

# Luciano Combi

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## Academic Formation

2011-2016 **Ms.S. in Physics**, *Department of physics*, Faculty of Exact Sciences, *Universidad Nacional de La Plata (UNLP)*.

Average mark: 9.60/10

Degree thesis: *Equivalence between General Relativity and Teleparallel Gravity*.

Mark: 10/10. Supervisor: Gustavo E. Romero.

2017-Present **Ph.D. in Physics**, *Department of physics*, Faculty of Exact Sciences, UNLP.

Supervisor: Gustavo E. Romero.

## Current position

2017-Present **Doctoral Fellow**, *CONICET*.

Supervisor: Gustavo E. Romero.

Research field: gravitation, General Relativity, cosmology, black holes, local physics and cosmology, astrophysics, foundations of physics, scientific philosophy.

Place: Instituto Argentino de Radioastronomía, Bs.As., Argentina

## Ph.D. Courses

2017 **Elements of Quantum Field Theory I.**

Department of Physics, Faculty of Exact Sciences, UNLP

Professor: Horacio Falomir

Duration: 1 semester

## Fellowships

2017 **Ph.D. Research Fellow**, *CONICET*, (National Research Council).

Supervisor: Gustavo E. Romero.

Place: Instituto Argentino de Radioastronomía, Bs.As., Argentina.

## Teaching Experience

2015 **Undergraduate Teaching Assistant** of Calculus II, Department of Mathematics, Faculty of Exact Sciences, UNLP. **Period:** 1th semester

- 2015 - 2017 **Undergraduate Teaching Assistant**, Department of Physics, Faculty of Exact Sciences, UNLP. Courses given: Linear Algebra, General Physics I, General Physics II
- 2015 - 2017 **Undergraduate Teaching Assistant** Faculty of Engineering, UNLP. **Course:** Physics I (Laboratory duties)
- 2017- Present **Graduate Teaching Assistant** Department of Physics, Faculty of Exact Sciences, UNLP. Courses given: Gravitation, General Physics III, Methods in Mathematical Physics. **Current course:** Mechanics I

## Workshops and Schools

- 2016 *Journeys in theoretical physics*, (ICTP-Perimeter Institute). **Place:** Sao Paulo, Brasil. **Duration:** 1 week (40 hs).
- 2016  *$f(R)$  theories of gravity*, (FCGALP, UNLP). **Place:** La Plata, Argentina. **Duration:** 1 week (40 hs).
- 2018 *LAPIS: Cosmology in the era of large surveys*, (FCGALP, UNLP). **Place:** La Plata, Argentina. **Duration:** 1 week (40 hs).
- 2018 *International Pulsar Timing Array, student week*, (NRAO). **Place:** New Mexico, USA. **Duration:** 1 week (40 hs).
- 2018 *First Biennial Midwest Summer School in Philosophy of Physics*, (University of Chicago). **Place:** Chicago, USA. **Duration:** 1 week (40 hs).
- 2018 *The Sound of Space-Time: The dawn of Gravitational Wave Science*, (ICTP-SAIRF). **Place:** Sao Paulo, Brasil. **Duration:** 3 weeks (120 hs).

## Research stays abroad

- 2018 *West Virginia University* with NANOGrav Collaboration. **Place:** Morgantown, West Virginia, USA. **Duration** 4 week.

## Scientific meetings

### Invited presentation

- 2018 *First Pulsar Observations in Southamerica*  
Binational meeting SOCHIAS-AAA, La Serena, Chile. Octubre 16

### Contribution presentation

- 2015 *Inconsistency within the Everett interpretation of Quantum Mechanics*  
First Latinamerican congress of Scientific Philosophy (In honor to Mario Bunge), Buenos Aires, Argentina. October 2015
- 2017 *PuMA proyect: Pulsar Monitoring in Argentina* (in Spanish)  
Encuentro de Estudiantes de Astronomía, Buenos Aires, Argentina. September 2017

### Posters

- 2015 *Force between cylindric magnets: Theory and experiment* (in Spanish)  
Luciano Combi, Lucas Pili, Pablo Pisani, Fernando Monticelli  
100<sup>a</sup> Anual Meeting of the Asociación Argentina de Física (AFA), September 2015

- 2017 *Intensive monitoring of pulsars in the south hemisphere* (in Spanish)  
 Luciano Combi, Jorge Combi, Federico García, Guillermo Gancio, Carlos Lousto  
 Anual Meeting of the Asociación Argentina de Astronomía (AAA), September 2017
- 2018 *Orbits in inhomogenous expanding space-times*  
 Luciano Combi, Eduardo Gutiérrez  
 LAPIS: Cosmology in the era of large surveys, April, 2018
- 2018 *The IAR observatory and the PuMA project*  
 Luciano Combi, Guillermo Gancio, Carlos Lousto  
 IPTA international meeting, Albuquerque, USA

## Outreach

- 2018 *Friday talks in the Planetarium: Gravitational waves and pulsars*  
 Planetarium, La Plata, Argentina
- 2018 **Outreach** department member of Argentine Institute of Radioastronomy  
 In charge of social media management and guide for primary school and high-school visits to the Institute

## Languages

Native **Spanish**  
**English**  
**French**

## Memberships

PuMA (*Pulsar Monitoring in Argentina* collaboration. **Status:** Full member. **Place:** Argentine Institute of Radioastronomy (IAR), La Plata, Argentina

## Awards

- 2017 **Joaquín V. Gonzales award** for distinguished graduate of the National University of La Plata. Given by the City Government of La Plata, Capital of Buenos Aires.

## Other activities

**Reviewer in scientific journals** and institutions:  
 Astrophysics and Space Science (Springer)  
 Gravitation and Cosmology (Springer)  
 Estonian Research Council (ETIS)

## Publications

### Refereed papers in international journals

- 1 **Inconsistency within the Everett interpretation of Quantum Mechanics.**  
Luciano Combi, Gustavo E. Romero.  
*Methateoria* (ISSN 1853-2322) **7**, 47-53, 2017
- 2 **Is Teleparallel Gravity really equivalent to General Relativity?.**  
Luciano Combi, Gustavo E. Romero.  
*Annalen der Physik*, 1700175, 2017
- 3 **Gravitational Energy and radiation of a charged black hole.**  
Luciano Combi, Gustavo E. Romero.  
*Classical and Quantum Gravity*, **34**, 195008, 2017
- 4 **A note on geodesics in inhomogeneous expanding spacetimes.**  
D. Perez, G.E. Romero, Luciano Combi, E.M. Gutiérrez.  
*Classical and Quantum Gravity*, **36**, 055002, 2019
- 5 **Electromagnetic fields and charges in expanding universes.**  
Luciano Combi, Gustavo E. Romero  
*Physical Review D*, 2019 (Accepted)
- 6 **Electromagnetic fields and charges in expanding universes.**  
Luciano Combi, Federico Lopez Armengol  
*Foundations of Physics*, 2019 (Submitted)

## Observational experience

### Telegrams

- 1 **Follow up of the radio flare from the magnetar XTE J1810-197 at 1.4 GHz.**  
Del Palacio, S.; Garcia, F.; Combi, L.; Lopez Armengol, F.; Gancio, G.; Muller, A. L.; Kornecki, P.  
*The Astronomer's Telegram*, **12323**, 2018
- 2 **Radio observations following the recent glitch of Vela Pulsar (PSR B0833-45).**  
F. G. Lopez Armengol (IAR, Argentina; RIT, USA), C. O. Lousto (RIT, USA), S. del Palacio (IAR, Argentina), F. Garcia (CEA, France), L. Combi (IAR, Argentina), J. A. Combi (IAR, FCAGLP, Argentina), G. Gancio (IAR, Argentina), A. L. Mueller (IAR, Argentina), P. Kornecki (IAR, Argentina), on behalf of the PuMA Collaboration  
*The Astronomer's Telegram*, **12482**, 2019