “astrophysicist” could also be a profession, I decided to study physics at the University of Cologne, where later I did my diploma and PhD theses in astrophysics, supervised by Prof. Dr. Andreas Eckart. For my diploma thesis I used multiparticle simulations to model the dynamics of a quasar host galaxy. This aroused my curiosity about host galaxies of active galactic nuclei, the evolution and dynamics of which has since then been my main research area. As my PhD project, which was partly supported by a scholarship of the German National Merit Foundation, I extended my work on multiparticle modelling of quasar host galaxies and became acquainted with the reduction of a complementary set of near-infrared images and spectra.

Having completed my PhD without any practical observing experience, I was eager to find a postdoc position which would involve observational tasks. The ESO Fellowship in Chile was my first choice and has more than fulfilled my expectations. Since my first days in Chile in May 2005 I have been fascinated by the combination of research and functional work in a multinational environment. As for the functional part, I am assigned to La Silla science operations, where I work as a support astronomer at the NTT and, since July 2007, as the first instrument scientist for SOFI. The expertise among my colleagues and the



Julia Scharwächter

continuous interaction with visiting astronomers provide a unique opportunity to learn about different research areas and observational techniques, as well as to advance one's own research projects with new ideas. In addition, I very much enjoy living in Chile, every now and then stealing a glance at the Andes or by night at Orion upside down.

(Printed in *The Messenger*, 129, p. 75, 2007)

Fellowship period: 2005–2009
Location: Chile
Current Institute: RSAA, Australia

Gaël James

Astronomy always interested me as a child, but the truth is that I had thought of many other professions before choosing this one. At least until I met two very enthusiastic astronomy professors while I was studying physics at Orsay University near Paris, in 1999. Not only did they pass on to me their passion for trying to understand the Universe, but, knowing about my origins and my growing interest to come back to South America, they also showed me the first pictures of the VLT while it was still being built and told me about its impressive first scientific achievements. The international aspect of the project and its foreseen impact on astronomy were definitely something of which I wanted to be a part.

I followed a Masters course at the Paris Observatory and had first contact with ESO for my thesis. After this, I obtained my PhD at the Paris Observatory studying chemical abundances of heavy elements in globular cluster stars. This work relied on high-resolution spectroscopic data taken at the VLT. During my PhD I also discovered the pleasure of observing in several observatories around the world, amongst which of course were La Silla and Paranal. I finally joined ESO as a Fellow in October 2005 after completing my PhD and having spent a year as a teaching and research assistant in Paris.

Now, I work at the Paranal Observatory as a support astronomer. In particular, I am the Instrument Fellow for UVES, the VLT high-resolution ultraviolet and visual échelle spectrograph. In a few months, I



Gaël James

will take over as its first Instrument Scientist. This has given me a lot of experience with an instrument that I regularly use for my science. Coupled with the rare human experience of working with highly dedicated professionals in a challenging but friendly environment, this has made my experience at ESO a great success.

(Printed in *The Messenger*, 130, p. 58, 2007)

Fellowship period: 2005–2008
Location: Chile

Lorenzo Monaco

I received my PhD in astronomy from Bologna University in 2004. Before joining ESO in June 2005, I also held a post-doctoral position at the Trieste Observatory. Therefore, the position at ESO was going to be my first experience in an international institution and I was very much looking forward to it.

Working at ESO is a wonderful experience for a young astronomer. The number of seminars at the ESO Vitacura office in Santiago, together with the visiting scientist programme, provides the opportunity to meet a number of scientists working on very different fields. Furthermore, the environment is enriched by the continuous flow of people joining ESO, from senior astronomers to Fellows and students. On the other hand, due to the observatory duties, some difficulties do exist in meeting colleagues in Santiago. Occasions like the traditional VVV, Vitacura Vino y Verbos, are thus very stimulating. At the VVV everyone is invited to briefly present any news con-

sidered interesting. Being in charge of organising the VVV for about one and half years was a nice opportunity to be directly involved in the Vitacura science life.

My research activity is focussed on the study of resolved stellar populations in the Local Group with the main aim of understanding the processes which drive galaxy formation. In particular, recently I spent a large part of my time computing chemical abundances from high-resolution spectra of red giant branch stars in the Sagittarius dwarf spheroidal galaxy, which certainly represents the most striking ongoing merger event in the Milky Way.



Lorenzo Monaco

At the La Silla Observatory I spend most of my time working with the 3.6-metre telescope instruments. Supporting these instruments is very instructive. With EFOSC2 I could use observing modes with which I was not familiar (e.g., low-resolution spectroscopy, polarimetry), while with HARPS I could refine my expertise with high-resolution spectroscopy. Taking care of an instrument is a very stimulating task.

Spending a few years at ESO allowed me to start many new collaborations. I could expand both my technical and science related knowledge and I was able to start investigating fields to which I had not been exposed.

(Printed in *The Messenger*, 130, p. 58, 2007)

Fellowship period: 2005–2009
Location: Chile
Current Institute: ESO

Lise Christensen

Growing up in a city, I never saw the Milky Way with my own eyes until the age of 16, and I could never identify more than two constellations. I was not at all certain that astronomy was the most interesting field of natural sciences that one could study until an observing trip to La Silla during my undergraduate studies finally convinced me.



Lise Christensen

After obtaining my Masters degree from the University of Copenhagen, where I studied images of the host galaxies of gamma-ray bursts, I wanted to gain experience with spectroscopy. In 2002 the instrumentation division in the Potsdam Astrophysical Institute had recently commissioned a new integral field unit (IFU) for the 3.5-metre telescope at Calar Alto. Data from this instrument (PMAS) were to form the basis for my PhD thesis, and it turned out to be quite a challenge to find the faint Lyman-alpha emitting galaxies that are responsible for strong absorption lines in the spectra of background quasars. After finishing my thesis in 2005, I immediately started as a Fellow on Paranal, and having knowledge about IFU data naturally led me to the position as a VIMOS instrument Fellow.

My scientific interests are inclined towards galaxies in the high-redshift Universe. Instead of using traditional large surveys with flux-limited samples of galaxies, I have used other selection criteria in order to locate and study either the more common or unusual galaxies that existed in the early Universe. The experience with IFU data has allowed me to

gain insight into different types of scientific projects that can be done with the same data sets, such as searching for field Lyman-alpha emitters or looking at quasar environments. Besides, working at ESO has given me the freedom and opportunity to work with several people on various projects that are outside my main scientific path.

(Printed in *The Messenger*, 131, p. 51, 2008)

Fellowship period: 2008–2009
Location: Garching
Current Institute: Dark Cosmology Centre, Copenhagen

Sune Toft

I did my Masters and PhD studies at the Niels Bohr Institute, University of Copenhagen. During my first years of studying physics, I became very interested in the philosophical aspects of physics, and discovered that astronomy, and in particular cosmology, was a natural framework to pursue this interest. I was fascinated by cosmologist's attempts to develop a model for the entire Universe, despite the limited amount of observational constraints available at the time.

In 2003 I received my PhD and moved to the United States where I took up a postdoc position at Yale University. There I started working on a newly discovered population of near-infrared-selected massive, high-redshift galaxies. Working in the US was very interesting, and I seriously considered staying for a second postdoc, but when in 2006 I had the



Sune Toft

opportunity to return to Europe for an ESO Fellowship, I didn't hesitate. I have been very happy with this decision. ESO is a stimulating place to work, with lots of stuff going on (talks, workshops, etc). For my functional work I have become involved in the planning of the Extremely Large Telescope, a project with great momentum, which is exciting to be part of, and besides that I have plenty of time to pursue my own independent research programme.

(Printed in *The Messenger*, 131, p. 51, 2008)

Fellowship period: 2006–2008
Location: Garching
Current Institute: Dark Cosmology Centre, Copenhagen

Michelle Doherty

My interest in astronomy began in the final years of high school and continued throughout my undergraduate studies in physics at the University of Sydney. I wrote my final Honours thesis in astronomy and subsequently moved to England to pursue a PhD at the Institute of Astronomy, Cambridge. There I worked with the instrument CIRPASS (Cambridge Infra-Red Panoramic Survey Spectrograph), developing an interest in near-infrared spectroscopy and, in particular, fibre-fed spectroscopy.



Michelle Doherty

During my doctorate I worked on projects related to the star formation rates of distant galaxies (at redshift $z \sim 1$) and the nature of extremely red galaxies at high redshift. After receiving my PhD in 2005 I moved to ESO Garching to take up a

Fellowship. For my duties I chose to be involved in science operations at Paranal, travelling out to Chile once every three months. I very much like the practical side of the job, i.e. being involved in the operations of the observatory, and eventually transferred to complete my Fellowship in Chile. My scientific research interests have expanded, primarily through new collaborations at ESO, and now include studying massive galaxies at high redshift, clusters of galaxies at high redshift and using planetary nebulae as dynamical tracers in nearby clusters of galaxies.

(Printed in *The Messenger*, 132, p. 51, 2008)

Fellowship period: 2005–2009
Location: Garching
Current Institute: Joint ALMA Observatory

Rachel Gilmour

Unlike many astronomers, as a teenager I was not at all interested in astronomy, particularly the practical sort that involved standing in the cold drizzle waiting for a gap in the clouds! However, whilst studying physics at university I found myself in the astronomy building at midnight on a Friday, and realised that I was hooked. After completing my Masters project at Oxford looking for gravitational lenses, and taking a year out, I started a PhD at the Royal Observatory in Edinburgh investigating X-ray-detected active galactic nuclei in galaxy clusters.

Although I mainly worked with X-ray data for my research, the highlights of my PhD were the occasional trips to “real” observatories in Chile and La Palma. After surviving, and enjoying, the exhausting experience of a five-night run on the Isaac Newton Telescope in January, I was keen to work at an observatory. This fitted well with my scientific aims of obtaining optical data for my X-ray sources, as well as my desire to work in a different culture, so I accepted an ESO Fellowship in 2005.

I have found the experience of working at Paranal both challenging and enjoyable. Being part of a large team, with problems to be solved in real time, is quite different from my research life back in Santiago. It has been interesting to learn about so many different observing techniques, and



Rachel Gilmour

the buzz of the observatory means that there is always something new going on. I particularly enjoy the opportunities to meet scientists with many different specialities, and to observe the whole spectrum of (optical) astronomical objects, from planets to gamma-ray bursts. I plan to expand on these interests in the fourth year of my Fellowship, when I hope to go to a UK institute to continue my research and to learn more about communicating astronomy with the public.

(Printed in *The Messenger*, 132, p. 51, 2008)

Fellowship period: 2005–2009
Location: Chile

Vincenzo Mainieri

I did my undergraduate studies in physics at the University of Rome and at that time I was not particularly interested in astronomy, but more in particle physics. I finally got interested in those shining objects up there when a friend showed me Jupiter using a small amateur telescope from the balcony of a flat in Rome, trying to find some clear sky between the buildings.

When I started a PhD in physics in Rome in 2000, I wanted to spend a period abroad and came to ESO for a short visit of two months. It was the right move at the right time. Thanks to my supervisor, Piero Rosati, I was introduced to the X-ray survey community and at that time the deep X-ray surveys with Chandra and XMM-Newton were starting and new science was available. I was able, during my thesis, to study, with unprecedented

photon statistics, the X-ray spectral properties of active galactic nuclei (AGN).

I found the ESO environment and the campus in Garching a very stimulating place to work. So much so that after my PhD I decided not to move far, but simply to cross the street to the Max-Planck-Institut für extraterrestrische Physik. There I was part of the X-ray group led by Günther Hasinger. I participated in the multi-wavelength follow-up studies of several of the major X-ray surveys, trying to understand the evolution, as a function of redshift and environment, of the properties of AGN. In the last few years I have been widening my interests — moving to the optical, infrared, submillimetre, and finally radio, bands. I was quite happy in September 2006 to cross the street once more and come back to ESO as a Fellow. During these two years of the Fellowship I have been studying how the luminosity of an AGN affects its geometry and how these properties are connected with the host galaxy.



Vincenzo Mainieri

For my functional duties, I am following up the science cases for a multi-integral field unit spectrograph for the E-ELT and am also participating in the preparations for the X-shooter commissioning.

After two very enjoyable and useful years as a Fellow, I am looking forward to the next step — as an Assistant Astronomer in the User Support Department, where I will start working in October.

(Printed in *The Messenger*, 133, p. 63, 2008)

Fellowship period: 2006–2008
Location: Garching
Current Institute: ESO

Suzanna Randall

According to my parents, my fascination with astronomy started when I was just a toddler, and would not stop staring at the Moon. My own first astronomical recollection is seeing photos of Mars' moons taken by some satellite — I was about seven years old and completely fascinated by the notion that a camera could have left Earth, let alone send back pictures of what to me seemed the most exotic and remote place imaginable. For years I collected pretty pictures of galaxies, nebulae and planets and occasionally braved the cold to observe stars in our back garden with my binoculars, only to all but forget about astronomy as a teenager.



Suzanna Randall

However, upon finishing school I remembered my childhood passion and decided to move from small-town Germany to the bustling metropolis of London to study astronomy at UCL. During my studies I had the opportunity to observe at several different observatories, and was hooked on both astronomy and travelling. I was then accepted for a PhD at the University of Montreal, apparently on the premise that my supervisor had “never had a student from the UK before”. Focusing on the asteroseismology of pulsating subdwarf B stars, I had more than my fair share of observing, spending five weeks at a time at the 1.5-metre on Mt. Bigelow in Arizona.

Eager to move to bigger telescopes, I applied to ESO as a Fellow, and with perfect timing received an offer the day before defending my thesis in Montreal.

While I am stationed in Garching, my functional duties regularly take me to Paranal, where I work as a support astronomer at the VLT. For me, this is one of the most exciting aspects of my job, as I feel that I am at the forefront of astronomical research, and work with people from around the world in a unique and dynamic environment.

(Printed in *The Messenger*, 133, p. 63, 2008)

Fellowship period: 2006–2009
Location: Garching
Current Institute: ESO

Daniel Kubas

My journey to the Atacama desert started quite a while ago. When I learned from my parents that what I was referring to as the “big lamp”, was a celestial companion called “the Moon” and was not in fact shining itself, but only reflecting the light from the “truly big lamp”, the Sun, I became more curious about what was going on up there in the skies above Berlin. Thanks to the supply of books from Jules Verne, television shows from Carl Sagan and films in which the Earth stood still, or featuring people from a planet called Vulcan, I held on to this curiosity. Eventually I started studying physics at the Technical University of Berlin, spending a year (1998) at the University of Melbourne and finishing at the University of Potsdam (2005).



Daniel Kubas

Finally, in March 2006, I had the privilege of joining the ESO team serving the astronomical community as support astro-

mer in Paranal. I had spent a lot of nights before on telescopes, but none as clear and long as the ones in the Martian-like Atacama desert. Apart from being an out-of-this-world place, what strikes me most, is the dedication and enthusiasm of the people working there. No matter the time of the day you always find a helping hand with a smile. However ESO is much more than an observatory. The science life at ESO Vitacura — last, but not least, thanks to new impulses given by the recently arrived Head of Science Michael West — offers an attractive mix of talks ranging from passing high profile experts from all fields, to specialised seminars organised by local staff, Fellows and Students.

So my decision to spend my last off-duty Fellow year (starting in March 2009) outside ESO was certainly not easy, but the temptation to exchange the starry lights for the city lights of the Institut d'Astrophysique de Paris, where a strong team in my favourite field of research (the hunt for exoplanets using microlensing) is forming, was too big. However I will surely stay in contact with my ESO colleagues and friends and, who knows, may be back some day or some night.

(Printed in *The Messenger*, 134, p. 65, 2008)

Fellowship period: 2006–2010
Location: Chile
Current Institute: IAP, Paris

Jörg Dietrich

I am one of those astronomers who became enchanted with astronomy very early in their lives. My parents tell me that shortly after my fascination with astronomy started, at the age of five, I declared that I wanted to become an astronomer, a goal I have pursued ever since.

I studied physics and astronomy at the University of Bonn and the University of Tennessee, Knoxville, and obtained a Masters degree in physics in Bonn in 2002. After that I joined ESO for the first time, working for the ESO Imaging Survey for one year. I then returned to Bonn to work on my PhD, which I obtained in 2006, two months before starting my ESO Fellowship.



Jörg Dietrich

My work focuses on studying galaxy clusters, the cosmic web, and the determination of cosmological parameters. My tool of choice is weak gravitational lensing, a technique that has fascinated me ever since I first heard about it in a lecture course in 2000. During my Fellowship I have mostly worked on comparing weak-lensing mass estimates of galaxy clusters to those obtained with other methods, and developing new statistics to constrain cosmological parameters with upcoming imaging surveys. Garching, with its unique conglomeration of astronomical institutes, is a near-perfect environment for my science and some of my projects could not have been realised without the close collaborations of colleagues at ESO's neighbouring Max Planck Institutes.

For my functional work at ESO I joined the ESO Survey Team, which oversees the preparation and, eventually, the execution of ESO public surveys with the upcoming VISTA and VST facilities. Since my research is based on large imaging surveys, my functional work is a perfect match to my science interests.

(Printed in The Messenger, 134, p. 65, 2008)

Fellowship period: 2006–2009
Location: Garching
Current Institute: Universitäts Sternwarte München

Jean-Baptiste Le Bouquin

I started astronomy in quite an unusual way. I first studied heat engines and other sorts of machinery using thermal energy. Having been lured into an increasing passion for physics, I contin-

ued studying fundamental physics for several more years.

There came a time when I had to choose between particle physics and astrophysics. My wife found the best strategy to make this dramatic choice: look at the potential colleagues in both areas and assess how they were set up in life (properly dressed or not, with family or not, etc.). The “vote” definitely went to astrophysics!

I completed my PhD thesis in the city of Grenoble, in the French Alps, conveniently located near numerous ski resorts. I visited Paranal once during my graduate studies, where I worked on the VLTI and was definitely impressed by this huge machine. Press a button and you have two giant telescopes pointing together and unveiling the mysteries of some unknown stars. I decided to be part of this adventure.



Jean-Baptiste Le Bouquin

I arrived at ESO in April 2006. I devoted a significant part of my duties and research time to improving the abilities of the VLTI. I greatly appreciated sharing the work with engineers, technicians and astronomers. I am proud of what has been achieved within these last three years. As well as managing technical challenges, we have succeeded in getting unprecedented astrophysical results. I am now in the fourth year of my ESO Fellowship and thinking about future projects and the next generation of VLTI instrumentation that will use the four giant telescopes together.

My wife and I have enjoyed Chile immensely — the people, nature, food, and all the new friends we now have. Moreover, we will leave Chile with two everlasting souvenirs: our son Tobie and our daughter Anaëlle.

(Printed in The Messenger, 135, p. 62, 2009)

Fellowship period: 2006–2010
Location: Chile
Current Institute: IPAG, Grenoble

Hugues Sana

11 961 kilometres... That's the distance between Liège and Santiago. 11 961 kilometres... it is difficult to get further away. It is further than the US West Coast, Hong Kong or Beijing, and even further than Tokyo. The only way to go further would be to head for Australia, to some small Pacific island or to Antarctica.

11 961 kilometres... it is not the other side of the world, but it is getting close and that is the adventure I had the chance to take up about three years ago when I was offered a Fellowship position at ESO. It was on a Wednesday morning, two days before Christmas, 1145 days ago and 11 961 kilometres away from where I am sitting right now.

Since then, I have enjoyed 54 Lan Chile snack boxes, delighted in 233 wonderful sunsets in Paranal and survived 671 rides from my house in Santiago to the Vitacura office. In Paranal, I had the opportunity to be trained on two Unit Telescopes, Antu and Kueyen, performing over 1500 Ob-



Hugues Sana

servicing Blocks for a cumulative open shutter time of 587 hours. Given the ratio of the instrument aperture sizes, it would have taken 17 290 years for Galileo to collect as many photons as I did.

But the most impressive part is not about numbers, sizes or advanced technology (although they are very impressive), it is about the people, working around the clock, away from family, often tired because of the workload, stress and lack of sleep. It is about their problem-solving attitude, their constant good mood and their incredible motivation. My ESO Fellowship has certainly been a wonderful challenge and one of the most intense life experiences. If I had to summarise what I learned in a single word, it would be “balance”. Balance between observatory duties, science time, private life and personal development, and what it takes, as a juggler, to keep that many balls flying in the air.

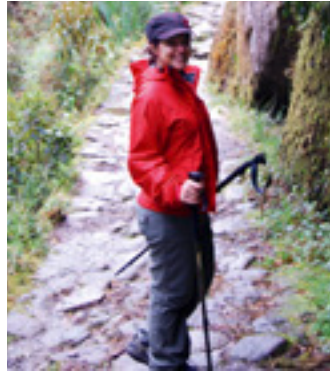
About me — I obtained my PhD at Liège University in 2005, working on optical and X-ray spectroscopy of massive stars. After an additional year in Liège, I moved to ESO/Chile in May 2006. In Paranal, I first joined the CRIFRES instrument team before taking over the enjoyable task of UVES instrument scientist, where I am learning what it takes to have an instrument working to the best of its performance. In Santiago, I pursue my own research projects on massive stars, taking advantage of the active collaboration of a dozen colleagues working in the nearby field of stellar clusters.

(Printed in *The Messenger*, 135, p. 62, 2009)

Fellowship period: 2006–2010
Location: Chile
Current Institute: University of Amsterdam

Carla Gil

I decided that I wanted to be an astronomer when I first visited the Lisbon Planetarium. I was six years old at the time, and had no clue what astronomy was about! I just remember my school drawings went from being little houses and trees to stars and planets.



Carla Gil

I lived in Lisbon until I was 18, and one day I came home and told my parents I was moving to Porto because that was the only place where I could study astrophysics. Portugal is a small country, and as you can imagine astronomy is not one of the most popular careers to pursue. However, my family was always very supportive of my choices and I was lucky to be one of the few people to be given such an opportunity.

I did my undergraduate studies at the University of Porto and after that I moved to Italy where I worked on my master's thesis at the Osservatorio di Capodimonte as part of the European Solar Magnetism Network. I started my PhD shortly after that and this time I moved to Grenoble, France.

I obtained a joint degree from the University Joseph Fourier and the University of Porto. My thesis research consisted of studying interferometry and its application to the study of ejection processes close to pre-main-sequence stars. I worked on the AMBER instrument, the three-beam combiner for the VLT, during the time I spent in France. When the instrument was shipped to Paranal I was awarded an ESO studentship in Chile, where I spent two years finishing my PhD and I had the privilege of participating in the assembly, integrations and first light of AMBER.

I joined ESO as a Fellow in June 2006. My duties consisted of observing 80 nights per year at the VLTI and being instrument Fellow for the AMBER instrument. I am now finishing my third year of a postdoc in Chile and soon will be moving back to Europe. One of the good things about the

ESO Fellowship in Chile is that it allows us to do a fourth year postdoc devoted fulltime to research in any of the ESO member countries. I am moving to Northern Ireland, where I will be kindly hosted by the Armagh Observatory for the next year. After five years in Chile it is now time to start a new adventure in a different place. I am looking forward to the green landscape, but will, for sure, miss the unusual workplace I have had for the last few years where no living species can survive, apart from astronomers!

(Printed in *The Messenger*, 136, p. 78, 2009)

Fellowship period: 2006–2009
Location: Chile
Current Institute: University College Dublin

Thomas Stanke

Looking out of the window I can see buses bringing the workers from the Chajnantor Plateau back to their “low-elevation” camp (3000 metres above sea level). My functional duty work at ESO is to do service observations at the APEX telescope, located right next to the construction site of the ALMA array, at an elevation of 5100 metres; if I have written anything that seems stupid, I can easily blame it on the lack of oxygen (I just walked up three steps to measure my blood oxygen, it's 85% of normal, pulse is at 110 bpm, and that's without actually doing anything). Working at APEX is one of the few possible ways to see Chajnantor and the progress of work up here on a regular basis, and yes, there is progress. Every time I come back, there are a few more antennas around, more foundations, construction spreading out, and more speed limit signs on the ALMA road up to Chajnantor!

Working at APEX, i.e., being sort of a radio astronomer, however also means being a bit of a freak within ESO, although the community of freaks (those radio astronomers, just imagine, they also observe during daytime...) is growing, with ALMA nearing the beginning of operations. As my research interests are in the field of star formation, I use observations covering a wide wavelength range, so luckily, I'm only half of a freak, doing a fair fraction of my work at infrared and optical wavelengths.



Thomas Stanke

While I did of course look at the skies as a kid, with binoculars, or without, I never really planned to become an astronomer. First, I wanted to be an archaeologist (well, astronomers and archeologists do pretty much the same — try to find out about the big picture with very little information). But after a while, I became more and more interested in physics, so I studied physics in Würzburg. I always thought that it could be interesting to work in research, either on the small scale (particle hunting), or on the large scale. But it was not until I had to look around for a theme for my diploma thesis that I got hooked up with astronomy, after I had found the way to the Würzburg University Astronomy Department, hidden on the fourth floor of the mathematics building. There, Professor Yorke told me that yes, there may be some things to work on, I should talk to Herr Zinnecker, but NOW, as he was just back from travelling, and would leave for the next trip in two hours, and indeed, Herr Zinnecker found, after some digging, a DAT tape with some 10 μm data of binaries I could work on.

Starting from 10 μm , I then first worked my way to shorter wavelengths, and did my PhD thesis on a *K*-band (not the radio but the infrared one) imaging search for protostellar outflows in Orion, following Herr Zinnecker to Potsdam. The original idea of that project was to use the outflows as pointers to protostars, but as I collected my data at the Calar Alto Observatory (which can be a pretty good site, but in December there's a fair chance of getting stuck in fog for days...), the millimetre guys had time to develop ever larger bolometer arrays, and in the end I started to search for protostars

directly, shifting to wavelengths 500 times longer and moving to the Max-Planck-Institut für Radioastronomie in Bonn. Apart from regular observing trips to the IRAM 30-metre telescope, I also took the opportunity to observe at a real radio telescope in Effelsberg, and found it very impressive that one can indeed observe in pouring rain (those radio astronomers...). During that time, I started to observe my dear outflows also in millimetre CO lines, and envisaged the higher excitation lines, possibly at higher resolution, which led to the next move to the IfA in Hawaii. The main motivation was to use the Submillimeter Array (SMA), but as the IfA has access also to all the other nice things on top of Mauna Kea, I had a lot more toys to play with. And Hawaii is not only nice for doing astronomy. However, it's also a pretty expensive place to live. So, after two years, when I was offered the ESO Fellowship, we were among the very few people who are delighted to see that the rents in Munich and surroundings are quite affordable (well, at least if you have the Hawaii experience...).

But now, my Fellowship is about to end. I have found ESO a very interesting place to work, having contact with the progress on the next generation of major observatories almost every day. Still, having left Hawaii's beaches and telescopes behind hurts a bit (mostly the beaches, particularly for my family), but we also love the Biergarten in Garching. Maybe you should not be too surprised then, if some day you see an original Bavarian Biergarten.

(Printed in *The Messenger*, 136, p. 79, 2009)

Fellowship period: 2006–2009
Location: Garching
Current Institute: ESO

Silvia Leurini

I studied physics at the Università di Cagliari, in sunny Sardinia, where I was raised, but I was soon fascinated by astronomy, probably because I found it, and still do, the most romantic and philosophical branch of physics.

I then moved to Bonn, where I obtained my PhD under the supervision of Karl



Silvia Leurini

Menten at the Max-Planck-Institut für Radioastronomie. During this period I started working on massive star formation, mostly through spectroscopic observations at millimetre wavelengths. Thanks to this, I gathered extensive observational experience and visited beautiful countries with millimetre-wavelength telescopes, such as Spain, Hawaii and Australia. I finished my PhD at the end of 2004, when the APEX project was in its final commissioning phase. Therefore I decided to stay in Bonn as a postdoc and took part in the APEX project. I was so fascinated by the Atacama desert and by the challenge of working at 5000 metres altitude to observe at high frequency, that in 2006 I decided to stay in Germany, despite the weather, and took up a Fellowship at ESO in Garching in order to be directly involved in the next project in the Atacama, ALMA.

Since arriving in Garching I have continued my work in star formation, but I have expanded my studies to shorter wavelengths. For my functional work I joined the ESO ALMA team as European User Support specialist for the Common Astronomy Software Applications (CASA) package. I also had the unique opportunity to work at the ALMA Test Facility in New Mexico on testing of the ALMA prototype antennas.

ESO offers an incredibly stimulating scientific atmosphere with many seminars and lively discussions at morning coffee. The diversity of research carried out by ESO researchers is something that will be hard to match anywhere else. I will be sad to leave Garching behind, but I am excited about moving on to the next

chapter of my career. I will join the Max-Planck-Institut für Radioastronomie in Bonn as a staff member — back to a research institute where radio astronomy is not an exception!

(Printed in *The Messenger*, 137, p. 59, 2009)

Fellowship period: 2006–2009
Location: Garching
Current Institute: MPIfR, Bonn

Masayuki Tanaka

I did my undergraduate studies at the Tohoku University, which is in the northern part of the main island of Japan. After that, I moved to the University of Tokyo to start my PhD there. My thesis research focused on observations of distant galaxy clusters using the Subaru 8.2-metre telescope. After receiving my PhD, I moved to Germany and started my first postdoc at ESO.



Masayuki Tanaka

This is the first time I have worked at an international institute. I am quite impressed by the wide range of science covered at ESO and the neighbouring institutes, and I find ESO a very stimulating environment. It is great to have so many seminars and visitors every week in Garching. Soon after arriving at ESO, I started new collaborations with people at ESO and the local institutes.

I have continued to work on galaxy clusters, but the focus has shifted to high redshift clusters, particularly those at $z > 1$. When I started my Fellowship, I could not imagine that I would be work-

ing on $z \sim 2$ galaxies. The VLT has excellent instruments for this work, and I am fortunate to have access to the VLT to further my science.

I am a VLT user, and, at the same time, I am a VLT astronomer. I am one of the relatively few Garching Fellows who are brave enough to take up functional duties on Paranal and I have spent quite a bit of time on the mountain. Paranal is an amazing place in many respects — beautiful sunsets with the green flash, an amazing night sky, world-leading telescopes, hard-working people, scary earthquakes, incredibly sweet desserts at the cafeteria, etc... etc... It is great experience for me to operate the VLT for so many nights.

Later this year, I will go back to Tokyo to take a small step forward in my career. I am very excited to move on to the next chapter in my life. But it will be sad to leave the Biergartens behind, but my friend told me that there is an Oktoberfest in Tokyo. I shall wear Lederhosen and say “Prost” in Tokyo!

(Printed in *The Messenger*, 137, p. 59, 2009)

Fellowship period: 2007–2009
Location: Garching
Current Institute: IPMU, University of Tokyo

Giuseppina Battaglia

I have always been amazed by the monumental efforts we humans make to understand our own nature and the world around us. When I think of astronomy, I think of us, small humans on a small planet, trying, since the dawn of time, to decipher the mysteries of the Universe — notwithstanding our limited means — yet trying, striving to understand something so immense, so complicated and remote, and yet so fascinating, or probably so fascinating exactly because it is so unreachable. For me, this is what astronomy is about.

I took my first steps as a professional astronomer at the University of Bologna where I did my undergraduate studies. In 2002 I moved to Groningen, in the Netherlands, first for a few months to work on my Masters project, and then stayed for four years to start my PhD studies. The first project I carried out as



Giuseppina Battaglia

a PhD student at the Kapteyn Astronomical Institute was a study on the dark matter content of the Milky Way, analysing the kinematics of objects in its stellar halo out to a very large distance from the Galactic Centre, 120 kpc! For the main part of my project I worked on a sample of dwarf spheroidal galaxies, nearby small satellite galaxies of the Milky Way, using spectroscopic data from VLT/FLAMES for hundreds of individual stars in these systems. I used these data to derive the dark matter content of these galaxies, among the most dark matter dominated systems known to date, and to study their chemical and kinematic properties. I cherish the years I spent in Groningen, not only for the highly stimulating and friendly work environment of the Kapteyn Astronomical Institute, but also because of the many people I met along the way who made me feel at home and made my time there unforgettable.

In 2007 I moved to Germany to join ESO as a Fellow. Currently at ESO Garching I still like to pursue the kind of research I carried out for my PhD and I am extending it to the types of dwarf galaxies that are found at the outskirts of the Local Group, the dwarf irregulars and the so-called transition dwarfs, with the aim of understanding whether the different dwarf types that we observe today may be the descendants of similar progenitors, or are actually intrinsically different systems. As part of my functional duties at ESO I am performing simulations to explore the feasibility of resolved stellar population studies at large distances using the European Extremely Large Telescope (E-ELT), the project for the largest ground-based optical and infrared telescope in the world.

Working at ESO not only gives me the chance to make my own small contribution to such an exciting project as the E-ELT, but also to be in one of the places where the future direction of European astronomy is decided and where a great part of the action takes place. Definitely a very interesting place to be!

(Printed in *The Messenger*, 138, p. 38, 2009)

Fellowship period: 2007–2011
Location: Garching
Current Institute: INAF–Osservatorio Astronomico di Bologna

Blair Conn

As an Australian coming to Chile there were a lot of familiar aspects of life waiting for me. I'd travelled a lot in Chile in 2001 and knew what to expect from the scenery and that, like Australians, Chileans are fairly laid back. The seasons weren't backwards and when gazing up at the night sky from La Silla, the stars were reassuringly like home and Christmas in summer is perfectly normal. Originally scheduled for Paranal, a hasty meeting was organised soon after I arrived and it was decided I'd go to La Silla to work on the Wide Field Imager at the MPG/ESO 2.2-metre telescope. In the three years since then I've had a wonderful experience at the La Silla Observatory and will miss it dearly.

As I sit here writing this, on the 9th of August, my last night as a support astronomer on La Silla, it certainly feels sad to be leaving this place. In all my visits here I've never grown tired of the mountains — they have this quiet majesty that creates a very special atmosphere of calm and tranquility. The gentle hues of the desert slowly turn red with the setting Sun and make it really feel like a privilege to be a witness to this transformation. But the real show is at night, when the Moon is yet to appear, and the Milky Way stretches across the entire sky in one vast ceiling of stars. I am pleasantly surprised that after all this time up here I'm still amazed at how beautiful it is. It is probably time to leave astronomy if I ever get cynical about the night sky.

Most people I talk to agree that La Silla is one of the special observatories of the



Blair Conn

world, remarking that it has a real family atmosphere amongst all who work and visit here, and I think it's true. There is always a smile and a laugh accompanying any task and my time working closely with the telescope operators and the engineering staff has been a great learning experience and lots of fun. They have really shown me what it means to work at an observatory. The small, but dedicated, team of La Silla astronomers have been a wonderful support when the going got tough or when a healthy dose of humour was needed. I have often relied on them to help me find solutions to the tricky problems that surface from time to time.

Before coming to Chile I was doing my PhD at The University of Sydney and now, as I move into my fourth year as an ESO Fellow, I'm heading off to the Max-Planck-Institut für Astronomie in Heidelberg. There will be many new challenges ahead, least of all learning some German, and I'm excited about having the chance to live in Europe. I'm sure though that my time spent in Chile and especially here at the Observatory will stay with me. This place has become a second home to me and I'm already looking forward to when I can return.

(Printed in *The Messenger*, 138, p. 38, 2009)

Fellowship period: 2006–2010
Location: Chile
Current Institute: MPIA, Heidelberg

Thomas Bensby

Having entered a new decade twice within just a few weeks, I realise that time

is passing really quickly. It seems that we just came to Chile, and now it's already time to leave. However, considering that the family has grown here in Chile, and that the most recent addition is almost two years old, it must be true. Three years in Chile, but where did the time go? The short answer: Paranal!

Longer answer (with a prelude): During my PhD, which I finished in 2004 at Lund Observatory in Sweden, I worked on detailed elemental abundance studies of the Galactic thin and thick discs. It was during this time I had my first observing experience with the FEROS and the CES spectrographs on the ESO 1.5-metre and 3.6-metre telescopes on La Silla, and the SOFIN spectrograph on the Nordic Optical Telescope (NOT) telescope on La Palma. Before coming to Chile in 2007 as an ESO Fellow I spent three years as a postdoc at the University of Michigan. Originally I was supposed to do theoretical work on models of chemical evolution, but, as Michigan is a partner in the Magellan consortium, I could not resist applying for observing time. I ended up doing a lot of observing (and less modelling), with the MIKE and the IMACS spectrographs (the latter with multi-slit masks). Naturally, as a consequence of my experience with high resolution spectrographs I have, during my time here at ESO, been a support astronomer on the VLT Kueyen (UT2) telescope with its excellent set of instruments, including the UVES and FLAMES spectrographs. Now with the X-shooter spectrograph installed, UT2 is a Mecca for spectroscopists. I have been fortunate to have been a (small) part of UT2 for a few years,



Thomas Bensby and family

and am really looking forward to coming back as a visiting astronomer.

Outside of Paranal, Chile has offered, given, and also taken a lot. Six months of summer is great, living close to the Andes with spectacular natural environment all around is great, having vineyards everywhere is great, 45 minutes to the ski resort is great, and one hour to the beach is great. Being robbed of all valuables upon arrival at the airport is of course bad. The greatest gift here in Chile has been our third daughter Mira, the only Chilean in the family. Even though the Spanish language has (at least for me) not been easy, our other two daughters Sofia and Alva are, after our “*tour de las Americas*”, trilingual, happily speaking Swedish, English and Spanish. So, after six years “on tour” it is with mixed feelings we go back. Anyway, it will be great to once again be able to eat good cheese and feast on pickled herrings.....

(Printed in *The Messenger*, 139, p. 58, 2010)

Fellowship period: 2007–2010
Location: Chile
Current Institute: Lund Observatory

Paula Stella Teixeira

My story begins when I was told, as a very young child, what my name, Stella, meant. I have been fascinated by the stars ever since! I was born and spent my childhood under southern skies, and I remember identifying the Magellanic Clouds and the Coalsack, knowing these were famous astrophysical objects, but not knowing (yet!) what exactly they were. My family encouraged my interest, particularly my brother, who gave me a telescope when I was seven years old and who often took his little sister to science museums. My curiosity made me continue to wonder about the Universe, and so I grew up with a dream of becoming an astronomer.

I embarked on a path which began with a physics undergraduate degree at the University of Lisbon, Portugal. I stayed on for an MSc in astronomy and astrophysics and enrolled in a PhD programme at the same university. At the beginning of my doctoral studies I was awarded a

Smithsonian Predoctoral Fellowship, and off I went to the Harvard–Smithsonian Center for Astrophysics, in Cambridge Massachusetts, USA to carry out my research for the next five years. It was an extremely rewarding experience, both on a professional and personal level! I finished my PhD in the fall of 2008 and moved to Garching for an ESO Fellowship.

My research is primarily based on observational studies of low- and intermediate-mass star formation. I began working on ESO New Technology Telescope near-infrared imaging data during my MSc, and progressively have been shifting to longer and longer wavelengths: during my PhD I analysed mid-infrared Spitzer data and ended up venturing into the (sub)millimetre realm with the SubMillimeter Array (SMA). I am interested in many aspects of star formation, namely, the collapse and fragmentation of filamentary molecular clouds, proto-binaries, the characterisation of young star-forming clusters, and the evolution of circumstellar discs and planet formation. I approach these topics from a multi-wavelength perspective.

ESO offers a wide spectrum of opportunities for me to expand my knowledge and horizons. Regarding my functional duties, I am involved with the second generation VLTI PRIMA instrument and am part of the VISTA Science Verification Team. I am also co-organising a weekly meeting, the Informal Discussion, which has allowed me to interact with many visiting astronomers and learn about multiple aspects of the science being pursued at ESO and/or using ESO telescopes.



Paula Stella Teixeira

The future of astronomy is very promising, with ALMA coming online soon and the development of ESO’s E-ELT. I am very fortunate to be able to pursue my childhood dream and hope to continue on this journey. One of my specific goals is to use these upcoming cutting-edge facilities, combining a multi-wavelength approach with stunning angular resolution!

(Printed in *The Messenger*, 139, p. 59, 2010)

Fellowship period: 2008–2012
Location: Garching
Current Institute: Astronomy Department, University of Vienna

Nadine Neumayer

Looking at the crystal-clear winter night skies I so often enjoyed — growing up in the middle of nowhere in south-west Germany — I always asked myself where all “this” comes from and where it will all go. I was fascinated by the fact that our planet Earth is just a tiny blue dot orbiting a star amongst millions of stars in a galaxy amongst billions of galaxies in a possibly endless Universe. This thought still blows my mind, and makes me want to learn more about the origin and evolution of the Universe.

After high school I wanted to find out what the life and work of an astronomer would be like. So I travelled to Chile to visit the La Silla Observatory (Paranal was still under construction at that time). Little did I know that I would end up working at ESO!

With a deep wish to become a professional astronomer, I went to the University of Heidelberg for my undergraduate studies. Afterwards I moved to Cambridge, in the United Kingdom, for one year to take Part III of the Mathematical Tripos. It was during that time that my interest in black holes arose. Back in Heidelberg I finished my Diploma (MSc) with the thesis that led to my first publication — signed with my maiden name Nadine Häring. I had found my heart in Heidelberg and stayed at the Max Planck Institute for Astronomy for my PhD, studying the nucleus of Centaurus A in great detail.



Nadine Neumayer

Half way through my PhD I had my first daughter, Johanna. With the great support of many people and a fellowship from the Christiane Nüsslein-Volhard Foundation, I finished my PhD thesis at the beginning of 2007, already knowing that I would start an ESO Fellowship at the end of the year. My second daughter, Lena, was born just a few months before I started my Fellowship at ESO. Luckily, ESO contributes to a daycare unit together with the neighbouring Max Planck Institutes, and I was more than happy to receive confirmation that both girls had a place there.

My research focuses on the co-evolution of black holes and galaxies and I am especially interested in how black holes get to the centres of galaxies in the first place. Along with my research I also have functional duties at ESO where I am involved with the education and Public Outreach Department, and I am part of the VISTA Science Verification Team. I am also co-organising the monthly Wine and Cheese Seminar, which has allowed me to interact with many visiting as well as ESO astronomers.

ESO is a great place to be scientifically, but also because it is a very family friendly employer. I am happy to be part of it and to have the opportunity to live my childhood dream!

(Printed in *The Messenger*, 140, p. 63, 2010)

Fellowship period: 2007–2010
Location: Garching
Current Institute: ESO

Irina Yegorova

Like most astronomers I was fascinated by the night sky from my childhood. In addition, visiting a planetarium at the age of five, and a passion for science fiction during my school years, made me choose the profession.

I did my undergraduate studies in my home city, at the Odessa National University (Ukraine). My master's thesis was dedicated to studies of sodium enrichment of stellar atmospheres. My first observational experience at the Crimean Observatory just confirmed my desire to be an astronomer. Later I moved to Trieste, Italy, to do my PhD thesis at SISSA-ISAS (International School for Advanced Studies). My PhD project was dedicated to studies of dark and luminous matter in spiral galaxies. Although SISSA-ISAS is a theoretical institute, I always tried to expand my research



Irina Yegorova

towards the observational side. I remember writing a proposal for VIMOS and later reducing the data after obtaining observing time. At that time I could not imagine that only a few years in the future I would be supporting VIMOS.

I joined ESO in July 2008 as a Fellow. Since my first visit to the Paranal Observatory, I have been enchanted by this place. It is so special: modern technology telescopes, the deep blue sky and the red stony landscape that gives you a feeling of being on the planet Mars, rather than on Earth. For functional duties I support Melipal (UT3), and I am the instrument Fellow for VISIR, the mid-infrared

spectrometer and imager. Working at Paranal is challenging, but also very enthralling. It gives me an opportunity to appreciate the latest astronomical investigations, from the Solar System to redshift 8, and beyond.

When I am at Paranal I try to use any free minute to look at the stars. The southern hemisphere night sky is one of the most amazing things that I have ever seen. Looking at it reminds me of how lucky we are to uncover the secrets of the Universe. The visible sky is so beautiful and knowing that it represents only a small fraction of what can be seen makes it even more enigmatic.

Despite its geographical isolation, Chile has become a very active centre for astronomy, with such important sites as the VLT and ALMA and in the future the E-ELT. Therefore Chile offers plenty of opportunities to meet astronomers from institutes worldwide. Our science life in the Vitacura office is really vivid. Enthusiastic observers coming back from their campaigns are excited to share the first results of their observations. The Vitacura office is full of enthusiastic people, and you can feel at the forefront of both technology and research. This gives me inspiration for new ideas for my research. My current scientific interest covers the wide topic of galaxy formation and evolution — starting from giant spiral galaxies and finishing with tiny dwarfs. I study the dynamical properties of these objects, together with their chemical evolution history. Understanding the origin of spiral galaxies means understanding our own origin as inhabitants of the dearest disc galaxy to us, the Milky Way!

(Printed in *The Messenger*, 140, p. 64, 2010)

Fellowship period: 2008–2012
Location: Chile

Pamela Klaassen

Picture it: the first day of school in suburban Toronto, 1996. A physics teacher at the front of the classroom with a bow tie and monotone voice (think Ben Stein in Ferris Beuller's *Day Off*), and a 17-year-old girl sitting down at her desk saying, "Well, let's see if I like this, 'cause it's what I'm

doing with the rest of my life". And so, my career as an astronomer began.

A few years later, I did my undergraduate and Master's degrees at the University of Calgary. As an undergraduate, I did manage to do a few nights of observing at an optical telescope, but I soon swayed over to the dark side (radio astronomy), and haven't really looked back since. Then one day, on the road up to the summit of Mauna Kea to start some observations on the James Clerk Maxwell Telescope, my supervisor (Rene Plume) asked me where I wanted to do my PhD. I think he was trying to get rid of me. Apparently though, some good decisions CAN be made at 4000 metres, because I contacted Christine Wilson later that evening, and started as her PhD student about a year later; with the caveat that she would be on sabbatical for my second year. This gave me license to go on a sort of graduate student sabbatical of my own, and I headed to the Harvard-Smithsonian Center for Astrophysics for a one-year Submillimeter Array (SMA) pre-doctoral fellowship (with Eric Keto). Instead of being one of three radio astronomers on campus, I was in a building dedicated to radio astronomy. It was great! After that year, I dutifully returned to McMaster University with a new-found appreciation for radio interferometry. Two years later (which takes us to 2008), I finished my PhD, and moved to ESO.



Pamela Klaassen

For most of my career, I've been studying the gas dynamics in regions of our Galaxy forming massive stars. I started out only studying the large-scale outflow structures. But, as I gained knowledge, I

started asking more questions, and writing more observing proposals, and asking more questions, and... the cycle continues to this day. I've now broadened my research interests to studying the dynamics of the gas in a variety of ways. This includes not only looking at the outflowing gas, but the infalling gas and rotation in and around the star-forming regions. I do this by looking at the small-scale structures with interferometers, and the large scale structures both with single-dish telescopes and combinations of interferometers and single dishes (to see the large-scale structures at high resolution). Recently, I've started probing the relationship between the ionised and molecular gas in regions forming massive stars, and how the bulk gas kinematics described above change across the ionisation boundary. (FYI — it doesn't look like much changes!)

Since arriving at ESO, I've become involved in the ALMA project, and have had the opportunity to learn all about the software under development by becoming a tester of the Observing Tool, and giving lectures on how to use the data reduction software (CASA). I'm really looking forward to putting the skills I've learned here at ESO to good use when ALMA comes online next year.

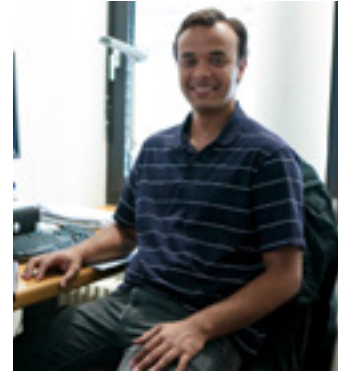
(Printed in *The Messenger*, 141, p. 53, 2010)

Fellowship period: 2008–2011
Location: Garching
Current Institute: Leiden Observatory

Rodolfo Smiljanic

When I was eleven years old, I had the chance to do a course on basic astronomy at the planetarium in my home town in Brazil. There I also looked through a telescope for the first time. The images I saw that night are still imprinted on my mind. Two years later, I read in a magazine an article entitled: "How to become a professional astronomer". That was the true turning point, where the path to becoming a professional astronomer became clear to me.

This path first led me to the Valongo Observatory of the Federal University of Rio de Janeiro for an astronomy under-



Rodolfo Smiljanic

graduate degree. I first wanted to be a cosmologist, but that changed in my first month of studies. During a class I was told that it was possible to infer the chemical composition of the stars from their spectra! I was so excited by this amazing idea that I immediately knew that my days as a cosmologist were over; I would become a stellar astrophysicist. There I had my first research experience, studying the abundance of heavy s-process elements in chemically peculiar barium giant stars. For this research I analysed FEROS spectra, and that was probably the first time I heard about ESO. The years I spent at the Valongo Observatory were very important for me and I cherish them a lot.

Later I moved to the University of São Paulo, first for an MSc in astrophysics and then for a PhD. During those years I changed my focus from the heavy elements to the lighter ones. It was during my PhD that I had my first chance to come to ESO. In 2006, I came with a Brazilian studentship to stay for one year and work on the use of stellar beryllium abundances as a cosmochronometer. The scientific environment in ESO made a great impression on me. I went back to Brazil to finish my PhD, hoping that one day I would be able to come back to ESO.

The chance for that appeared one month after my PhD defense. On the day before my birthday I received the Fellowship offer, which I promptly accepted. I started as a Fellow in Garching in October 2009, after a nine-month postdoc in Brazil. In my research, I use high resolution spectroscopy to determine stellar chemical abundances and investigate the physical

processes affecting the structure and the evolution of low- and intermediate-mass stars. I am also interested in understanding the chemical evolution of the Galaxy better. For my functional duties I joined the User Support Department. I am now helping to support service mode observations using UVES at the VLT. It was a long and challenging, but also rewarding, path from a small telescope and a planetarium to being part of ESO, a world-leading observatory where I can work with one of the largest and most modern telescopes ever built.

(Printed in *The Messenger*, 141, p. 53, 2010)

Fellowship period: 2009–2012
Location: Garching
Current Institute: Toruń Centre for Astronomy

Margaret Moerchen

I grew up in central Texas, where city lights frequently obscured the nightly show of constellations. (While we proudly refer to Texas as The Lone Star State, it isn't for this reason!) When it was time for a meteor shower, I could make a short drive into the hill country where a much richer sky was revealed — and perhaps it's because the stars weren't always in plain sight that these glimpses were so inspiring.



Margaret Moerchen

These night-time excursions continued while I did my undergraduate coursework at the University of Texas at Austin. I then found an even darker sky in the Davis Mountains, home of McDonald Observa-

tory, where I had my first experience using a “big” (0.75-metre) telescope. After graduating, I took my first step into mid-infrared astronomy by working on the design of EXES (Echelon Cross Echelle Spectrograph), a spectrograph that will soon fly on SOFIA, the Stratospheric Observatory for Infrared Astronomy.

Wanting to continue in the hot field of the thermal infrared, I went to the University of Florida to participate in the building of mid-infrared instruments such as T-ReCS (Thermal Region Camera and Spectrograph) for Gemini South. I spent five monsoon seasons in Gainesville, where my thesis research employed T-ReCS and other mid-infrared cameras to study the architecture of young planetary systems by determining the location of warm dust within them. At the same time, I had the opportunity to become involved in the development of CanariCam (presently in the commissioning phase), the mid-infrared facility instrument for the Gran Telescopio Canarias, the 10.4-metre segmented mirror telescope on La Palma.

After attending the Observing Planetary Systems workshop at ESO Chile in 2007, I thought this would be a fantastic place to combine the pursuits of both scientific research and instrumentation development. I became even more sold on ESO after I had the chance to visit Paranal to assist in a post-intervention characterisation of VISIR. Now, almost three years later, I'm back at the VISIR console as instrument Fellow and am part of the team working on its exciting upgrade project. My functional duties include support of observations not only with VISIR, but with all instruments at Unit Telescope 3 (UT3) and UT4, and at UT4 I've been able to learn more about adaptive optics and the near-infrared regime. Performing a wide variety of science programmes at the two telescopes has provided a unique perspective on the power of 8-metre telescopes, and welcoming visiting astronomers and hearing enthusiastic detailed descriptions of their projects is one of the most rewarding aspects of the support work. In fact, even driving astronomers up or down the mountain in the middle of the night offers one of the benefits we sometimes forget — to look at the night sky! I've seen the most spec-

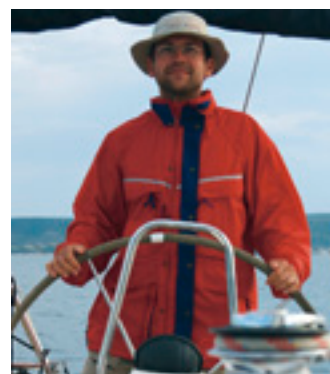
tacular crumbling-fireball meteors of my life while on the summit road, and they're an impressive reminder of why I travelled thousands of miles to stay up at night in the middle of the desert.

(Printed in *The Messenger*, 142, p. 47, 2010)

Fellowship period: 2008–2012
Location: Chile
Current Institute: Space Telescope Science Institute

Davor Krajnović

On a warm summer night, in the company of a dentist, a physician and a manager, in the cockpit of a sailing boat that rocks slowly, while a breeze brings the smell of pine trees and the buzzing sound of a few persistent cicadas, and the stars shine on us with the intensity of a crystal-clear night, the dentist concludes: “What a good job you have: looking at the stars!”



Davor Krajnović

I often ask myself, how many decisions I made to get here. Until I was more than half way through my university physics degree I was not thinking of being a professional astronomer. I had not even looked through a telescope until about that time. One of the first convincing moments was when I joined a group of fellow students on a visit to the observatory in the sleepy town of Višnjičan in Croatia, where amateur astronomers were becoming professionals in their achievements of spotting Near Earth Objects. There I had a first glimpse of the life of an astronomer: it was not just star-gazing. There was a lot of careful and patient

taking of pictures, comparing them, and working with different image-processing software, and so on, throughout the night, until the rain came. It was fun!

The starting point in my career was the acceptance to do a PhD at the Leiden Observatory. Very early on, I went to observe with the SAURON integral field unit mounted on William Herschel Telescope on La Palma. The fifth observing run of the SAURON Project was 14 nights long and a number of team members came to share the time, but I stayed for the full run. Two weeks on the mountain, not having to close the dome once, catching as many photons as the detectors allowed, from dusk until dawn, and, just before going to sleep, looking at the shadow of the mountain on the clouds or the Atlantic Ocean, this was something extraordinary. I was hooked.

I spent four wonderful years in Leiden. My thesis consisted of the analysis of the nuclear properties and dynamical modeling of nearby early-type galaxies, as well as developing a method to analyse the two-dimensional kinematic maps coming from instruments such as SAURON. After the PhD, I went to Oxford where I stayed for five years. For the last two I was an Extraordinary Junior Research Fellow of Queen's College (the "Extra" actually means they were not paying my salary, but they did take care of me as a college does). There I started working in the near-infrared and with laser-guided adaptive optics observations, which unfortunately also meant that trips to the telescopes became rarer. A large part of my science, however, concentrated on a new and exciting project, the ATLAS3D survey, which I am co-leading. This is a multi-wavelength survey of a complete sample of nearby early-type galaxies, and it includes a large team of observers and theoreticians. The first results are coming out right now and it is amazing to see how the initial ideas have turned into science.

It is now about ten years since I left my hometown and I am entering my second year as an ESO Fellow. Astronomy really is not just star-watching, and ESO is a prime example of the complexity needed for successful astronomical operations. I feel rather privileged to be able to par-

ticipate in it. On a warm summer night, however, when a friend says it is a good job, this star watching, one has to make a decision: to agree, or say: "Well, actually I study black holes ..."

(Printed in *The Messenger*, 142, p. 48, 2010)

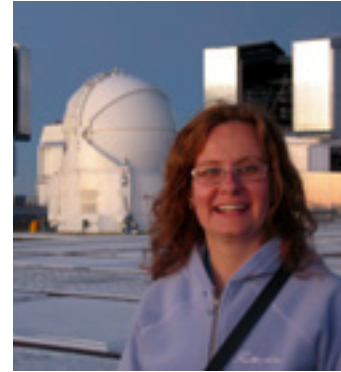
Fellowship period: 2009–2012
Location: Garching
Current Institute: AIP, Potsdam

Andrea Ahumada

I have always been fascinated by astronomy. As a young girl, when I watched the first episode of *Cosmos* (by Carl Sagan), I had a dream: to become an astronomer. Now, after almost 30 years, I am writing these lines as an ESO Fellow. This achievement was possible because my parents and my oldest sister were pivotal in my career: they believed in me and supported my dreams.

Cordoba (Argentina), where I was born, has a long and proud history in astronomy, so, I had the opportunity to study astronomy at the FaMAF (Facultad de Matemática, Astronomía y Física), and finally, under the supervision of Professor J. J. Claria, I obtained my PhD at the National University of Cordoba (Argentina) in 2004. Since then, my main topics of research have been Galactic open clusters and star clusters of the Magellanic Clouds. During my career, as an observational astronomer, I have been able to observe with many different telescopes, and fortunate to go from small (at the Bosque Alegre Observatory, Argentina) to big ones (at Paranal Observatory). I remember the first time that I visited those telescopes, I was fascinated!

I joined ESO in April 2008, and as an Argentinian, I only had to cross the Andes to come to Chile. With functional duties at Paranal Observatory, where I work with the world's most powerful telescopes and instruments, I have learnt new technical skills, with the opportunity to observe, in the same night, with different techniques, a large spectrum of astronomical objects, from comets to very distant objects, such as gamma-ray bursts. During the night shifts, I am the support astronomer for Antu's (UT1) instruments.



Andrea Ahumada

After all this time in Paranal, I still continue to be amazed at how unique it is to spend a night there.

Working at ESO has been very beneficial for my development as a scientist, providing me with important opportunities to advance in my research and to expand my network of scientific collaborations, while continuing with the old ones. ESO has also given me the opportunity to do outreach. I feel that I am lucky to do what I do for living, so outreach is very important to me, because in this way I can give something back to people.

In two months I will move to Bologna Observatory (Italy) for my fourth year as an ESO Fellow. This is a wonderful scientific opportunity for me because I have started working on the BOCCE (Bologna Open Clusters Chemical Evolution) Project. In Bologna there will be new challenges, and I am very happy about having the chance to live in Italy, where my great-grandparents came from.

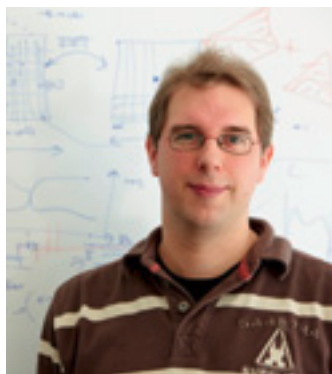
While I am writing this, my last *turno* at Paranal is coming up soon. I feel strange and a little sad to be leaving. Most of those whom I have met in Santiago and Paranal are really nice people; working here I had the opportunity to make new friends, and also I had the chance to meet Juan Manuel. Memories of the three years that I have spent in this beautiful country will stay for ever in my heart.

(Printed in *The Messenger*, 143, p. 59, 2011)

Fellowship period: 2008–2012
Location: Chile
Current Institute: Observatorio Astronómico de Córdoba, Argentina

Bram Venemans

When I was around 12 years old, I became interested in astronomy for the first time. Amateur astronomers had organised a public viewing of a lunar eclipse, which made a big impression on me. Unfortunately, growing up in the light-polluted city of Amsterdam, often the Moon was the only object visible in the sky at night. I kept my interest in astronomy alive by reading lots of books, with topics ranging from a detailed description of the Solar System to the theory of the Big Bang. When I went to university, I had no doubt what I wanted to study, and in 1995 I started my undergraduate studies in astronomy at the University of Leiden. During the first few years of study I somehow was very certain I would finish my degree and start a career outside the academic world. This assumption turned out to be completely wrong ...



Bram Venemans

My ideas for the future radically changed when I was doing my Master's project at the Leiden Observatory. The research consisted of reducing multicolour imaging data. Shortly after choosing my project, my supervisor asked me whether I wanted to go for an observing run with the New Technology Telescope (NTT) on La Silla. Although scientifically the observing run was not a huge success (lots of clouds!), I thoroughly enjoyed the experience. Exploring various ways to get the best results and to make new discoveries fascinated me and by the time I finished my Master's thesis, I was determined to pursue a career in astronomy.

After finishing my degree in 1999 at the Leiden Observatory, I went to the University of Cambridge for a one-year Master's in astronomy working at a more numerical project. In 2000 I returned to Leiden to start my PhD project. The aim was to study the environment of powerful radio galaxies at redshifts between two and five by searching for overdensities of Lyman- α emission-line galaxies. My project got off to a flying start, as three months into my PhD our group received confirmation that our VLT large programme had been accepted. This meant that I had the opportunity to visit Paranal several times to obtain all the data I needed for my thesis. The observations went really well, giving me more than enough results to write several papers and to fill my thesis. After defending my PhD thesis in 2005, I went back to Cambridge, this time to work as a research associate at the Institute of Astronomy. My work there focused on studying galaxies and quasars at the highest redshifts ($z > 6$), using, amongst others, data from large public surveys like SDSS and UKIDSS.

As nearly all my research made use of large amounts of ESO data, applying for an ESO Fellowship was the obvious next step for me. Currently, I am in my third year as an ESO Fellow working in Garching. One of the great things about being at ESO is the possibility of attending many of the large number of interesting workshops and talks that are organised in the area each year. Besides continuing to study very high redshift objects, working at ESO also gives me the opportunity to be involved in the E-ELT project. I find it very exciting to be able to contribute to a project with such importance for the future of European astronomy. As an undergraduate student on my first observing trip I was thoroughly impressed by the size of the mirror of the NTT, so I can hardly imagine how it will be to stand next to a 42-metre telescope in (hopefully) a few years from now!

(Printed in *The Messenger*, 143, p. 60, 2011)

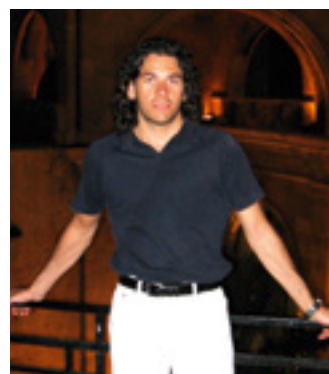
Fellowship period: 2008–2011
Location: Garching
Current Institute: MPA, Heidelberg

Ciriaco Goddi

I grew up on a Mediterranean island, the enchanting Sardinia (Italy), a place where the low level of air and light pollution reveals a beautiful, dark, star-filled night sky (almost) all year long. I remember, as a child, being always fascinated (and overwhelmed) by the vastness of the Universe. My passion for scientific subjects and some books read during high school (Weinberg and Hawking were among my favourites) determined my choice: I wanted to be a physicist!

I undertook a path which began with an undergraduate physics degree at the University of Cagliari in Sardinia. My Master's thesis was on astronomy, where I analysed mid-infrared data from planetary nebulae taken with the SWS spectrometer on board the ISO satellite. During my thesis work, I had the invaluable opportunity to visit ESO as a summer student. I had never been in a big institute at that time and I was overall so impressed by the scientific activity on campus, that once back at my home university I decided to enroll in a PhD programme in astronomy. The main goal of my PhD thesis project was to determine 3D gas dynamics in obscured massive star-forming regions. I learned the basics of radio interferometry, in particular very long baseline interferometry, which, despite requiring labour-intensive processing, allows images to be produced with the highest angular resolution in astronomy.

After finishing my PhD in 2005, I spent one year at the INAF–Osservatorio



Ciriaco Goddi

Astrofisico di Arcetri in Florence, just next door to Galileo's villa. There I joined the main research group on star formation in Italy, with whom I still collaborate today.

In the meantime, I was awarded a post-doctoral fellowship at the Harvard–Smithsonian Center for Astrophysics (CfA). I moved to Cambridge (Massachusetts) in 2006 where I lived for three years. The experience was very rewarding, both on a professional and a personal level. At the CfA I met prominent scientists, including authors of books I had studied, and also a Nobel laureate who was sitting just a few offices down from mine! My research there focused on the analysis of a large dataset of radio interferometric data aimed at a detailed study of an intriguing, yet enigmatic, region in the Orion Nebula. It is curious that the favourite constellation of my childhood, The Hunter, turned out to be my “pet source” as a professional astronomer. We also developed websites and animations for public outreach, a valuable way, in my view, to spread scientific knowledge among the general public.

I was awarded an ESO Fellowship in 2009 and I moved back to Europe. ESO offers an incredibly stimulating scientific atmosphere, with a remarkable diversity of research carried out by excellent astronomers and a rich diet of workshops, seminars, and lively discussions at morning coffee. As a co-organiser of the weekly Informal Discussion, I have had the opportunity to meet and interact with many visiting (and ESO) astronomers and to learn about many aspects of science that I am less familiar with.

One great thing about ESO is the close relationship between the science and the cutting-edge facilities. Soon after joining ESO, I was given the opportunity to go for an observing run at APEX. The experience turned out to be enriching beyond expectations and very exciting for many reasons: the impressive variety of science programmes observed (from Solar System bodies to high-redshift galaxies), the great team (family!) of staff astronomers and engineers/operators, the breath-taking night show of the Milky Way in the southern hemisphere, the majestic mountains and the “martian” landscape of the Atacama desert, and the challenge of working in the rarefied atmosphere at 5000 metres, just

one step away from the sky! I ended up spending approximately 80 nights observing in the Atacama desert. APEX is one of the special observatories in the world, and I will miss the real family atmosphere (and the famous asados!).

Now, while entering the second half of my Fellowship, for my functional work I will join the ALMA commissioning team, the biggest ground-based project in astronomy. I know that probably previous generations of astronomers, at different times, have said this already, but I truly feel we are in a golden age for astronomy. New upcoming facilities like ALMA will revolutionise our knowledge of the Universe and will bring great discoveries... And I feel rather privileged to be part of this revolution!

(Printed in *The Messenger*, 144, p. 52, 2011)

Fellowship period: 2009–2012
Location: Garching
Current Institute: JIVE, Dwingeloo

Petr Kabath

My passion for astronomy started in high school almost two decades ago, leading me to study physics, and especially astronomy, later. Currently, I am an ESO Chile Fellow trying to contribute to and unveil some of the most intriguing scientific topics of today, while working at the world-leading Paranal Observatory.

I was born in Brno, in the Czech Republic, where I officially started my astronomy career at the local public observatory in 1996. Years later, as my interest in astrophysics had steadily increased, I enrolled on a physics course at Masaryk University in Brno. After a year and a half I applied for an Erasmus Fellowship, which provides support for one year spent at foreign universities. Tempted by the rumours of the great student life abroad, I chose the Freie Universität (FU) Berlin, and Prof. Baumgärtel's group at the Department of Physical Chemistry, as my temporary home for the academic year 2002–3. Even though I then left astronomy temporarily, since I was investigating the nucleation rates of undercooled liquids at the FU (as part of my Master's programme), I thoroughly enjoyed my time



Petr Kabath

in Berlin. I was so impressed by the great city and its pulsating life that I decided to stay for six more years and I also met my future wife Martina there.

The year 2006 signified a swift return to astronomy when I landed a PhD position in Prof. Heike Rauer's group at the German Aerospace Centre Berlin (DLR). My astronomy career started over again with long observing runs on transiting exoplanets with the BEST telescope located at the Observatoire de Haute Provence (OHP), France. Subsequently, I exchanged the OHP trips for a significantly more distant destination, Cerro Armazones in Chile, now the chosen site for the future European Extremely Large Telescope. I was very much involved in the building, commissioning and setup of the new transit search telescope BEST II, which started to operate in 2007. Both telescopes were built to support the space mission CoRoT, which is designed to detect transiting exoplanets. So the outcome of my PhD thesis is a fully operational robotic telescope and the first detected candidates for transiting exoplanets.

Since the Chilean Atacama desert is officially the astronomical capital of the world, I was delighted to receive the offer of an ESO Fellowship in 2009. Currently, while performing operational duties at Paranal, I am assigned to the Unit Telescopes 4 and 2. Besides these functional duties, I am working on my own scientific research on exoplanets. My major focus is on the detection and physical characterisation of these distant worlds. Most recently, our team has been attempting to detect and characterise exoplanetary atmospheres

with near-infrared instruments, using mostly HAWK-I, ISAAC and SOFI.

ESO has given me a great opportunity to conduct my own research and to reinforce and foster collaborations. Even though I am developing my own scientific focus on exoplanetary atmospheres, I am still collaborating with my former colleagues on the BEST II telescope project. Furthermore, a couple of ESO proposals submitted for the current and upcoming observing period are a result of new and productive collaborations with my current colleagues at the ESO offices in Vitacura.

At present, I am mid-way through my four-year contract. I have not yet decided whether I would like to stay in Chile for the final year or go and spend the fourth year somewhere else. Nevertheless, while I am in Chile I am relishing the chance to experience this diverse culture, and appreciating the breathtaking natural beauty of this captivating country while simultaneously being part of ESO. Of course all that would not be possible without the great support from my wife Martina, to whom I am very thankful for her endless patience with me.

(Printed in *The Messenger*, 144, p. 53, 2011)

Fellowship period: 2009–
Location: Chile

Sergio Martin

I was born in Madrid, where the flag of the region consists of a plain crimson red background containing seven white stars representing the stars in the constellation of Ursa Minor (the Little Dipper). Even the flag of the city of Madrid shows the city's coat of arms where the seven stars of the constellation of Ursa Major (the Big Dipper) are depicted. Beautiful as it may seem, it may now be difficult to find someone who remembers the last time these stars could be clearly seen from the city, due to the light pollution related to modern living. It is thus difficult to understand how I chose to become an astronomer from such a star-deprived city! Actually I cannot remember the time when I took such a decision. At some point during high school I became intrigued by physics, and once I got to



Sergio Martin

university I just knew that astronomy was the only way ahead for me. Perhaps my spending most of my childhood summers in a small town in one of the darkest spots in Spain, with an overwhelmingly star-crowded night sky, had something to do with my decision.

So there I was on my way to an astronomy career. After my degree in physics, I spent one year at the Observatorio Astronómico Nacional, where I first got in touch with the experience of real research. It was during this time that I observed with a professional telescope for the first time. That was the 30-metre radio telescope located at an altitude of almost 3000 metres on top of the Sierra Nevada, near Granada in southern Spain. This telescope was, and still is, the most powerful single dish telescope operating at millimetre wavelengths, and I was there using it for my own research project! I clearly remember the first time that I was allowed to access the computer controlling the telescope and how I ran outside the building to see how that massive antenna started to move under my first observing command. I was observing, and I loved it!

I was then given the opportunity to move to Granada, one of the most beautiful cities in the south of Spain, to start my PhD at the Instituto de Radioastronomía Milimétrica (IRAM), an international research institute for radio astronomy that maintains the 30-metre telescope in Spain and the Plateau de Bure interferometer in the French Alps. I spent four years in Granada where, apart from carrying out my PhD research, I had to spend about a week per month as astronomer on duty at the observatory.

There I helped visiting astronomers with their observations, which allowed me to meet lots of people coming from institutes around the world and with a wide variety of science interests. Even though tiring at times, doing my PhD at an observatory was a great experience. On top of a great observing experience, I could also enjoy gorgeous mountain sunsets.

The main topic of my PhD was the study of the detailed chemical composition of the interstellar medium in the central region of galaxies. My aim was to understand whether the physical processes in these regions can be traced by measuring the abundances of different molecules. There are currently more than 50 molecules detected outside our Galaxy. If we manage to understand the origin of these molecules we can decipher valuable information about the regions where they formed.

My PhD years were over and it was time to move on. A couple of weeks after I defended my thesis I moved to the Harvard-Smithsonian Center for Astrophysics (CfA) in Cambridge (Massachusetts, USA), close to the lively city of Boston. The scientific life at the CfA, one of the biggest astronomy hot-spots in the world, was a whole new story compared with my previous experience. Hundreds of astronomers working on every field of astronomy resulted in dozens of science talks every week. Within the CfA, I joined the Submillimeter Array (SMA) as a Fellow. The SMA was the first interferometer operating at submillimetre wavelengths. The SMA interferometer combines the signal from eight 6-metre antennas to achieve high resolution astronomical images. Though located at an altitude of 4000 metres on top of Mauna Kea in Hawaii, we remotely controlled the array from Cambridge for the second half of the nightly observations.

Luckily, I had the opportunity of helping with the observations on site a few times a year. I have always felt the need to work close to the instrumentation and see this as key to keeping up with the daily operations. On top of that, I always tried to compensate a few days of intense night observation at high altitude with some time off in the amazing Hawaiian islands. During this time I extended my

molecular studies to the very central region of our own Galaxy, where I studied how the molecular gas is affected by the harsh conditions around the central supermassive black hole. Even taking into account the extreme weather conditions of the US east coast, the time in Cambridge was scientifically and personally enriching. But again, as part of this migrating job it was time to move on and I received the offer to work at ESO in Santiago, where I joined as an ALMA Fellow. This was the opportunity to take part in the commissioning of the largest astronomy project ever undertaken on earth, the Atacama Large Millimeter/Submillimeter Array. At an altitude of 5000 metres in the middle of the Atacama desert, one of the driest places in the world, hundreds of people are working hard to put together 66 large antennas working together as a unique and overwhelming instrument. Once ALMA is in operation, starting at the end of this year, we will be able to get a glimpse of the most distant galaxies formed in the early times of the Universe down to the planets forming around nearby stars. Being here in Chile during these exciting times, when ALMA is starting to peer into the Universe, is an extremely rewarding experience. We are indeed on the verge of the next revolution in astronomy and, as part of a worldwide astronomical community, I am keen to see what this amazing instrument will teach us about the origin of the Universe and the emergence of life.

It is actually difficult to figure out what will be the next step in my astronomy career: what one has to make sure is to enjoy every single step of the way.

(Printed in *The Messenger*, 145, p. 53, 2011)

Fellowship period: 2009–
Location: Chile

Joana Ascenso

“Gastronomy, how very interesting!”
“I agree, but I am actually an astronomer.”

It turns out that the idea of an astronomer evokes all sort of images, including those of the wacky astrologer, of the weatherperson, or even of a chef for the

more distracted, and it takes some explaining to convince people that an astronomer is just “a scientist”. Describing what a scientist actually does, that takes another session altogether. In my case it’s relatively easy: I study how stars form.

It’s hard to identify a single event that led me to astronomy. Having grown up in Coimbra, Portugal, where the sky was dark but not particularly spectacular, I cannot say it was the view from my window that decided my career. Maybe the rich tales of the stars from my grandparents’ village first made me realise that the Universe was not just stickers in the night sky, and I’m pretty sure that the big, heavy encyclopedia of the Universe in the living room had something to do with it too, since it was already missing a piece of the spine from being opened too many times when I was still a teenager. The affinity for science must have done the rest, because when the time came to choose a university degree, astronomy already sounded like the most interesting option. I did my undergraduate studies in mathematics, physics and astronomy at the University of Porto, during which time I also guided tours of the local planetarium, a very fulfilling experience that taught me the importance of communicating science. It’s remarkable how amazed people can be about even the simplest things in the Universe, especially the adults. Small children find it all normal, probably like learning that there are other cities besides their own, and I am sure I was more amazed by their replies than they were by my astronomical facts.



Joana Ascenso

I continued in Porto for my Master’s thesis on the spectral properties of young T Tauri stars, after which I started my PhD. I had two thesis supervisors, who inspired me greatly: Teresa Lago in Porto, and João Alves, first at ESO in Garching, and then Granada, which meant I spent my time between these three cities. The experience of living abroad and working in different institutes (Centro de Astrofísica da Universidade do Porto [CAUP], ESO and Instituto de Astrofísica de Andalucía [IAA]), all of which have excellent conditions but somewhat different work cultures, widened my perspective of science and impressed me beyond expectation.

My PhD thesis was about young massive star clusters still embedded in their natal clouds. I went about it from the observational perspective, which provided me with one of the best experiences I’ve ever had: to observe with a “real” telescope. To see the near-infrared images of my first cluster taken at ESO’s La Silla Observatory in Chile with the dark desert as background was exhilarating. Those were images no one had ever seen before, and they were mine for the taking. They proved to be as scientifically relevant as beautiful, and I spent the following four years observing more clusters at the ESO telescopes, and studying their properties, namely mass function and morphology, and whether it was possible to actually detect and measure spatial segregation of stars of different masses in massive clusters.

My first post-doctoral fellowship took me to the Harvard–Smithsonian Center for Astrophysics in Cambridge, to work on Spitzer data of the Pipe Nebula, a nearby dark cloud. I ended up learning more about linear regression than I had ever intended, in a successful attempt to prove that the extinction law toward high-density cores was different from that of the low-density interstellar medium due to grain growth. This project, as well as the analysis of more data on some of the clusters I had studied in my PhD, was prolonged through my next postdoctoral position, back in Porto.

I am now back at ESO, eleven months into my Fellowship, and enjoying every bit of it. Apart from doing science, I also work on the E-ELT (European Extremely

Large Telescope) project assessing science goals, conditions for the use of different instruments, and whatever is necessary to help get the telescope going. The contact with other Fellows, the varied and plentiful seminars and talks, and the proximity to the core of the observatory makes ESO a unique place for a postdoc.

(Printed in *The Messenger*, 145, p. 54, 2011)

Fellowship period: 2010–
Location: Garching

Olja Panić

There is nothing that makes our differences so insignificant as the infinite starry sky above our heads. Just a glance at it, and I see millions of reasons to do astronomy twinkling back at me reassuringly. Perhaps this glance was what has kept me going through many difficult moments in my life, as the starlight lit the way ahead.



Olja Panić

As dawn broke one September day in 2000, I left Bosnia, my friends and family, with no more than 2500 euros to my name, but with disproportionately more ambition and enthusiasm. I went to nearby Italy and enrolled in an undergraduate degree course in astronomy at the University of Bologna, the world's oldest university. This was an endeavour that changed my life completely: from a life with no prospects in a country torn apart by a recent war, to a beautiful medieval city in Italy where my new life began to develop, and offering so much

more. My interest in the chemistry that takes place in the cold dark corners of the Universe led me to do my MSc research in Florence, where I modelled the physics and chemistry of the dense prestellar cores.

Five years later, I was changing countries once more. I had just received my MSc degree cum laude and not more than two weeks later I took up a PhD position in Leiden. I followed the advice of my MSc thesis supervisors, who told me that Leiden was the best place for astrochemistry. To date they tell anecdotes about my fearless attitude of aiming only at the top places. I enjoyed my life in the Netherlands, the place that my husband and I soon called home, and the exciting research I was carrying out. Throughout my PhD I travelled a lot, an aspect of being an astronomer that I enjoy: exploring different cultures and traditions, speaking foreign languages and building collaborations with experts of varied personal and scientific backgrounds.

In my PhD thesis I investigated the structure of discs around young stars with high angular resolution observing techniques, mainly using millimetre interferometers. The three-dimensional structure of these discs holds keys to the conditions in which planets are formed, what the physical regimes of the gas and dust are during this process, and what chemical material will be delivered to the new planetary systems. In my papers, I brought modelling closer to observations by observing and modelling both gas and dust, a challenging and not frequently applied approach, in spite of the close interdependence of the gas and dust in discs.

For my next step, my heart was set on ESO, and ESO alone. In 2009 I received my PhD degree and though broken-hearted to leave Holland, I moved to my present job — that of a Fellow at ESO's Headquarters. Here, I am studying protoplanetary discs further, modelling discs and deriving observational constraints on their structure from both infrared and millimetre interferometry.

The stimulating environment at ESO, with the instrumentation experts at one's fingertips and a big star and planet for-

mation community in Garching and Munich, has allowed me to grow as a researcher and expand my observational expertise. For almost two years I have been organising star formation seminars, regularly bringing together dozens of people to discuss the newest science results. A great thing about my job at ESO is that I spend three months a year on duty in Chile, where I have a unique opportunity to participate in the commissioning and science verification of the Atacama Large Millimeter/submillimeter Array (ALMA). In my view ALMA represents the same for our modern world as the Egyptian pyramids or Machu Picchu did for their epochs — a pinnacle of our civilisation and technology created in the attempt to reach toward the heavens. If ever the stars in the sky are not enough to motivate me, a glance at the synchronous dance of the ALMA antennas certainly is.

After ESO I will spend five years at Cambridge University, where I will study both protoplanetary discs and their later stages, the debris discs.

(Printed in *The Messenger*, 146, p. 48, 2011)

Fellowship period: 2009–2012
Location: Garching
Current Institute: IoA, Cambridge

Dimitri Gadotti

I had forgotten about Jupiter's high proper motion!

It was the first night alone on my first observing run, studying to get a Master's degree. We had six nights at the 60 cm telescope of the Laboratório Nacional de Astrofísica, atop the pleasant hills of Minas Gerais, in Brazil, to obtain multi-band optical images of barred galaxies. At the beginning of each night the position of the telescope on sky had to be calibrated by eye, using the finder and a bright star with well-known coordinates. I did not want to get into much trouble with that, saw Jupiter at sunset, and decided to use it as my calibrator, since it could be easily identified with the finder. This was a bad idea of course, as Jupiter moves fast, and the coordinates I could get from the *Astronomical Almanac* did

not correspond to the time when I put the planet at the centre of the finder! As a result, to my dismay I couldn't find any of the targets!

After realising the mistake, and correctly calibrating the telescope, everything went smoothly, and I can still clearly remember the excitement running through my veins when, one by one, "my" galaxies were parading on the computer monitor. The privilege of witnessing their spectacular beauty was all mine! I was utterly alone, cold, in pitch black darkness, and Pink Floyd was playing loudly. I knew I was doing something I would never let go of.

Years later, I'm at the helm of the VLT, a truly impressive technological feat, performing complicated spectroscopy of the transit of extrasolar planets, and it works superbly well.



Dimitri Gadotti

I also obtained my PhD degree in Brazil, at the University of São Paulo, on the formation and evolution of stellar bars in galaxies. This led me to work on the secular building of galaxy bulges, a subject that is receiving considerable attention now. After São Paulo, I continued my work on bars at the Laboratoire d'Astrophysique de Marseille. Just before I came to work at ESO in Chile, I worked for four years as a researcher in the cosmology group at the Max Planck Institute for Astrophysics, in Garching, just across the street from ESO Headquarters. Ironically, when I received the offer of the ESO Fellowship, it was not to just cross the street, but to move twelve thousand kilometres away and spend 80 nights per year on Paranal — I was thrilled!

Working as support astronomer at Paranal for FORS2, CRIRES, X-shooter, FLAMES and UVES, even if a very demanding job, both mentally and physically, has been a refreshing and very rewarding experience. Supporting observing programmes outside my field of expertise, which is the formation, evolution and structure of galaxies, has not only been fun, but also given me a chance to become much more complete as an astronomer. Paranal provides me with a chance to be involved in programmes on topics that range from Solar System bodies to high redshift quasars. Programmes such as the rapid time-monitoring of comets and supernovae allow me to see such objects, unlike galaxies, evolve before my eyes. In addition, the exchange of ideas, and the exciting atmosphere of discovery and challenge that permeates the control building during a regular night, has helped my own research on multiple occasions.

Understanding the intricate evolution of galaxies and their substructures is the main focus of my research. The current instrument suite at Paranal is paramount in providing us with the data we need to fulfill this wish. New instruments, already scheduled to come to the mountain, are even more revealing and challenging. I can only be thankful that my career path has led me here.

(Printed in *The Messenger*, 146, p. 46, 2011)

Fellowship period: 2009–
Location: Chile

Mark Westmoquette

I think I was around age 16 or 17 and doing my A-level examinations when I developed a serious interest in astronomy. This was due in part to a particularly engaging teacher called Mr Sheldrake, and, in another part (although I hate to admit it now) to *Star Trek*. Moving swiftly on ... My interest grew, such that in 1999 I decided to leave home and go to University College London (UCL) to study astrophysics. Unbeknownst to me then, I wasn't to escape UCL for another 11 years. The undergraduate research project that I did with Linda Smith set me up very well to do a PhD with her on super



Mark Westmoquette

star clusters, feedback and galactic winds. I then did four years as a postdoc at UCL before being awarded an ESO Fellowship and moving here to Munich.

After my initial naïve and idealistic period of enthusiasm, I have encountered a number of moments in the past ten years when the thoughts of "what's the point of studying astronomy?" and "is it a good use of my life?" have risen to crisis point. One particularly memorable one came just after I'd finished my PhD and was travelling before starting my postdoc. I clearly remember realising that wherever I was, from a dark beach in Costa Rica to a wedding reception in Gloucestershire, people were always fascinated to find out that I study astronomy and often started asking the same fundamental questions about the Universe as I was actually being paid to research. Perhaps it is because the Universe is so vast, so full of wonders (albeit often very complicated and low signal-to-noise wonders), and the "what's out there?" question is so deeply engrained in our human consciousness. This universal interest convinced me that I was doing something meaningful.

I have come to think of studying astronomy as something similar to being an artist or musician. Since it has almost no commercial value — even Google can't sell a galaxy evolution model — its value to society comes solely through curiosity (of our origins), like art whose value is based on curiosity of the human condition. That, in this capitalist world dominated by advertising and profit, with the potential of financial ruin always (and particularly recently) just round the corner,

we can still find billions of euros to fund projects of pure curiosity is marvellous! Doesn't knowing that the Sun was born out of an interstellar gas cloud that contained chemicals from many previous generations of stars give more meaning to life than knowing that 37% of smartphone users use their devices for shopping?

In my opinion, one of the most important things in life is to find a passion and do it 100%. I feel extremely honoured to be in the position of being able to do that. Not only am I paid to do it, but in academia my passion is continually and actively nurtured. That is part of what makes ESO such an amazing place to work. I'm surrounded on a daily basis by high-flying, brilliant people with high aspirations, and have many possibilities to meet and collaborate with other astronomers in ESO, in the Garching campus or visitors passing through.

My current research focuses on determining the interstellar medium conditions, both within the cores of nearby starburst galaxies and in their resulting feedback-driven winds, with the aim of understanding how these winds are driven and evolve. Integral field units (IFUs) are ideal for studying these complex gas environments, and I have made extensive use of instruments such as VIMOS and FLAMES, and of course the Hubble Space Telescope.

Among my extracurricular interests, yoga and zen are the two most important. One of the highlights of my week is the yoga class I run every Tuesday for ESO staff.

(Printed in *The Messenger*, 147, p. 50, 2012)

Fellowship period: 2011–
Location: Garching

Amelia Bayo

Unlike most astronomers, studying the mysteries of the sky did not even cross my mind when I was a child. I grew up in a “bigish” city in the south of Spain, Málaga, where nobody around me was especially fascinated by astronomy. From a young age, though, as my parents can testify, it was clear that I wanted to do research. I loved discovering new things,



Amelia Bayo

and the challenge of tackling a problem until I could find the way to unveil what was going on.

I studied mathematics at Universidad de Málaga and I was leaning towards topology or geometry. But life decided otherwise. I moved to Madrid where the possibilities to do research were way higher. At the Universidad Complutense de Madrid there was a programme for students to participate at the European Space Astronomy Center (ESAC, at that time the Villafranca satellite tracking station) in small summer projects. There was no such thing for pure maths students, so I joined the programme and that is how I got “hooked”.

I remember perfectly well the first day I arrived at ESAC. The place was the most advanced technological complex I had ever seen. But this was nothing compared to talking to my supervisor for that little project. ESA staff astronomer, Pedro Garcia Lario, was clearly in love with his research. In less than two minutes he convinced me that one would be out of one's mind not to want to study planetary nebulae! He showed me beautiful images, and he could name plenty of objects by those weird names... I left the office fully convinced that this was the kind of passion I wanted for my career, and so, “astrophysics it was!”.

I finished studying mathematics, but with majors in astronomy and then started two Masters, one in artificial intelligence (connected to the Virtual Observatory) and one in astrophysics. With Masters ongoing, it was then time to look for a PhD project.

I learned about an opening for a PhD position at LAEFF; a Spanish laboratory located on the ESAC campus. I went for the interview with David Barrado y Navascues and the experience proved very different from my first day at ESAC. David did not show me the “in love with astronomy” side of him, he showed me the direct and competitive one and let me know very clearly that I was the one asking for a job and that I had to be able to “sell” myself. I was absolutely not prepared for this and I left the office thinking that this will not be “the perfect match” to start a PhD and being pretty sure that he would not offer me the position.

Funnily enough I did get an offer and I could not have been more wrong. No PhD student-supervisor relationship is perfect, but I am convinced that I would not be where I am now in my career (with exactly the job that I wanted to have) without his influence. The first time we went to observe together on La Silla he told me to stay outside for a while and let my eyes get used to the dark. There I found what I had wanted ever since I went to ESAC for the first time: I fell in love with the southern sky, and I decided that Chile and the ESO observatories should become my home very soon.

My main research field is the study of the formation of brown dwarfs, those intermediate objects between stars and planets. Do they form like the stars? Do they form like the planets? How often do they host planetary mass objects? Do their discs evolve similarly to the protosolar disc? To answer these questions we need to compare their properties with those of low-mass stars. During my PhD I studied an extremely interesting star-forming region that hosts clouds of different ages; the λ Orionis star-forming region. In particular, the study of the central cluster (Collinder 69) led to the ensemble of one of the most complete Initial Mass Functions (IMF) for a young association. This allowed us to put constraints on some formation scenarios proposed for brown dwarfs. Besides, the detailed study of the population of sources still harbouring discs in the region allowed us to put caveats on the possibility that a supernova triggered the star formation in the outer clouds.

During my PhD I realised that complete samples are mandatory in order to reach any strong conclusions. Therefore, I joined a very ambitious spectroscopic survey that, using ESO telescopes, will complement Gaia at the lower end of the mass function. On the other hand, to analyse and fully exploit the database that this project will generate, a solid base in astrostatistics and inference is absolutely mandatory. In a sense I am returning to my mathematical background, something I enjoy a lot.

Being at ESO Chile has allowed me to improve my observing skills and to deeply understand some of the instruments that I use for my science. Besides that, and certainly the most important benefit that I will take away from working at Paranal, is the interaction with colleagues and visitors, and the effort required to understand what each service programme needs. All this, I believe, has made me a more complete astronomer. I think that focusing too much on one problem can cause a lack of perspective that can prevent one from finding a solution. Well, being at ESO Chile has had the completely opposite effect on me; I will leave this country with a wider view of astronomy that hopefully will help me to find my answers.

(Printed in *The Messenger*, 147, p. 51, 2012)

Fellowship period: 2009–
Location: Chile

Maja Vučković

I have been living in Santiago de Chile and working as an ESO Fellow for two years. Of that time I have spent about six months in the Atacama Desert at the Paranal Observatory as a VLT support astronomer. While on Paranal, I am also a Fellow responsible for X-shooter on Unit Telescope 2 (UT2), the unique echelle spectrograph that can obtain a simultaneous spectrum from ultraviolet to near-infrared wavelengths (0.3–2.5 μm). This simultaneous wavelength coverage is a major advantage for photometrically and spectroscopically variable objects as it allows the various contributors to a spectrum to be disentangled, which is



Maja Vučković

one of the hottest topics of my research at present. While in Santiago, apart from enjoying a “normal life”, I am trying to understand what the hot subdwarf stars do.

I was one of those children who dreamed of becoming an astronomer when they were growing up. My grandma frequently took me from the roof of our vacation house in the mountains as I would often fall asleep there while watching the stars. I was mesmerised by the night sky, while all her other grandchildren would safely be sleeping in their beds surrounded by their favourite toys. Even though it seems that I have known what I wanted to do since my childhood, the road to where I am now was anything but straightforward, and it took many years.

Thirsty for knowledge during my undergraduate studies of astronomy at the University of Belgrade, my home town, I was totally taken by the observational astronomy course. The undergraduate studies at my university at the time were based mostly on following courses, passing written and oral exams and at the time I didn't have a clue what research was all about. After the oral exam I went to my professor, Istvan Vince, and told him (more like complained) that I was bored of just studying, solving problems and taking exams, and that I would like to do something! He gave me some stellar spectra to reduce. Soon after I found myself at an international conference eagerly presenting a poster with my work and discussing the temperature sensitivity of Mn lines over dinner ... Now I know — that is what research is about.

However, my undergraduate studies were interrupted by the difficult situation in my country (Serbia). Torn by civil wars, decimated by sanctions, hyper-inflation and finally NATO bombing, life took a “parallel path” and I felt the need to contribute to humanity while living through a humanitarian catastrophe. I fully engaged in activism and spent several years as a volunteer in a non-governmental organisation (NGO) taking care of and helping refugees, mainly adolescent girls who had been traumatised by the war and the bombing. In fact my first proposal was not in astronomy at all! It was for a European Union grant to foster the livelihood of girls who had suffered violence, by founding centres in several towns of Serbia which would work to raise awareness, educate society, and improve integration, while also serving as shelters. When the situation in the country stabilised somewhat, I decided it was time for me to continue with my life. I asked myself yet again what it was that I wanted to do, and my mind took me back to the very same roof of my grandma's house ... it was clear that I wanted to continue studying astrophysics!

Asteroseismology, the relatively young branch of astronomy devoted to the study of internal stellar structure on the basis of stellar vibrations, caught my attention. While reading more I found out about the Whole Earth Telescope (WET), a worldwide network of cooperating astronomical observatories linked together to obtain uninterrupted time-series measurements of variable stars. The idea sounded profound to me: that a group of scientists would use the Earth's rotation — the biggest enemy of any asteroseismologist — as a tool to obtain continuous 24-hour light curves in order to derive the fundamental parameters of stars. The headquarters were at Iowa State University (ISU) and I contacted Steve Kawaler, the professor at the Department of Physics and Astronomy and director at the time. He told me what I should do in order to enroll for graduate studies at ISU. Several months later I had my farewell party.

I arrived in Ames, Iowa in August 2001 with my life packed in two suitcases, ready to start my graduate studies in

astrophysics. During my first day at the ISU campus I met Steve, who opened the door of science for me. He is one of those professors who can transmit his thrill for science, and stamina for research, to the student, while letting you struggle, but never fall. After a few months I was already observing at the 2.1-metre telescope at the Kitt Peak National Observatory as one of the observing sites for my first WET run. The more I learned about asteroseismology the more I was enchanted by it — the fact that we can “look” into the interiors of stars by studying their pulsations is still what keeps me going.

My strong observing interest resulted in my adopting the small University Observatory, equipped with a Fick 0.6-metre telescope, for high-speed photometric monitoring of rapidly pulsating subdwarf B (sdB) stars. As soon as the skies had cleared, even if only very late in the night, I’d head off to the Fick Telescope; my friends still joke about the strong correlation between the clear skies and my disappearance from every party!

The research in asteroseismology of sdB stars, during my Masters studies at Iowa, mainly consisted of gathering, analysing and interpreting photometric data in white light. Through this study it became clear to me that the ultimate goal of any asteroseismological study can only be achieved with accurate pulsation frequencies and an unambiguous identification of the oscillation modes. While I was writing up my thesis on PG0014+067, an intriguing pulsating sdB star, Conny Aerts, the professor at the Institute of Astronomy at the University of Leuven, and the world’s leading expert on mode identification, came to our department to work with Steve. We discussed my research over a few lunches, she saw my devotion to observing and, in between the lines, gauged my nostalgia for the cobbled streets of European towns. Soon after she returned to Belgium, I received an offer to continue my research on sdB stars with her in Leuven. The University of Leuven had so much to offer: it is one of the oldest universities, is in the middle of Europe, they make one of the best dark chocolates in the world, not to mention all the varieties of beer, AND I could continue studying pulsating sdB stars!!!

I arrived in Leuven in August 2005, with my life packed in two suitcases ready to start my PhD. The Institute of Astronomy (IvS) is a great place to work, the friendliness and the enthusiasm of all the people there quickly made it into my new home. I still have that nostalgic look when I talk about it. Apart from offering me a comfortable research nest, it allowed me to fulfill my thirst for observing. The IvS has a 1.2-metre Mercator Telescope at one of the most beautiful European observing sites on La Palma in the Canary Islands and I spent at least two months per year observing there. Also, observing time is shared with the twin 1.2-metre Leonhard Euler Telescope at La Silla. I will never forget my first observing run at the Euler Telescope — it was my first encounter with the southern skies and with the desert. I can’t really tell which of the two made the stronger impact on me; but the feeling of peacefulness and fulfillment I felt while observing there is the one I come back to whenever the inevitable question of a (somewhat lost) nomadic, modern-day astronomer “is this all worth it?” comes to my mind.

While studying the origin and evolution of hot sdB stars during my PhD, my research interest naturally expanded into studying close binary stellar evolution, in particular post common envelope ejection systems. Once the PhD was defended, it was time to find a “real” job; I guess for everyone this is a scary moment as all of a sudden you have to get out of your PhD “bubble” and begin your way through life. In the heat of my PhD party a good friend, an ESO Fellow in Chile at the time, started to convince me to apply for the very same job. One of his strongest arguments was “you would love it”. He was right!

In April 2010 I arrived in Santiago, this time with my life packed into somewhat more than two suitcases. Again, starting another four-year life cycle, I moved to a different continent, ready for my ESO Fellowship and the new challenges of life.

During my last turno at Paranal, I was sitting at the back of UT1 watching the sunset, something I usually do every day while observing there. It is also the point where the day and the night crew meet. But that day I was alone and my thoughts

took me far far away, back to one of my high school days. The surprised face of my high school professor appeared in my mind when I had told him that I would study astronomy. He wanted to challenge my choice and simply asked “But why?”, as he was sure I would study philosophy. “Because philosophy I know I can do, but astronomy — I am not sure if I am able to?!” I answered.

The sun has set into the Pacific without a green flash yet again, and I hurry to start the observing night. In some ways it felt as if I had just woken up after almost 20 years, in the middle of the desert, behind one of the biggest telescopes, with a clear answer to my childhood question. Beware of your dreams, they may come true!

(Printed in *The Messenger*, 147, p. 53, 2012)

Fellowship period: 2010–
Location: Chile

Giacomo Beccari

The oldest memory I have of the stars is of Ursa Major. When I was a child, during the summer holidays, I used to sit on the strong shoulders of my father and spend time with him wandering along the beach at night watching the stars. The constellation of Ursa Major was the only one that my father ever knew, but he used to show it to me every night, telling me fantastic stories.... That constellation appeared to my eyes as the most beautiful thing in the sky ... and still does.

I was born in Verona some years ago. I like to see myself moving around with a funny Veronese flavour permeating my personality: that strange mixture of romanticism (Romeo and Juliet as it were), passion and fanaticism (go to a soccer stadium in Verona on Sunday and you will understand), and South Tirolean rationalism. I studied astronomy at the University of Bologna followed by a PhD in astronomy and informatics at the Astronomical Observatory of Teramo. I am proud of seeing myself as a disciple of the glorious Italian school of stellar astrophysics. Even if I do not know much about the constellations, astronomy is for me, as for all the astronomers I have met so far, a passion. To do a colour–magnitude diagram (affectionately called a CMD) can be



Giacomo Beccari

therapeutic. As an example, I remember in 2010, when the Italian team was badly eliminated from the Football World Cup, I was so depressed that I went to my office and downloaded some images of 47Tuc from the Hubble Space Telescope (HST) archive. I analysed the data and it was only after I saw the beautiful cluster's main sequence in the CMD that I started to breathe again!

After a one-year postdoc, I left Italy for a fellowship at ESA/ESTEC, in the Netherlands. It was my first experience of living abroad. I left Italy with a suitcase full of pizza, spaghetti, mamma, Valpolicella, *"cornetto e cappuccino, grazie"*, globular clusters and blue stragglers. Two years later I left ESTEC with a suitcase containing much less spaghetti, but lots of great experiences, memories of nice people, new scientific projects, new ideas, a few kroketten, and knowing that science is much more than sitting at the desk in the office analysing data.

I came to ESO as a Fellow with the desire to discover how a big astronomical observatory works, what's behind it. In Garching I found a community of excellent scientists and an enthusiastic environment that triggered new collaborations and ideas. I asked to be assigned for my functional duty as support astronomer at the Very Large Telescope (VLT) in Paranal. This experience has been even more exciting than I thought. I will always remember the first time I walked into the Control Room ... UT1, UT2, UT3, UT4... there is no cause for alarm ... VST, VISTA, VLT1 ... mamma mia! Then walking back ... interferometry, wide-field multi-band surveys, high resolution

adaptive optics imaging, multifibre and single object spectroscopy at almost all wavelengths ... on top of hundreds of "there is no cause for alarm". How much science is done in this place in one night? It's magic! But then you walk to the platform and there is the secret.

I am sure that every single person who has had the chance to see this place has been impressed. You are there, the Sun is going down, the sky turns red, and you see these machines, as if from a Kubrick movie or a book by Philip K. Dick, opening their big eyes to a beautiful sky. This is the secret. Years ago a group of astronomers had a dream ... a desire that, maybe, looked much bigger than themselves. Many people gave a piece of their life for that ... many of them were enthusiastic ... maybe some were not ... many of them were nice and funny ... maybe some were not ... many of them were devoted ... and others maybe were not. But the desire became a reality. This is being human ... fulfilling a desire that is so big that it flies way above the individual capabilities of those who realise it. Let's be honest: the astronomical community is a funny one ... people looking at galaxies at redshift 10 000, waiting for that photon coming every ten days, with the aim of discovering the origin of life ... and we do not have any idea of how the Solar System was born. But you are there, the Sun goes down, the stars are coming: there's silence ... there is no cause for alarm ... it's time to do science.

(Printed in *The Messenger*, 148, p. 55, 2012)

Fellowship period: 2010–
Location: Garching

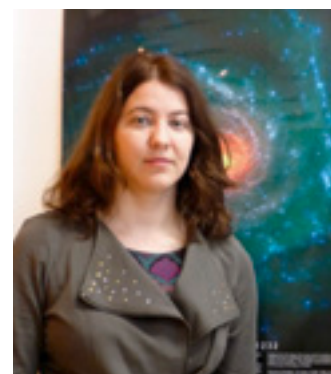
Myriam Rodrigues

Like many astronomers, I've had the amazing chance to realise a child's dream: "When I grow up, I want to be an astronomer!"

Everything started 20 years ago, when a family friend working in a condensed matter lab took me into the lab for a couple of days. At the time, condensed matter physicists were excited by a new toy, invented a few years earlier: the scanning tunnelling microscope. I was just seven

years old, but I still remember perfectly the huge instrument filling the room and a little TV with some kind of purple spheres on the screen. "These are atoms," they said, "and these are molecules," pointing to another screen close to another huge piece of machinery. I came back to school, totally convinced that I wanted to be a particle physicist and feeling like a new Messiah preaching new-found truth to my schoolmates: "Matter is made of molecules and molecules are made of atoms, how cool is that?!"

I would have probably become a particle physicist if the star-studded night sky at my grandmother's village in Spain had not brought the poetry of astronomy to me. On summer nights, the children used to go to the "movie theatre": a field with a clear horizon. Lying on the warm ground, with a pack of sunflower seeds (the Spanish version of popcorn) in hand, we used to gaze at the sky for hours: the Milky Way, shooting stars, the constellations. The link between these two passions fused a few years later, when I discovered in a kid's science book an incredible invention: spectroscopy! It is possible to make the atoms of stars and nebulae speak! I was definitely decided: I wanted to study galaxies using spectroscopy. Some years ago, I read a quote from Annie Jump Cannon that remains carved in my mind. She expressed beautifully what had been on my mind all those years: "They are not only lines for me; each new spectrum opens the door to a new wonderland. It is as if the distant stars have acquired the gift of speech and started to tell us their physical conditions and constitution."



Myriam Rodrigues

I studied physics at the Instituto Superior Técnico at Lisbon. Unfortunately there was no research on distant galaxies at the astronomy department and I started to look for a place to do my undergraduate research project on galaxy evolution. I finally decided to send an email directly to François Hammer of the Paris Observatory to ask for an undergraduate project. A few months later, I left the sunny skies of Lisbon to start a Masters in astrophysics at the Paris Observatory and one year later began a PhD on galaxy evolution in the team of François Hammer.

My main research topic is the study of the interstellar medium and stellar populations of intermediate-mass galaxies at intermediate redshift. This galaxy population appears to be the likeliest progenitor of the present-day spiral galaxies and their properties therefore provide strong constraints on galaxy evolution models. During my PhD I started working on the characterisation of the interstellar medium — metallicity, star formation rate (SFR), gas fraction and presence of star-formation-driven outflows — of distant galaxies from integrated spectroscopy from FORS2 on the Very Large Telescope. I also worked on the estimation of their stellar populations using broadband spectral energy distributions from the ultraviolet to the infrared combined with Lick indices and SFR.

I applied for the ESO-Chile Fellowship moved by the same child's dream. The small child in me was categorical: there is only one place in the world where you can be an astronomer. This place is the Very Large Telescope at the Paranal Observatory, surrounded by the driest desert and the darkest sky in the world.

And here I am, writing this article from my room at the Paranal Residencia. I started my ESO-Chile Fellowship two years ago and I am a support astronomer at Unit Telescopes 1 and 2. I have learnt a lot in these past two years about observation strategies, operations and instrumentation. Being a support astronomer has allowed me to be a more complete astrophysicist by seeing the complete chain of the science. I always find that moment when a new frame appears gradually on the screen fascinating. At this exact

moment, the incomprehensible light arising from the sky above our heads is caught in the pixels of the detector and becomes science.

That's it! This is the story of a stubborn daydreamer.

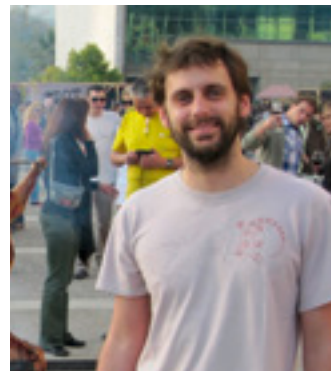
(Printed in *The Messenger*, 149, p. 57, 2012)

Fellowship period: 2010–
Location: Chile

Rubén Sánchez-Janssen

When I was a child, I was all about dinosaurs and outer space. But I guess that, having grown up in the Canary Islands and with an engineer dad who works on infrared astronomical instrumentation, the odds were uneven. I think I made *The Decision* to become an astronomer during a cold February night in the late 80s, after a visit to the IAC80 telescope in Tenerife with my father. Of course I had no clue what the job was really about, but became absolutely fascinated by the quietness of the telescope control room at those after midnight hours. What really touched me, though, was the image of a galaxy that the astronomers had just obtained. That whole big collection of stars existed somewhere out there, and they got to observe it in much greater detail than I could have ever imagined!

So that was it. I pursued that winter night's dream and years later obtained a degree in Astrophysics at the Universidad de La Laguna. This was followed by a PhD at the Instituto de Astrofísica de Canarias on the effects of the environment on the evolution of galaxies in nearby clusters. My enchantment with telescopes not only persisted, but increased with the years of experience. I was therefore excited when I got the opportunity to join ESO as a Fellow in Chile and work at the VLT. I landed in Santiago on a cold and rainy day in mid-August 2009, a mere month after my PhD defence. I had spent my entire life on a small Atlantic island, and was expecting some rough times ahead and a period of adjustment. It took me less than a week to realise that this new place 9000 kilometres away was easily to become my second home.



Rubén Sánchez-Janssen

At ESO I've continued my research on galaxy evolution as a function of mass and environment, and established new collaborations with colleagues at Vitacura, at other Chilean institutions and from abroad. During my functional duties as a Fellow I have supported observations at the Paranal Observatory, with a particular commitment to VLT/UT3 and its suite of instruments. More specifically, I've been the VIMOS Fellow during the recent instrument upgrade project, which has allowed me to become involved in the re-commissioning activities together with a great team of engineers and astronomers.

Paranal is a place that everyone should visit at least once. You reach the mining city of Antofagasta and start travelling deeper into the heart of the Atacama Desert. One rock, five rocks, 377 rocks, 6765 rocks ... and nothing else but rocks. And then, out of the blue, the telescopes' silhouettes out in the distance, like giants in a modern Quixote's wildest delirium. Sunsets from the telescope platform are one of the greatest privileges of observatory life, when the desert is painted in red and shadows play with hills and mountains. Afterwards, from dusk to dawn, it's the time of the astronomer.

I look in my rear view mirror and realise my time at ESO has gone by fast. I have just started the fourth and last year of my Fellowship, and the future awaits. I still like dinosaurs. But above all, I love my job.

(Printed in *The Messenger*, 149, p. 57, 2012)

Fellowship period: 2009–
Location: Chile

Loredana Spezzi

Thinking back, I was around the age of six when I first thought about “knowing more about stars” (the word “astronomy” was not yet part of my vocabulary).

I grew up in Sicily and during my childhood I spent innumerable summer nights sitting with my father on our terrace, trying to fight the heat (typically 40 degrees) and enjoying the view of the Milky Way on a clear night in the south of Italy. During those nights I exhausted him with the never-ending questions that children of that age ask about all the inexplicable details of this world. One of the more recursive ones was: “Dad . . . tell me about the Universe!” And “Dad . . . tell me more about the Universe!” I repeated it over and over again and, after a few summers, my father (who studied medicine) had no more news for me and redirected me to illustrated astronomy books. The interest stayed with me and the illustrated books became university textbooks, when at the age of 19 I decided to study physics, foreseeing a future career in astrophysics (and not knowing exactly what was the deal!).

And so the amazing “trip” started: I graduated in physics and I obtained a PhD in astrophysics at the University of Catania. After that, I had the privilege to be a post-doctoral fellow in two of the top European institutes for astronomy and space science: first the European Space Agency (ESA-ESTEC at Noordwijk in the Netherlands) and now at ESO-Garching.

The “trip” turned out to be long, not always easy and it is not yet over! I am still looking for the “final destination”, but in the meanwhile the little six-year old “me” is quite satisfied. Not only does she “know a lot about stars”, but she is even trying to understand how and why they are up there! Translated into the language of an adult astronomer, this means that my current research is devoted to the investigation of the properties of young low-mass stars and brown dwarfs and their circumstellar discs, both in our Milky Way and in the Magellanic Clouds. These studies aim at clarifying the star formation mechanism, its dependency on specific star-forming conditions (such as metallicity, the presence



Loredana Spezzi

of strong radiation fields, etc.) and, in particular, to identify the specific conditions leading to the formation of planets in circumstellar discs and to assess how frequently they occur. My approach is mainly observational. I make extensive use of both imaging and spectroscopic data from ESO ground-based telescopes and satellite observatories (HST, Spitzer and Herschel).

Of course, the ten years I have spent so far in the astronomy world have given me much more than the pleasure of satisfying the whim of a six-year old girl. I have lost count of the many breathtaking places that I have visited during the several observing trips, conferences, meetings and, even more importantly, I have lost count of the many outstanding people I have met. Some of them have been my mentors, supervisors and advisors, and they have transmitted to me a fund of human and professional experiences that will stay with me until the end of my career. Many others are colleagues, sharing with me the good and the bad of this job. Finally, many of them are people with no connection with astronomy whatsoever. I crossed their paths just because I was following mine, but they have become immeasurable lifetime friends.

(Printed in *The Messenger*, 149, p. 58, 2012)

Fellowship period: 2011–
Location: Garching

Noé Kains

Looking back, my path to becoming an astronomer is perhaps a slightly unconventional one. Like most other astronomers, I have early memories of being interested in space and rockets. I also remember being entranced by the night sky during summer family holidays — I was lucky to spend entire summers sailing around the North Sea, and I particularly enjoyed sailing at night, which gave me plenty of opportunities to get away from light pollution and see the night sky in all its glory.

I was born and raised in Brussels, and moved to London when I was 17 to begin an undergraduate degree in physics at Imperial College, because I enjoyed physics and maths at school, but also because I had decided very early on that I wanted to go and see other things than the small country in which I grew up. Apart from my long-standing obsession with London, there was another reason that I wanted to move to the UK in particular. Since the age of six, I had been studying the piano and I knew that the more flexible education system in the UK would allow me to pursue both interests. During my undergraduate physics degree, I was lucky enough to be supported by scholarships that enabled me to continue my musical education in parallel; something that would have been very difficult in Belgium. After working on an astronomy project for my Master’s thesis, I decided to apply for a PhD in astrophysics, which I started at the University of St Andrews in Scotland in 2006. Again, throughout my PhD I kept



Noé Kains

up a busy musical parallel life, which I think made the PhD experience much easier. I was lucky to have a supervisor who fully supported this, even when I disappeared for weeks at a time on concert tours! During almost four years in Scotland, my love for astronomy developed further and the fun I had working on my PhD convinced me that this was the career I wanted to pursue.

My first observing trip, in 2007, was a 23-night run on the 1.54-metre Danish telescope at La Silla. If 23 long winter nights did not dent my fascination for observing, clearly my commitment to this was no fluke! Every day I was amazed to wake up in this strange place in the middle of nowhere, and every night I spent hours marvelling at the splendour of the Chilean night sky, running outside between two exposures of the Galactic Bulge to look at the bright trail of the Milky Way and the Magellanic Clouds. Two (thankfully slightly shorter) further observing runs in La Silla only strengthened my attachment to the place, so ESO was a natural place for me to consider when it came to looking for my first postdoctoral position.

Working at ESO is such a privilege — to be surrounded by the people who run the world's most important observatory, particularly seeing the engineering and political sides of it, which is something that most scientists easily forget. The sheer number of talks, seminars and colloquia is a testament to this. Most astronomers come through ESO at some point or another, which means that, being here, we get to hear and meet many of today's brightest astronomers. During my Fellowship I have continued my work on exoplanet hunting using gravitational microlensing, and have started new collaborations, leading me to apply my work to areas of astronomy that I would not necessarily have considered before. There is definitely a sense of being lucky to be here at ESO and wanting to make the most of it amongst the community of young researchers. Of course, being an astronomer is a privilege in general: we are essentially employed to think, and get to visit many of the world's most incredible places for observing trips, conferences or collaborations. Another ad-

vantage of being here is that ESO is in the news a lot. It may seem trivial, but it is a nice feeling when your family and friends have a vague idea of what you do as an astronomer, thanks to the amount of media exposure ESO receives as a world-leading observatory.

On the music side — well, of course I don't spend as much time practicing the piano or performing as I once did, but the first "piece of furniture" I bought when I moved to Munich was a piano — before even buying a bed! I still find that the balance in my life between music and my "job" is essential. When struggling with a science problem I can come home, practice for a few hours and "reorganise" my brain. It really works!

After two great years at ESO, it's unfortunately already time to start looking for my next job. Wherever I go, I know that the experience and contacts I am gaining here will be a major asset, both on a personal and professional level.

(Printed in *The Messenger*, 150, p. 72, 2012)

Fellowship period: 2010–
Location: Garching

Roberto Galván-Madrid

Looking at it in retrospect, I don't know how I got here, but I'm very happy that it came to be. I was born in the southeast of Mexico, in the "small" city (with about a hundred thousand inhabitants) of Chetumal, in the Yucatan Peninsula. People there just do not become scientists. The natural path within my extended family would have been to become a merchant, a bureaucrat, or a politician. Luckily, my parents always motivated my brothers and me to educate ourselves, perhaps because they didn't have the chance to finish professional degrees, and there were many lectures at home on which to spend some afternoons after school. I remember my excitement when I was a kid and discovered some books that explained things about particle physics, space travel or the Solar System.

When I finished high school in 2000 I convinced my parents that "I had to leave"



Roberto Galván-Madrid

my home town to study physics. Then I moved to Monterrey to start my college degree, a completely different, accelerated, heavily industrialised city of four million people in the north of Mexico. I remember those years as a period of discovery where I dived into so much knowledge, made some of my best friends in life, and realised that making contributions to science was within reach. Five years later, after discarding the idea of postgraduate studies in some other areas of physics, or taking a second degree in philosophy — good decision! — I started my masters in astronomy at the Center for Radio Astronomy and Astrophysics of the National University of Mexico (UNAM). There I learned a lot from my advisor Luis F. Rodríguez and several other staff members. In 2007, I was lucky enough to be admitted to the predoctoral programme of the Smithsonian Institution, and moved to the Center for Astrophysics in Cambridge, Massachusetts, to conduct my doctoral research working with the Submillimeter Array (SMA) group. Those years in "the geekiest town on Earth", with all their ups and downs, have a very special place in my memory. Toward the end of my thesis, I also spent a dreamy season in Taipei, Taiwan, eating yummy Chinese food.

In September 2011 I moved to Munich and started my ESO Fellowship. I wanted to learn about the European way of doing things and gain expertise with ALMA, and what better place than at the flagship astronomical institution on this continent. So far I am loving both the scientific opportunities and life in Germany, including beer fests and trying to learn to pile up words as locals do. I envision myself

in the future going back to Mexico and helping a little bit to the development of my country — but one never knows! — while at the same time strengthening ties with all the great institutions in which I have worked all over the world. Owning a dog and publishing some fiction are also in my plans.

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Fellowship period: 2011–
Location: Garching



Group photographs from some of the Fellows Days: 2005 in Garching (top); 2009 in Garching (middle); and 2011 in Chile (bottom).

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