

# Gerardo RAMOS-LARIOS

## Professor/ Researcher | IAM - UdeG

[iam.cucei.udg.mx](http://iam.cucei.udg.mx), [fisica.cucei.udg.mx](http://fisica.cucei.udg.mx)  
3336164937 @ gerardo.rlarios@academicos.udg.mx  
Av. Vallarta 2602, Col. Arcos Vallarta  
Guadalajara, Jalisco, Mexico



I got both, my BSc and PhD degrees in Physics at the University of Guadalajara in Mexico. My undergraduate project was under the supervision of Dra. Yolanda Gómez at the CRyA-UNAM (now IRyA) in the city of Morelia. Some years later began my PhD supervised by Dr. Peter Phillips. After completing my PhD, I moved to Granada, Spain to start a postdoc position at the IAA-CSIC under the supervision of Dr. Martín Guerrero. Finally, I moved back to Mexico as a Research Fellow. Among my extracurricular interests, photograph the night sky is by far the most refreshing. I love look at the stars in clear dark skies, far away from urban areas and light pollution. Luckily, my career nicely combines with my hobby :) I'm convinced that I feel more at home with the sky than with anything else. The time I have spent so far in astronomy has allowed me to meet outstanding people, amazing friends and visited many wonderful places during my observing trips. We recently build our own astronomical observatory in the University ([www.oarp.com.mx](http://www.oarp.com.mx)) and subsequently we created an international research group on evolved stars ([www.grnes.com](http://www.grnes.com)).

## EDUCATION

- |      |  |
|------|--|
| 2002 | Bachelor of Science (BSc) in Physics (University of Guadalajara, Mexico).<br>Supervisor : Dra. Yolanda Gómez Castellanos.† |
| 2007 | Ph D. in Physics (University of Guadalajara, Mexico).<br>Supervisor : Dr. John Peter Phillips.†                            |

## AWARDS AND DISTINCTIONS

- |   |   |
|---|---|
| 2010 Jalisco State Award for Science, Technology and Innovation | The Science in Images                             |
| 2010 National Contest of Scientist Photography                  | Winner by National Science and Technology Council |
| 2012 Member of the Mexican Academy of Sciences                  | Mexican Academy of Sciences                       |
| 2012 National Researcher Level II (SNI)                         | National Science and Technology Council           |
| 2013 Jalisco State Award for Science, Technology and Innovation | Astronomy Club                                    |
| 2017 Marcos Moshinsky Young Scientist Fellowship                | Physical Sciences category by the M-M Foundation  |
| 2020 National Contest of Photography                            | Winner by National Science and Technology Council |
| 2021 Medal for Academic Merit                                   | University of Guadalajara                         |

## TEACHING

- |                               |  |
|-------------------------------|--|
| Physics lecturer<br>2009-2021 | Graduated   Undergraduated, CUCEI, University of Guadalajara<br>> Observational Astronomy<br>> Astrophysics<br>> Physics<br>> Mechanics<br>CUCEI UdeG IAM            |
| Professional<br>2012-2021     | Refereeing   Grant reviewer/Projects, POST DOCTORAL, Ph D<br>> Journal referee<br>> Review for grant applications<br>> Project applications<br>MNRAS ApJ A&A CONACyT |

## PROFESSIONAL








- |          |  |
|----------|--|
| 2008     | Astrophysics Post Doctoral research (IAA-Spain). Supervisor : Dr. Martín A. Guerrero Roncel. |
| 2009     | Fellow (IAM-UdeG)  |
| 2010     | Research associate (IAM-UdeG)  |
| 2015-now | Full professor (IAM-UdeG)  |

## PUBLICATIONS

- |                                      |     |
|--------------------------------------|-----|
| Peer reviewed publications           | 101 |
| Papers in proceedings of conferences | 22  |
| Science outreach publications        | 15  |
| Book chapters                        | 2   |

## KEY PUBLICATIONS

---

- 2005  [An Analysis of 2MASS Near-Infrared Photometry for Galactic PNe](#)  
Gerardo Ramos-Larios & J.P. Phillips; *MNRAS*, 357, 732-752
- 2009  [Searching Heavily Obscured Post-AGB Stars and Planetary Nebulae. I. IRAS candidates](#)  
Gerardo Ramos-Larios, M.A. Guerrero, O. Suárez et al.; *A&A*, 501, 1207-1257
- 2011  [The Halo and Rings of the Planetary Nebula NGC 40 in the Mid-Infrared](#)  
Gerardo Ramos-Larios, J.P. Phillips & L. Cuesta.; *MNRAS*, 411, 1245-1257
- 2016  [Rings and Arcs around Evolved Stars I. Fingerprints of the Last Gasp in the Formation of PNe](#)  
Gerardo Ramos-Larios, E. Santamaría, M.A. Guerrero et al.; *MNRAS*, 462, 610-635
- 2018  [The Inside-Out Planetary Nebula around a Born-Again Star](#)  
M.A. Guerrero, X. Fang, Bertolami, Gerardo Ramos-Larios et al.; *Nature Astronomy*, 2, 784-789
- 2021  [The Decline and Fall of the Youngest Planetary Nebula](#)  
B. Balick, M.A. Guerrero & Gerardo Ramos-Larios; *ApJ*, Vol 908, Issue 2, id.L54, 7pp
- 2024  [H2 molecular gas in the old planetary nebula NGC3587](#)  
Gerardo Ramos-Larios, M.A. Guerrero, J. Toalá et al.; *MNRAS*, 527, 10123-10130

## LANGUAGES

---

Spanish ●●●●●  
English ●●●●○

## SUPERVISION

---

- > 4 Ph D students
- > 4 M Sc students
- > 8 Bachelor students

## PROJECTS

---

### SINGULAR BUBBLES AROUND EVOLVED STARS : A PANCHROMATIC VISION

2021 - 2024

#### [CONACyT 2019 results](#)

This project aims to study the formation and destruction of dust and complex molecules formed in the ejected material of four evolved objects, namely nova shells, planetary nebulae, the peculiar born-again planetary nebulae, and Wolf-Rayet bubbles, taking advantage for the first time of panchromatic observations of these sources.  
PI - National Science and Technology Council (grant 263373).

CONACyT

### GROUP FOR THE RESEARCH ON NEBULAE AROUND EVOLVED STARS

2020

#### <http://www.grnes.com/>

The Group is composed of an international team of astrophysicists aimed at a better understanding of the formation of nebulae around evolved stars and their diffusion into the Interstellar Medium.  
Founder

GRNES

### ROBOTIC ASTRONOMICAL TELESCOPE

2015

#### <http://www.oarp.com.mx/>

The observatory is an astronomical teaching and research small facility located in the heart of La Primavera forest. Maintained by the Department of Physics and the Institute of Astronomy and Meteorology of the University of Guadalajara. The construction and operation of this facility has been supported by grants from the National Science and Technology Council, the Secretary of Public Education and CUCEI.  
Manager and Founder

OARP

### RESEARCH OF RINGS, RAYS AND LOW IONIZATION STRUCTURES ASSOCIATED WITH PLANETARY NEBULAE

2012 - 2015

#### [CONACyT 2012 results](#)

The objective of this project is to detect and analyze structures in the form of rings, rays and halos not previously observed and that are associated with Planetary Nebulae.  
PI - National Science and Technology Council (grant 177864).

CONACyT

## REFERENCES

---

**Dr. Héctor H. Ulloa Godínez**

Director, IAM, UDEG - MEXICO

@ hector@astro.iam.udg.mx

☎ +52 3336164937

**Dr. Martín Guerrero Roncel**

Scientific researcher, IAA, CSIC - SPAIN

@ mar@iaa.es

☎ +34 958121311