

Novae were also explored for their current usefulness as distance indicators, although they seem to be hampered by larger systematics than other stellar candles. Planetary nebulae, presented as the “Swiss-army knives” of extragalactic astronomy, are also used to derive distances to galaxies, through their luminosity function (measured in the [OIII] emission line). The technique seems to work, in spite of a number of complicating factors, which led to the following remark: “An astrophysicist is someone who sees something working in practice and wonders whether it works on the basis of first principles”.

The luminosity function of globular clusters is another attempt at enriching our tool-box of distance indicators, which was discussed at the Workshop. And, finally, the use of eclipsing binaries as distance indicators looks very promising if more appropriate systems in Local Group galaxies can be found.

Altogether, the Workshop allowed us to discuss and compare in depths the different stellar indicators used so far in the difficult quest of astronomers for distances. The very pleasant environment of the campus, the excellence of the talks, the challenges of the field were key-elements for stimulating dis-

cussions and exchanges. Remaining controversies were “discussed” during the soccer game which closed the Workshop, although some attendees (those for which all questions had been answered) had left already! The game was won by the population II team against the population I team, with the help of a Dutch referee who is known to be a friend of old stellar populations...

The reviews of this Workshop will be published early 2003 in a volume of the Springer series Lecture Notes in Physics, while all contributions – talks and posters – will be made available on the Workshop webpage in Concepción (<http://cluster.cfm.udec.cl>).

## Fellows at ESO

*Since the beginning ESO has provided opportunities for young scientists to interact with the environment of an observatory. Many European astronomers spent some years as post-doctoral Fellows at ESO. The Fellowship programme has been very successful; with only very few exceptions, all former ESO Fellows are now working as astronomers in the community.*

*In addition to developing their scientific careers the Fellows are also asked to contribute to the work of the observatories. In Chile all Fellows are involved in operational activities at Paranal and La Silla, while in Garching they participate in instrument and software development, PR activities, ALMA related studies and surveys.*

*With this issue of The Messenger we start short presentations of Fellows currently at ESO. They describe in their own words what research they pursue and how they are involved in ESO activities. We will continue to present some of the young faces at ESO in the coming issues.*

B. Leibundgut

### Aurore Bacmann



I have been a Fellow at ESO Garching since March 2002. Before that, I had done my PhD thesis with Philippe André at CEA-Saclay near Paris, France, and spent two years

as a post-doc at the University of Jena, Germany, working in the group of Thomas Henning. My area of research is star formation, mostly the early pre-stellar 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 that ALMA will be very relevant to the research I am doing.

### Maria-Rosa Cioni



I am probably an astronomer since the autumn of 1990 when I started at the University in Bologna, though the bed sheets of my earliest days were full of planets and stars. After graduating I moved to the Leiden Observatory in the Netherlands where I obtained the Ph.D. degree. 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.

I study Asymptotic Giant Branch stars, 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 to spectroscopy using the FLAMES instrument. At the same time I follow-up from the La Palma observatory AGBs in northern Galaxies.

I am presently in the middle of my ESO fellowship and I feel proud of being among the people that 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 learned how to support the 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.

## 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 gave, with the Padova and

IAC groups, an important contribution on 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 establishing the idea of extended SF histories (and discovered the old population of Leo I). I was also one of the creators of the *Virtual Planetarium* educational website, at the Padova Observatory.

I am enjoying very much the La Silla environment, 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 LMC 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 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 free-hand 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' *The complete Reprise* years!

year of my fellowship I will join the Astronomy Department of 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 several different projects, including optical and near-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.

A thing I have missed is teaching, which I had done previously in Helsinki (where I finished my PhD in 2001) and Harvard (where I worked as a SAO Pre-doctoral 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.

## 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

## URANUS, Rings and Moons

A near-infrared view of the giant planet Uranus with its rings and some of its moons, obtained at a wavelength of 2.2  $\mu$ m on November 19, 2002, with the ISAAC multi-mode instrument on the 8.2-m VLT ANTU telescope. The observing conditions were excellent, with seeing of 0.5 arcsec.

The rings of Uranus are almost undetectable from the Earth in visible light, but on this VLT near-infrared picture the contrast between the rings and the planet is strongly enhanced. At the near infrared wavelength at which this observation was made, the infalling sunlight is almost completely absorbed by gaseous methane present in the planetary atmosphere and the disk of Uranus therefore appears unusually dark. At the same time, the icy material in the rings reflects the sunlight and appears comparatively bright.

The observers at ISAAC were Emmanuel Lellouch and Thérèse Encrenaz of the Observatoire de Paris (France) and Jean-Gabriel Cuby and Andreas Jaunzen (both ESO-Chile).

More details can be found in ESO press release PR 31/02.

