

# Maite Echeveste

*Curriculum Vitae* (January 12, 2024)

## Personal Information

Full Name Maite Echeveste  
E-mail mecheveste@fcaglp.unlp.edu.ar  
Nationality Argentinean

## Education

2019–2023 **PhD in Astronomy**, La Plata National University (UNLP), Argentina.  
PhD thesis On the evolution of interacting binary systems with short orbital periods. Graded 10/10 (December 22, 2023)  
Supervisor Dr. Omar G. Benvenuto  
Co-Supervisor Dra. María A. De Vito  
2018 **Licenciada en Astronomía**, UNLP, Argentina (Five-year degree plus thesis, equivalent to Master's Degree). Orientation: Theoretical Astrophysics; GPA: 9.15/10.  
Master thesis Formation and evolution of Ultracompact X-ray binaries. Graded 10/10  
Supervisor Dr. Omar G. Benvenuto  
Co-Supervisor Dra. María A. De Vito

## PhD Courses

2023 (in progress) **Statistical Data Analysis (Python Programming)** (120 hours course). Host institution: Institute of Astroparticle Detection Technologies (ITeDA), San Martin National University (UNSAM), Argentina.  
2021 **Binary stars** (45 hours course). Host institution: UNLP. Graded 10/10  
2021 **Python Programming** (96 hours course). Host institution: UNSAM. Graded 10/10  
2020 **Machine Learning-Applications in Data Mining and Deep Learning** (30 hours course). Host institution: UNLP. Graded 9/10  
2019 **Philosophy of Science** (64 hours course). Host institution: UNLP. Graded 10/10.  
2019 **The English of Science** (24 hours course). Host institution: UNLP. Graded 10/10

## Other Courses

2022 **Introduction to Data Science in Python**. Online non-credit course authorized by University of Michigan and offered through Coursera.

## Scholarships

March 2023-June 2023 **Coimbra Group Scholarships Programme for Young Professors and Researchers from Latin America Universities**. (research scholarship). Topic: Binary origin of blue straggler stars in open clusters. Host institution: University of Padova, Italy. Supervisor: Dr. Giovanni Carraro.  
April 2019-April 2024 **Five years Doctoral Scholarship from CONICET (Argentina's National Scientific and Technical Research Council)**. Topic: Formation and evolution of compact binary systems. Workplace: Argentinean Institute of Astrophysics (IALP). Supervisor: Dr. Omar G. Benvenuto  
Feb. 2018-April 2018 **Research Fellowship granted by Argentinian Astronomical Society**. Topic: Formation and evolution of ultracompact binary systems. Host institution: UNLP. Supervisor: Dr. Omar G. Benvenuto

April 2017–April 2018 **Training Fellowship from CIC (Scientific Research Council from Buenos Aires province, Argentina).** Topic: Formation of ultracompact binary systems. Host institution: UNLP. Supervisor: Dr. Omar G. Benvenuto.

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## Participation in Research Groups and Scientific Associations

- 2022–Present Member of Argentinian Astronomical Society (AAA).
- 2018–Present Member of the group Grupo de Evolución en Sistemas Binarios (GESBi)  
<https://ialp.fcaglp.unlp.edu.ar/grupos-de-investigacion/>.
- 2020–2024 Collaborator in research group. Project code: G174. Host Institution: UNLP. Subject: Stellar Evolution in Binary Systems: Theoretical and Observational Aspects.
- 2018–2019 Collaborator in research group. Project code: G138. Host Institution: UNLP. Subject: Stellar Evolution in Binary Systems: Theoretical and Observational Aspects.

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## Stays abroad

March 2023 - June 2023. Research stay to collaborate in a project related to the formation of blue straggler stars. With the supervision of Prof. Giovanni Carraro. Host institution: Università degli Studi di Padova, Italy.

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## Publications

### Refereed Papers in International Journals

- **The impact of different magnetic braking prescriptions on the evolution of LMXBs.** Authors: **M. Echeveste**, M. L. Novarino, O. G. Benvenuto, M. A. De Vito. Submitted to Monthly Notices of the Royal Astronomical Society (MNRAS).
- **Effect of tides on the orbital evolution of the redback system PSR 1723-2837**, (2021). Authors: M. L. Novarino, **M. Echeveste**, O. G. Benvenuto, M. A. De Vito, Gabriel Ferraro. MNRAS. Volume 508, Issue 3, pp.3812-3819.
- **Binary evolution leading to the formation of the very massive neutron star in the J0740+6620 binary system**, (2020). Authors: **M. Echeveste**, M. L. Novarino, O. G. Benvenuto, M. A. De Vito. MNRAS. Volume 495, Issue 2, pp.2509-2514.

### Refereed Conference proceedings

- **On the binary origin of short-period blue straggler stars in Collinder 261.** Authors: **M. Echeveste**, M. J. Rain, O. G. Benvenuto, G. Carraro, M. A. De Vito, J. A. Panei. Submitted to Revista Mexicana de Astronomía y Astrofísica Serie de Conferencias (RevMexAA Conference Series edition.)
- **Explorando pérdidas de momento angular y la estabilidad en la transferencia de masa en binarias interactuantes**, (2023). Authors: **M. Echeveste**, M. L. Novarino, O. G. Benvenuto, M. A. De Vito. Proceedings of Argentinian Astronomical Society. Vol. 64, p. 65-67.
- **Estrellas binarias con transferencia de masa: aplicación a distintos sistemas astrofísicos**, (2023). Authors: M. A. De Vito, O. G. Benvenuto, **M. Echeveste**, M. L. Novarino, L. Bartolomeo Koninckx, C. Rodriguez. Proceedings of the Argentinian Association of Astronomy (AAA). Vol. 64, p. 44-46.
- **Efectos de una nueva prescripción de frenado magnético en la evolución de sistemas binarios ultracompactos**, (2022). Authors: **M. Echeveste**, M. L. Novarino, O. G. Benvenuto, M. A. De Vito. Proceedings of the AAA. Vol. 63, pp. 89-91
- **Influencia de los efectos de mareas en la evolución del período orbital de sistemas binarios interactuantes**, (2022). Authors: M. L. Novarino, **M. Echeveste**, M. A. De Vito, O. G. Benvenuto. Proceedings of the AAA. Vol. 63, pp. 95-97
- **Effect of tides on the orbital evolution of irradiated interacting binaries**, (2020). Authors: **M. Echeveste**, M. L. Novarino, O. G. Benvenuto, M. A. De Vito. Proceedings of the AAA. Vol. 61B, p.69-71
- **Formación de sistemas binarios ultracompactos**, (2019). Authors: **M. Echeveste**, J. Gonzalez, O. G. Benvenuto, M. A. De Vito. Proceedings of the AAA. Vol. 61A, p.87-89.
- **Estudio del estado evolutivo del sistema binario PSR J1227-4853**, (2019). Authors: J. Gonzalez, **M. Echeveste**, O. G. Benvenuto, M. A. De Vito. Proceedings of the AAA. Vol. 61A, p.84-86.

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## Teaching Experience

### Graduate Experience

March 2022–Present **Practical Applications Teacher**, *Experimental Physics I*, *General Physics I*, Department of Physics, Facultad de Ciencias Exactas (FCE)–UNLP.

- Sept. 2023–Present **Practical Applications Teacher**, *Physics I CIBEx course*, Department of Basic Sciences, (FCE)–UNLP.
- Sept. 2022–Sept. 2023 **Teacher assistant**, *Stellar Interiors course*, Facultad de Ciencias Astronómicas y Geofísicas (FCAG)–UNLP.
- Feb. 2022 **Practical Applications Teacher**, *Physics I CIBEx summer course*, Department of Basic Sciences, (FCE)–UNLP.
- May 2020–March 2022 **Teacher assistant**, *Physics I CIBEx course*, Department of Basic Sciences, (FCE)–UNLP.

### Undergraduate Experience

- Sept. 2015–April 2018 **Teacher assistant**, *General Physics I course*, Department of Physics, FCE–UNLP.
- April 2018–May 2018 **Teacher assistant**, *Computer Programming course*, Facultad de Ciencias Astronómicas y Geofísicas (FCAG)–UNLP.
- Feb. 2018 **Teacher assistant**, *Summer Academic Levelling course*, FCAG–UNLP.
- June 2016–April 2017 **Teacher assistant**, *Physics I CIBEx course*, Department of Basic Sciences, FCE–UNLP.
- Feb. 2017 **Teacher assistant**, *Summer Levelling course*, FCAG–UNLP.
- Feb. 2017 **Teacher assistant**, *Summer Admission Preparation course*, FCE–UNLP.
- Feb. 2016 **Teacher assistant**, *Summer Academic Levelling course*, FCAG–UNLP.

## Conference and Meetings

### Contributions

- *On the binary origin of Blue Stragglers Stars in Collinder 261. (oral contribution)*. XVII Latin American Regional IAU Meeting. Nov. 2023, Montevideo, Uruguay.
- *Sobre el origen de las BSS en Collinder 261. (oral contribution)*. VII Jornada Anual de Estudiantes de Doctorado, FCAGLP–UNLP. Nov. 2023, La Plata, Argentina.
- *Explorando los efectos del frenado magnético en la evolución de binarias de baja masa interactuantes. (oral contribution)*. VI Jornada Anual de Estudiantes de Doctorado, FCAGLP–UNLP. Nov. 2022, La Plata, Argentina.
- *Explorando pérdidas de momento angular y la estabilidad en la transferencia de masa de binarias interactuantes, M. Echeveste et al. (poster)*. 64rd Annual Meeting of the AAA. Sept. 2022, Buenos Aires, Argentina.
- *Can the newly magnetic breaking prescriptions help the formation of ultracompact X-ray binaries?, M. Echeveste et al. (poster)*. 63rd Annual Meeting of the AAA. Oct. 2021, Córdoba, Argentina.
- *Influencia de los efectos de marea en la evolución del período orbital de sistemas binarios interactuantes, M. L. Novarino et al. (including M. Echeveste.) (poster)*. 63rd Annual Meeting of the AAA. Oct. 2021, Córdoba, Argentina.
- *Effect of tides on the orbital evolution of irradiated interacting binaries. M. Echeveste et al. (poster)*. V Jornada Anual de Estudiantes de Doctorado, FCAGLP–UNLP. Sept. 2019, La Plata, Argentina.
- *Effect of tides on the orbital evolution of irradiated interacting binaries, M. Echeveste et al. (poster)*. 61th Annual Meeting of the AAA. Sept. 2019, Viedma, Argentina.
- *Formación de sistemas binarios ultracompactos, M. Echeveste et al. (poster)*. 2° Binational Meeting between the Chilean Astronomy Society and the AAA. Oct. 2018, La Serena, Chile.
- *Estudio del estado evolutivo del sistema binario PSR J1227-4853, J. Gonzalez et al. (including M. Echeveste.) (poster)*. 2° Binational Meeting between the Chilean Astronomy Society and the AAA. Oct. 2018, La Serena, Chile.
- *Students of Astronomy National Meeting. FCAG–UNLP, Facultad de Matemática, Astronomía, Física y Computación (FaMAF)–Universidad Nacional de Córdoba (UNC). Sept. 2012, La Plata, Argentina. (Organizer)*
- *Students of Astronomy National Meeting. FCAG–UNLP, FaMAF–UNC. Sept. 2011, La Plata, Argentina. (Organizer)*

### Attendance

- 1° Workshop South American Supernovae SAS2016. FCAG–UNLP. May 2016, La Plata, Argentina.
- 2nd Argentinian-Brazilian Meeting on Gravitation, Astrophysics and Cosmology. Apr 2014, Buenos Aires, Argentina.
- Grav13 Conference. FaMAF–UNC. Apr 2013, Villa General Belgrano, Argentina.
- Students of Astronomy National Meeting. FCAG–UNLP, FaMAF–UNC. Sep 2014, La Plata, Argentina.
- Students of Astronomy National Meeting. FCAG–UNLP, FaMAF–UNC. Sep 2013, Córdoba, Argentina.
- 53th Annual Meeting of the Argentinean Astronomical Society. Sep 2010, Salta, Argentina.

## Awards

- 2018 Distinction Joaquín V. González awarded to students with the highest qualifications at the Faculty of Astronomical and Geophysical Sciences, UNLP. La Plata City Council, Buenos Aires, Argentina.

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## Computer Skills

Languages Python, Fortran, Latex, Gnuplot  
Operating Systems Linux, Microsoft Windows

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## Languages

Spanish Mother tongue  
English Cambridge University, ESOL Level 1  
French Basic Level  
Italian Basic Knowledge  
German Basic Knowledge

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## Other Activities

- 2013–2016 **Student Member of the Academic Council FCAG–UNLP (Faculty’s co-governance)**.
- Program: two nights observing experience with the Sistemas Estelares course during my degree. Hosting Institution: Complejo Astronómico El Leoncito (CASLEO), San Juan province, Argentina.