

Fellows at ESO

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.

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 condi-



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tions 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 formation 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.

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.

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, CRIFRES, X-shooter,



Dimitri Gadotti

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.

Personnel Movements

Arrivals (1 October–31 December 2011)

Europe

Reckmann, Fabian (DE)	Construction Technician
Davis, Timothy (GB)	Fellow
Spezzi, Loredana (IT)	Fellow
Muller, Nicolas (FR)	Optical Engineer
Argomedo, Javier (CL)	Software Engineer
Niederhofer, Florian (DE)	Student
Feldmeier, Anja (DE)	Student
Ferreira, Leticia (BR)	Student
Feltre, Anna (IT)	Student
Sciocluna, Peter (GB)	Student
Costigan, Gráinne (IE)	Student
Sanchez, Joel (MX)	Student

Chile

Barkats, Denis (FR)	System Astronomer
Vlahakis, Catherine (GB)	Commissioning Scientist
Wesson, Roger (GB)	Fellow
Manjarrez, Guillermo (MX)	Student
Saulder, Christoph (AT)	Student
Kim, Taehyun (KR)	Student

Departures (1 October–31 December 2011)

Europe

Austin-May, Samantha (GB)	Deputy Head of Human Resources
Igl, Georg (DE)	Quality Engineer
Checucci, Alessio (IT)	Software Engineer
Santander Vela, Juan de Dios (ES)	Software Engineer
Boehnert, Alex (DE)	Student
Sartoris, Barbara (IT)	Student

Chile

Gillet, Gordon (DE)	Electronics Engineer
Aguila, Luis (CL)	Electrical Technician
Arcos, Juan Carlos (CL)	Warehouse Assistant
Saguez, Claudio (CL)	Warehouse Supervisor
Costa, Jaime (CL)	Electrical Engineer
Pizarro, Andres (CL)	Safety Engineer
Quitana, Rolando (CL)	Procurement Officer
Beletsky, Yuri (BY)	Operations Astronomer
Kurz, Richard John (US)	ALMA Project Manager
Mateluna, René Cecilia (CL)	Student
Alamo, Karla Adriana (MX)	Student
Jilkova, Lucie (CZ)	Student