

Felipe Eduardo Gran Merino

Ph.D. student at Instituto de Astrofísica
Pontificia Universidad Católica de Chile
Millennium Institute of Astrophysics (MAS) graduate student
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PERSONAL DETAILS

Birthday: July 20, 1989
Citizenship: Chilean
Webpage: fegran.github.io
Family status: 1 child born September 4, 2012

EDUCATION

Ph.D. in Astrophysics: March 2016 - Present
Pontificia Universidad Católica de Chile
Ph.D. candidate: aproved May 2018

M.Sc. in Astrophysics: August 2013 - August 2015
Pontificia Universidad Católica de Chile
“Distinción Máxima”

B.Sc. in Astronomy: March 2018 - August 2013
Pontificia Universidad Católica de Chile
“Distinción Máxima”

RESEARCH INTERESTS

The Galactic bulge: stellar populations, structure, globular clusters, proper motions
Variable stars: RR Lyrae stars as distance tracers
Wide-field surveys: VVV, Gaia, APOGEE surveys

EXPERIENCE

Ph.D Thesis: March 2017 - Present
Unleashing the inner Galaxy: the proper motion revolution
Advisor: Manuela Zoccali (PUC, Chile)

Short internship: January 2019 - March 2019
European Souther Observatory (ESO), Garching bei Munich, Germany
Advisor: Elena Valenti (ESO, Germany)

M.Sc. Thesis: March 2015 - August 2015
Mapping the outer bulge with RR Lyrae stars from the VVV survey
Advisors: Manuela Zoccali (PUC, Chile) and Dante Minniti (UNAB, Chile)

B.Sc. Thesis: March 2013 - August 2013
Long-Period variable stars in the VVV survey
Advisors: Dante Minniti (PUC, Chile) and Roberto Saito (UFS, Brazil)

Summer Practice: January 2012
Commissioning and characterization of the spectrograph at UC Observatory
Advisor: Felipe Barrientos (PUC, Chile)

Technical Staff: April 2015 - July 2015
*3D Structure, 3D Kinematics and Chemical Abundances
of the Spheroid and Bar in the Inner Milky Way*
Proyecto FONDECYT Regular 1150345

Advisor: Manuela Zoccali (PUC, Chile)

Technical Staff:

March 2014 - March 2015

Stellar Evolution and Variability Studies in the Era of Large Surveys

Proyecto FONDECYT Regular 1141141

Advisor: Márcio Catelan (PUC, Chile)

Technical Staff:

December 2012 - February 2014

VVV Templates Project

Proyecto FONDECYT Regular 1110326

Advisor: Márcio Catelan (PUC, Chile)

Assistantships:

- *Data Analysis II (2014B)*
- *Scientific Assistant at UC Observatory (2012A, 2012B, 2013A, 2014A, 2014B)*
- *Experimental Astrophysics (2013B)*
- *Astronomy (2013A)*
- *Stellar Astrophysics (2012B)*

**ACADEMIC
GRANTS**

“CONICYT: Beca de asistencia a eventos”: October 2018 - December 2018

Selected for a grant to attend two conferences:

- IAC XXX Canary Islands Winter School of Astrophysics:
Big Data Analysis in Astronomy (November 2018)
- The Galactic Bulge at the crossroads (December 2018)

March 2017 - December 2019

“CONICYT: Concurso Becas de Doctorado en Chile”:

Selected for a grant to continue Ph.D. studies

March 2014 - July 2015

“CONICYT: Concurso Becas de Magíster en Chile”:

Selected for a grant to continue M.Sc. studies

SKILLS

Languages:

Spanish (native language)
English (preparing ALTE 3 certification)

Programming Language:

Python (advanced)
ADQL (basic)
HTML (basic)

Used Software:

TOPCAT, STILTS, Aladin

Github Repository:

github.com/fegran

**CONFERENCES
AND
WORKSHOPS**

Galactic Bulge at the Crossroads

Oral presentation: “Unleashing the inner Galaxy: the proper motion revolution”

Pucón, Chile, December 2018

XXX Canary Islands Winter School of Astrophysics:

Big Data Analysis in Astronomy

Tenerife, Spain, November 2018

ESO Star Cluster Meeting

Oral presentation: “High-resolution analysis of the globular cluster NGC 6544”
Santiago, Chile, March 2017

Data Driven Modeling of Spectra using The Cannon

La Serena, Chile, March 2016

6th VISTA Variables in the Vía Láctea Science Meeting

Oral presentation: “Outer bulge RR Lyrae stars in the VVV Survey”
Puerto Varas, Chile, March 2015

Second La Serena School for Data Science

La Serena, Chile, August 2014

Harvard-Chile Special Workshop on Data Science

La Serena and Santiago, Chile, January 2014

**APPROVED
OBSERVING
PROGRAMS**

SPARTAN at SOAR Observatory

*Hidden in the haystack: characterization of recently
discovered bulge globular clusters*

PI: F. Gran, June 2019

APOGEE-2S at Las Campanas Observatory

Exploring the heart of our Galaxy

PI: M. Zoccali, March 2017, 2018

VIMOS at Paranal Observatory

Kinematics and Chemical Abundances of RR Lyrae variables in the Galactic bulge

PI: M. Zoccali, December 2014

OSIRIS at SOAR Observatory

Follow-up observations of Galactic novae candidates discovered by the VVV Survey

PI: R. K. Saito, March 2013

PUBLICATIONS *Globular cluster candidates in the Galactic bulge:*

Gaia and VVV view of the latest discoveries

Gran, F. et al. 2019, arXiv:1904.10872

VVV-WIT-07: another Boyajian’s star or a Mamajek’s object?

Saito, R. K. (**incl. Gran, F.**) 2018, MNRAS, 482, 500

The VVV Survey RR Lyrae Population in the Galactic Center Region

Contreras Ramos, R. (**incl. Gran, F.**) 2018, ApJ, 863, 79

The Orbit of the New Milky Way Globular Cluster FSR1716 = VVV-GC05

Contreras Ramos, R. (**incl. Gran, F.**) 2018, ApJ, 863, 78

VVV Survey Orbital Period Confirmation for the

Cataclysmic Variable IGR J17014-4306

Ferreira, T., R. et al. (**incl. Gran, F.**) 2018, RNAAS, 2, 39

Proper motions in the VVV Survey:

Results for more than 15 million stars across NGC 6544

Contreras-Ramos, R. et al. (**incl. Gran, F.**) 2017, A&A, 608, 140

Near-IR period-luminosity relations for pulsating stars in ω Centauri (NGC 5139)

Navarrete, C. et al. (**incl. Gran, F.**) 2017, A&A, 604, 120

FSR 1716: A New Milky Way Globular Cluster

Confirmed Using VVV RR Lyrae Stars

Minniti, D. et al. (**incl. Gran, F.**) 2017, ApJ, 838, 14

A machine learned classifier for RR Lyrae in the VVV survey

Elorrieta, F. et al. (**incl. Gran, F.**) 2016, A&A, 595, 82

Discovery of RR Lyrae Stars in the Nuclear Bulge of the Milky Way

Minniti, D. et al. (**incl. Gran, F.**) 2016, ApJ, 830, 14

Mapping the outer bulge with RRab stars from the VVV Survey

Gran, F. et al. 2016, A&A, 591, 145

VVV Survey Observations of a Microlensing Stellar Mass Black Hole Candidate in the Field of the Globular Cluster NGC 6553

Minniti, D. et al. (**incl. Gran, F.**) 2015, ApJ, 810, 20

Clustered Cepheid Variables 90 kiloparsec from the Galactic Center

Chakrabarti, S., et al. (**incl. Gran, F.**) 2015, ApJ, 802, 4

Updated Census of RR Lyrae Stars in the Globular Cluster ω Centauri

Navarrete, C. et al. (**incl. Gran, F.**) 2015, A&A 577, A99

Bulge RR Lyrae stars in the VVV tile b201

Gran, F. et al. 2015, A&A, 575, 114

Variable stars in the VVV globular clusters. I. 2MASS-GC02 and Terzan10

Alonso-García, J. et al. (**incl. Gran, F.**) 2015, AJ, 149, 99

The VVV Templates Project Towards an automated classification

of VVV light-curves. I. Building a database of stellar variability in the near-infrared

Angeloni, R., et al. (**incl. Gran, F.**) 2014, A&A, 567, 100

A misidentified RR Lyrae variable star in omega Centauri

Navarrete, C. et al. (**incl. Gran, F.**) 2013, IBVS, 6078, 1