

Curriculum Vitæ - Vinicius Moris Placco

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Personal information

Full name Vinicius [vee-nee-see-uh-s] Moris Placco
Languages Portuguese (native), English (fluent),
Spanish (intermediate), Italian (basic)
Website <http://vmplacco.github.io/>
e-mail vmplacco@gmail.com

Employment / Appointments

2020– Associate Scientist
Community Science & Data Center – US National Gemini Office
NSF's National Optical-Infrared Astronomy Research Laboratory

2015–2020 Research Assistant Professor
Department of Physics
University of Notre Dame

2018–2020 Faculty Fellow
Liu Institute for Asia and Asian Studies
University of Notre Dame

2014–2015 Science Fellow
Gemini Observatory – Northern Operations Center
Association of Universities for Research in Astronomy

2013–2014 Postdoctoral Fellow
National Optical Astronomy Observatory
Association of Universities for Research in Astronomy

2010–2013 Postdoctoral Fellow
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Universidade de São Paulo

Education

2007–2010 Doctorate degree in Astronomy
[Search for very metal-poor stars based on carbon over-abundance](#)
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Universidade de São Paulo

2005–2007 Master's degree in Astronomy
[Abundance patterns among very metal-poor stars in the Galaxy: a statistical approach](#)
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Universidade de São Paulo

2001–2005 Bachelor's degree in Physics (concentration: Astronomy)
Instituto de Física
Universidade de São Paulo

Awards

2011 *Featured Astronomy thesis of the year 2010*
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Universidade de São Paulo

2005 *Best Astronomy undergraduate project*
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Universidade de São Paulo

Observatory Experience

Leadership roles/Service

- 2020–present Hubble Space Telescope External Proposal reviewer
- 2018–present Member of the J-PAS Survey Science Committee ([Javalambre Physics of the Accelerating Universe Survey](#))
- 2018–present Co-coordinator of the Resolved Stellar Population Working Group of the J-PAS Survey
- 2018–present Member of the Maunakea Spectroscopic Explorer (MSE) [Science Team](#)
- 2017–present Co-coordinator of the Stellar Parameters Value-Added Catalog Group of the J-PLUS Survey
- 2017–present Subaru Telescope Proposal reviewer – category group: Normal Stars, Metal-Poor Stars
- 2017–present Member of the S-PLUS Advisory Committee ([Southern Photometric Local Universe Survey](#))
- 2017–present Principal Investigator of the S-PLUS Short Survey
- 2019–2020 Member of the NSF’s NOIR Lab Time Allocation Committee - [Galactic Panel 2](#)
- 2017–2020 US representative for the Gemini Observatory Users Committee
- 2018–2019 Member of the NOAO Time Allocation Committee - [Galactic Panel 2](#)
- 2017–2018 Member of the Gemini OCS Upgrades Working Group
- 2018 US Extremely Large Telescope Program – [First Stars Key Science Project](#)

Operations and Instrument/User Support

- 2020–present **NSF’s NOIRLab**: Community Science & Data Center – US National Gemini Office
 Product development for the Gemini user community:
 [Twitter account bots](#) – [daily completion](#), [weekly paper](#), [monthly completion](#), [other metrics](#)
 [GitHub repositories](#) – [DRAGONS Imaging tutorials](#), [IRAF Spectroscopy tutorials](#), [users dashboard](#)
 Co-organization of AAS Splinter Meetings
 Migration and maintenance of the [US NGO Portal](#)
 Migration and maintenance of the [GMOS Cookbook](#)
 Gemini HelpDesk – Responsible for selected Tiers 2 and 3 inquiries
- 2021–present **NSF’s NOIRLab**: Gemini Observatory – Science User Support Department
 Part of the Science Verification effort for the DRAGONS spectroscopic routines
 Early testing of the quick-look and interactive tools for DRAGONS
 Performance comparison between Gemini/IRAF and DRAGONS packages
- 2021–present **NSF’s NOIRLab**: Communications, Education & Engagement
 Supported the migration of the NOAO Science website to the new [NOIRLab Science website](#)
 Developed, revised, and curated content for the [NOIRLab Science website](#)
 Serve as a liaison between RSS and CEE
 Support science staff in adding/editing content on the science webpages
 Responding/routing science inquiries from usercomms@noirlab.edu and info@noirlab.edu
 Add/moderate content for scientific meetings in the [Science Events database](#)
- 2014–2015 **Gemini-North**: Operations
 Support Scientist for Phase II programs
 Backup support for instrument teams
 Interface between observatory and visitors (staff, scientists, and others)
 Interactions with astronomers, engineers, IT personnel, and facilities staff
 Community support (help-desk and troubleshooting)
 Write/edit/update internal and external webpages
 Weekly operations meetings
 Queue observer
 Data reductions

- 2014–2015 **Gemini-North:** GMOS Instrument Team
 Instrument performance monitoring pipeline
[Throughput characterization](#)
 Commissioning of AO capabilities
 Write/edit/update internal and external instrument webpages
 Data quality assessment
 Commissioning of Hamamatsu CCD at GMOS-S
- 2014–2015 **Gemini-North:** GRACES Instrument Team
 Commissioning of the instrument
 Developed early data-reduction pipeline
 Write/edit/update internal and external instrument webpages
 Developed exposure time calculator (GRACES ITC v0.1 Beta)
- 2008–2012 **SOAR Telescope:** remote observing station – University of São Paulo
 Responsible for operations and maintenance
 Develop data reduction tools
 Edit/write manuals and data analysis cookbooks
 User support and troubleshooting
 Configure, quote, and purchase new workstations and teleconference hardware
 Work with university staff and IT personel to ensure physical access to buildings and computers
 Support daytime calibrations / nighttime observations

Observing Experience

Period	Telescope	# of nights	instrument	mode
2019–present	CTIO/Blanco	16	COSMOS	remote
2011–present	ESO/NTT	12	EFOSC2	visitor
2008–present	SOAR	40+	Goodman OSIRIS	remote
2013–2018	KPNO/Mayall	20+	RCSPEC KOSMOS	visitor/remote
2014–2015	Gemini North	12	GMOS GRACES GNIRS NIRI NIFS	queue observer
2014–2015	Gemini South	2	GMOS	remote
2013	McDonald 2.1m	4	ES2 Spectrometer	visitor

Research Experience

Funding

Past (Total: USD 470,229)

- 2020–2022 Hubble Space Telescope (Co-I)
Testing r-process nucleosynthesis models with two r-process enhanced stars
 Space Telescope Science Institute (USD 35,000)
- 2019–2021 Hubble Space Telescope (Co-PI)
HD 222925: A unique opportunity to study the full range of nuclei produced by a single r-process event
 Space Telescope Science Institute (USD 60,732)
- 2018–2020 Hubble Space Telescope (Co-PI)
The Unexplored Domains of the s-Process
 Space Telescope Science Institute (USD 119,104)
- 2018 Liu Institute for Asia & Asian Studies (PI)
Stellar Archaeology as a Time Machine to the First Stars
 University of Notre Dame (USD 600 - Travel support for conference)
- 2018 Liu Institute for Asia & Asian Studies (PI)
TDLI Workshop on The Exploding Universe
 University of Notre Dame (USD 2,600 - Travel support for conference)
- 2015–2017 Hubble Space Telescope (Co-I)
The First Detections of Phosphorus, Sulphur, and Zinc in a Bona-Fide Second-Generation Star
 Space Telescope Science Institute (USD 85,293)
- 2016–2017 Faculty Research Support Program Initiation Grant (PI)
Identification of CEMP Stars from S-PLUS Photometry using Artificial Neural Networks
 University of Notre Dame (USD 10,000)
- 2013–2014 FAPESP (State of São Paulo Research Foundation) – Postdoctorate
(re)discovery and analysis of metal-poor stars in the Milky Way
 National Optical Astronomy Observatory (USD 71,400)
- 2010–2013 FAPESP (State of São Paulo Research Foundation) – Postdoctorate
The Milky Way Halo revisited
 Universidade de São Paulo (USD 85,500)

Fellowships

- 2007–2010 Doctorate – FAPESP (07/04356-3) – Universidade de São Paulo
Search for very metal-poor stars based on carbon over-abundance
- 2005–2007 Master's – FAPESP (05/01023-8) – Universidade de São Paulo
Abundance patterns among very metal-poor stars in the Galaxy: a statistical approach
- 2004–2005 Undergraduate research project – CNPq/PIBIC – Universidade de São Paulo
Descoberta e Análise de Objetos com Linhas em Emissão no Survey HK
- 2002–2004 Undergraduate research project – FAPESP (02/04704-8) – Universidade de São Paulo
Construção de câmara de alvo gasoso para produção de feixes radioativos

Visiting Faculty/Postdoc/Graduate Student

- 2018 Universidade de São Paulo
Instituto de Astronomia, Geofísica e Ciências Atmosféricas
Funding: USP/FAPESP/JINA-CEE
- 2018 Chungnam National University
Department of Astronomy & Space Science
Funding: CNU
- 2014 University of Notre Dame
Department of Physics
Funding: Gemini Observatory and JINA (Joint Institute for Nuclear Astrophysics)
- 2014/2012 Massachusetts Institute of Technology
Kavli Institute for Astrophysics and Space Research
Funding: Gemini Observatory, FAPESP (The State of São Paulo Research Foundation – Brazil)
- 2013/2012 National Optical Astronomy Observatory
Kitt Peak National Observatory
Funding: FAPESP (Brazil)
- 2013 New Mexico State University
Department of Astronomy
Funding: FAPESP (Brazil)
- 2010/2008 Universität Heidelberg
Zentrum für Astronomie
Funding: Universität Heidelberg (Germany), FAPESP, PROEX (Brazil)
- 2010/2009 Michigan State University
2007 Physics and Astronomy Department
Funding: JINA (USA), FAPESP, PROEX (Brazil)

Academic Experience

Teaching

Lead Instructor (LI) / Co-Instructor (CI) / Guest Lecturer (GL)

Undergraduate

University of Notre Dame

- | | | |
|------|------|--|
| 2020 | (LI) | Descriptive Astronomy (SU20-PHYS-10140)
Course Instructor Feedback: 5.0/5.0 - link to full report |
| | (LI) | Descriptive Astronomy (SP20-PHYS-10140)
Course Instructor Feedback: 5.0/5.0 - link to full report |
| | (LI) | General Physics B - E & M Laboratory (SP20-PHYS-11422)
Course Instructor Feedback: 5.0/5.0 - link to full report |
| | (GL) | Engineering Physics II Laboratory (SP20-PHYS-11320) |
| | (GL) | Engineering Physics I Laboratory (SP20-PHYS-11310) |
| 2019 | (LI) | Physics A - Mechanics Laboratory (FA19-PHYS-11411)
Course Instructor Feedback: 5.0/5.0 - link to full report |
| | (LI) | Descriptive Astronomy (SU19-PHYS-10140)
Course Instructor Feedback: 5.0/5.0 - link to full report |
| 2018 | (GL) | Descriptive Astronomy (FA18-PHYS-10140) |
| 2017 | (CI) | Descriptive Astronomy (FA17-PHYS-10140) |
| | (LI) | General Physics B - E & M Laboratory (SP17-PHYS-11422)
Course Instructor Feedback: 4.8/5.0 - link to full report |
| 2016 | (GL) | Descriptive Astronomy (FA16-PHYS-10140) |
| 2015 | (GL) | Modern Observational Techniques (FA15-PHYS-30481) |

Universidade Virtual do Estado de São Paulo

- | | | |
|------|------|--------------------------------|
| 2012 | (LI) | Sky and Stars: An introduction |
| | (LI) | Galaxies: An introduction |
| 2011 | (LI) | Sky and Stars: An introduction |
| | (LI) | Galaxies: An introduction |

Graduate

University of Notre Dame

- | | | |
|------|------|--|
| 2017 | (CI) | Astrophysics: Stars (SP17-PHYS-80202) |
| 2016 | (CI) | Large-Scale Astronomical Surveys (SP16-PHYS-70210) |
| 2015 | (GL) | Astrophysics: Stars (SP15-PHYS-80202) |

Universidade de São Paulo

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|------|------|-------------------------|
| 2012 | (GL) | Observational Astronomy |
|------|------|-------------------------|

Teaching Assistant - Universidade de São Paulo

- | | |
|------|---------------------------|
| 2009 | Introduction to Astronomy |
| | Fundamental Astronomy |
| 2008 | Introduction to Astronomy |
| 2007 | Fundamental Astronomy |

Student/Postdoc supervision

Postdoctoral level

2022–2023 Felipe de Almeida Fernandes ([Universidade de São Paulo](#) - Visiting Fellow at NSF's NOIRLab)

Graduate Level (co-advisor) - University of Notre Dame

2019–present Carlos Andrés Galarza Arevalo ([Observatório Nacional - Brazil](#))

2019–present Joseph Zepeda

2019–present Derek Shank

2015–2020 Sarah Dietz

2015–2020 Dmitrii Gudín

2015–2020 Devin Whitten

2015–2020 Kaitlin Rasmussen

2015–2017 Geoffrey Lentner

2010–2016 Rafael Santucci (M.Sc. and Ph.D. - Universidade de São Paulo)

Undergraduate Level (advisor) - University of Notre Dame

2020 Dante Komater (Physics Major)

2019–2020 Lucas Pinheiro (Engineering Major)

2019 Shenghua Liu (Physics Major)

2019 Winter Allen (Arkansas Tech University - REU)

2019 Yihao Zhou (Shanghai Jiao Tong University - REU)

2018–2020 Guilherme Limberg (Universidade de São Paulo)

2016–2018 Erik Peterson

2016–2018 David Kalamarides

2015–2018 Spencer Clark (Glynn Family Honors Program) - [Senior Thesis](#)

2016–2017 John Roach

2016–2017 Cristobal Gonzales

2016–2017 Michael Kurkowski

2017 Jazmine Jefferson (University of Kansas - REU)

2017 Derek Shank (Ohio Wesleyan University - DISC/REU) - [video report](#)

2017 Diego Fernandez (University of Oregon - REU)

2016 Travis Hodges (Austin Peay State University - DISC/REU)

2016 Miguel Correa (San Diego State University - REU)

2015 Siyu He (Xi'an Jiaotong University - REU)

2012–2014 William Alves (Universidade de São Paulo)

2008–2010 Rafael Santucci (Universidade de São Paulo)

Committee Service - University of Norte Dame

2019–2020 Undergraduate Research, Department of Physics

2016–2018 Graduate Recruitment, Department of Physics

2015–2018 Preliminary Exam Committee, Department of Physics

2015–2018 University Committee on Research & Sponsored Programs, Notre Dame Research

Thesis Defense Committee

2018–2022 Heitor Ernandes (Ph.D. - committee chair)
Universidade de São Paulo

2021 [Raphaela Fernandes de Melo](#) (M.Sc.)
Observatório Nacional

2019 [Henrique Reggiani](#) (Ph.D.)
Universidade de São Paulo

2016 [Rafael Miloni Santucci](#) (Ph.D.)
Universidade de São Paulo

2016 [Camilo Francisco Javier Muñoz Peña](#) (M.Sc.)
Universidade de São Paulo

Professional References

Volker Bromm

Department Chair; Professor; Jane and Roland Blumberg Centennial Professorship in Astronomy
Department of Astronomy – The University of Texas at Austin
2515 Speedway, Stop C1400 – Austin, TX - 78712
vbromm@astro.as.utexas.edu – (512) 471-3432

Claudia Mendes de Oliveira

Professor of Astronomy; GMTO Board Member; PI - Southern Photometric Local Universe Survey
Department of Astronomy – Universidade de São Paulo
Rua do Matão, 1226 – São Paulo, SP, Brazil - 05508-090
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Anna L. Frebel

Silverman (1968) Family Career Development Associate Professor of Physics
Department of Physics – Massachusetts Institute of Technology
664C McNair Building, 70 Vassar Street – Cambridge, MA - 02139
afrebel@mit.edu – (617) 253-3718

Christopher Sneden

Professor, Rex G. Baker, Jr. and McDonald Observatory Centennial Research Professor in Astronomy
Department of Astronomy – The University of Texas at Austin
2515 Speedway, Stop C1400 – Austin, TX - 78712
chris@astro.as.utexas.edu – (512) 471-1349

Kim Venn

Professor, Director (Astronomy Research Center, New Technologies for Canadian Observatories)
The Astronomy Research Centre – University of Victoria
111 Elliott, 3800 Finnerty Road – Victoria, BC, Canada - V8P 5C2
kvenn@uvic.ca – (250) 472-5182

Josh Simon

Astronomer
Observatories of the Carnegie Institution of Washington
813 Santa Barbara Street, Pasadena, California, 91101 USA
jsimon@carnegiescience.edu – (626) 304-0256