

branch stars in the Spitzer Surveying the Agents of a Galaxy's Evolution (SAGE) survey.

In 2007, I began my PhD studies at the University of Colorado. I worked with John Bally on observational studies of molecular outflows and high-mass star-forming regions. I reduced the data for the Bolocam Galactic Plane Survey, the first unbiased survey of the Galactic Plane in the millimetre regime, which drove my thesis. I found the most interesting aspect of this survey work was what we didn't see, which led to the conclusion that the most massive clusters probably do not have a "starless" stage before they form: instead, they grow by consuming material from a large, spread-out molecular cloud or by the merger of smaller subclusters.

One of the recurring themes in my work has been the creation and improvement

of the computational tools needed to do astronomical research. As an undergraduate I learned about the Image Reduction and Analysis Facility (IRAF), which is an extremely powerful toolkit with a sometimes clunky interface. While writing a large data reduction pipeline as a student, I became involved in the Astropy Project, which has made a huge suite of tools available and accessible.

After my PhD, I came to ESO in Garching as a Fellow. I am involved in the ALMA Regional Centre, where my duties involve both observing and software development. Working with a small international collaboration, I have developed a suite of tools for use with ALMA data<sup>1</sup>. During the first year of my Fellowship, I dedicated most of my effort to producing a large 300-hour survey of the Central Molecular Zone of the Galaxy with the Atacama Pathfinder EXplorer (APEX) telescope. I used this data to measure the

temperature of the Galactic Centre's densest gas, and we found that it was uniformly warmer than observed elsewhere in the Galaxy.

I have continued my observational projects on the study of the structure and properties of high-mass clusters, which are some of the most active regions in the present-day Universe, and of the Galactic Centre. These objects also represent the most visually striking features on the sky, but they can only be observed in the radio. As I will soon move on from ESO, I look forward to continuing my work with ALMA and other radio telescopes to understand the nature of star formation and the origin of high-mass stars.

Links

<sup>1</sup> Software tools for radio astronomy: [radio-astro-tools.github.io](http://radio-astro-tools.github.io)

## Personnel Movements

### Arrivals (1 January–31 March 2016)

#### Europe

Bouchtita, Sonia (FR)	Accountant
Förster, Andreas (DE)	Optical Engineer
Gonzalez Fernandez, Ariadna Irene (ES)	Student
Kosmalski, Johan Pierre-Dominique (FR)	Optical Engineer
Mroczkowski, Anthony (US)	Astronomer/Submillimetre Instrument Scientist
Tulloch, Simon Mark (UK)	Detector Engineer
Zivkov, Viktor (DE)	Student

#### Chile

Guieu, Sylvain (FR)	Optical Physicist
Neumann, Justus (DE)	Student
Ramirez, Jorge (CL)	Electronic Engineer

### Departures (1 January–31 March 2016)

#### Europe

Finger, Gert (AT)	Applied Physicist
Guerou, Adrien (FR)	Student
Rodón, Javier Adrián (AR)	Fellow

#### Chile

Ertel, Steve (DE)	Fellow
Hill, Tracey (AU)	Fellow