

# Gabriel Lauffer Ramos

PHD STUDENT

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## Education

### Universidade Federal do Rio Grande do Sul - UFRGS

Porto Alegre, Brazil

PHD IN PHYSICS

2018 - present

- Concentration: Astrophysics

### Universidade Federal do Rio Grande do Sul - UFRGS

Porto Alegre, Brazil

M.S IN PHYSICS

2016 - 2018

- Concentration: Astrophysics

### Universidade Federal do Rio Grande - FURG

Rio Grande, Brazil

B.S IN PHYSICS

2016

- Science Without Borders scholarship to study at *State University of New York at Oswego*, NY, USA, from August 2013 to December 2014.

## Published Papers

- |      |   |     |
|------|---|-----|
| 2018 | <b>Lauffer R. G.; Romero A. D; Kepler S. O.</b> , New full evolutionary sequences of H- and He-atmosphere massive white dwarf stars using mesa. MNRAS, v. 480, p. 1547-1562, 2018   | DOI |
| 2019 | <b>Alejandra D. Romero; Kepler S. O.; Joyce S. R. G.; Lauffer G. R.; Córscico A. H.</b> , The white dwarf mass-radius relation and its dependence on the hydrogen envelope. MNRAS, v. 484, p. 2711-2724, 2019                                       | DOI |
| 2019 | <b>Alejandra D. Romero; L. Antunes Amaral; T. Klippel; D. Sanmartim; L. Fraga; G. Ourique; I Pelisoli; Lauffer G. R.; S. O. Kepler; D. Koester</b> , Ground based observation of ZZ Ceti stars and the discovery of four new variables. MNRAS, 2019 | DOI |

## Experience

### Teaching Assistantship

Porto Alegre, Brazil

UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

Aug. 2019 - Dec. 2019

- TA for the undergraduate Astronomy Fundamentals class.
- Professor: Dra. Alejandra D. Romero

### Teaching Assistantship

Porto Alegre, Brazil

UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

Mar. 2019 - Aug. 2019

- TA for the graduate Stellar Evolution class.
- Professor: Dra. Alejandra D. Romero

### Graduate Research

Porto Alegre, Brazil

UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

Aug. 2016 - Present

- Numerical simulations of evolution of massive white dwarfs.
- Advisors: Dra. Alejandra D. Romero and Dr. S.O. Kepler

### LaTeX Minicourse

Rio Grande, Brazil

UNIVERSIDADE FEDERAL DO RIO GRANDE

May. 2015

- Lecturer on a 12 hours LaTeX minicourse.
- Introduction to the LaTeX language.

### Undergraduate Research

Rio Grande, Brazil

UNIVERSIDADE FEDERAL DO RIO GRANDE

Mar. 2015 - Jul. 2016

- Final Project to obtain the title of B.S in Physics.
- The influence of noisy and frequency sample on variable stars data on the result of its period of pulsation
- Advisor: Dr. Fabricio Ferrari

## Undergraduate Tutor

UNIVERSIDADE FEDERAL DO RIO GRANDE

- Tutoring sessions for students enrolled at Undergraduate Physics classes.

Rio Grande, Brazil

Apr. 2015 - Jul. 2016

## Undergraduate Research

STATE UNIVERSITY OF NEW YORK AT OSWEGO

- Calculated periods of pulsation of variable stars.
- Contributed to the development of the Plotypus software, a Python library for manipulating and plotting stellar lightcurves.
- Advisor: Dr. Shashi M. Kambur

Oswego, U.S.A

Aug. 2014 - Dec. 2014

## Research Assistanship

STATE UNIVERSITY OF NEW YORK AT OSWEGO

- Developed a programming code to calculate periods of pulsation from variable stars data.
- Code developed in Python3 using the Conditional Shannon Entropy method.
- Research assistanship performed as demanded by the Science Without Borders scholarship.

Oswego, U.S.A

May. 2014 - Aug. 2014

## Undergraduate Research

UNIVERSIDADE FEDERAL DO RIO GRANDE

- Teoretical calculations of magnetic phase transition
- Developed a Fortran code to calculate the 2D-Ising model using Monte Carlo simulation.
- Advisor: Dr. Matheus J. Lazo

Rio Grande, Brazil

Aug. 2012 - Jul. 2013

# Presentation

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## SELECTED TALKS

- |      |   |                      |
|------|---|----------------------|
| 2019 | <b>Lauffer R., G.</b> , Evolutionary Sequences of Massive White Dwarfs Stars - Universidade Federal do Rio Grande do Sul                                | Porto Alegre, Brazil |
| 2018 | <b>Lauffer R., G.</b> , Sequências Evolutivas de Anãs Brancas Massivas- Mostra da Pós-Graduação em Física - UFRGS                                       | Porto Alegre, Brazil |
| 2015 | <b>Lauffer R., G; Ferrari, F.</b> , Determinação de Pulsação Estelar Através da Entropia de Shannon Condicional - XXIV Mostra de Produção Universitária | Rio Grande, Brazil   |
| 2014 | <b>Lauffer R., G.</b> , Kepler Laws: Exoplanetary Orbits and a Comet Study - Quest Day.   | Oswego, U.S.A        |
| 2012 | <b>Lauffer R., G; Lazo, M. J.</b> , Modelos de Spin Clássicos e Quânticos - XI Mostra de Produção Universitária   | Rio Grande, Brazil   |

## POSTER

- |      |   |                    |
|------|---|--------------------|
| 2017 | <b>Lauffer R., G. Romero A., D; Kepler S., O.</b> , Modelos Evolutivos de Anãs Brancas com o MESA - II Escola de Física do Extremo Sul  | Rio Grande, Brazil |
| 2015 | <b>Lauffer R., G; Ferrari, F; Kanbur, S. M.</b> , Determinação de Pulsação Estelar Através da Entropia de Shannon Condicional - I Escola de Física do Extremo Sul                           | Rio Grande, Brazil |
| 2015 | <b>Lauffer R., G; Ferrari, F; Kanbur, S. M.</b> , Determinação de Pulsação Estelar Através da Entropia de Shannon Condicional - VIII Semana Acadêmica da Física                             | Rio Grande, Brazil |
| 2014 | <b>Lauffer R., G; Bellinger, E; Kanbur, S. M.</b> , Conditional Entropy Method to Detect Periods on Variable Stars - Rochester Academy of Science 41st Annual Fall Scientific Paper Session | Brockport, U.S.A   |
| 2014 | <b>Lauffer R., G; Bellinger, E; Kanbur, S. M.</b> , Conditional Entropy Method to Detect Period on Variable Stars - Summer Scholar & Global Lab Posters                                     | Oswego, U.S.A      |

## PUBLIC OUTREACH

- |      |   |                    |
|------|---|--------------------|
| 2016 | <b>Orientation for Physics Freshmen students</b> , Presented the physics department of the Universidade Federal do Rio Grande to new students | Rio Grande, Brazil |
| 2015 | <b>Roudtable Interview</b> , Interview about studying abroad  | Rio Grande, Brazil |

# Skills

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## Programming

- Python, LaTeX, Markdown, Git, Bash, C++, Fortran.

## Languages

- English - advanced (TOEFL ITP score 630)
- Portuguese - native language
- Spanish - Intermediate

## References

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### **Dra. Alejandra D. Romero**

PROFESSOR - UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

*alejandra.romero@ufrgs.br*

### **Dr. S.O. Kepler**

PROFESSOR - UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL

*kepler@if.ufrgs.br*

### **Dr. Fabricio Ferrari**

PROFESSOR - UNIVERSIDADE FEDERAL DO RIO GRANDE

*fabricio.ferrari@furg.br*

### **Dr. Shashi M. Kanbur**

PROFESSOR - STATE UNIVERSITY OF NEW YORK AT OSWEGO

*shashi.kanbur@oswego.edu*