

Maite Echeveste

Curriculum Vitae (January 31, 2024)

Personal Information

Full Name Maite Echeveste
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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 **Statistical Data Analysis (Python Programming)** (120 hours course). Host institution: Institute of Astroparticle Detection Technologies (ITeDA), San Martin National University (UNSAM), Argentina. Graded 10/10.
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

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.
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.
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.

Participation in Research Groups and Scientific Associations

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

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.

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, G. 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 the Argentinian Association of Astronomy (BAAA). 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. Rodríguez. BAAA. 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. BAAA. 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. BAAA. 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. BAAA. Vol. 61B, p.69-71
- **Formación de sistemas binarios ultracompactos,** (2019). Authors: **M. Echeveste**, J. Gonzalez, O. G. Benvenuto, M. A. De Vito. BAAA. 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. BAAA. Vol. 61A, p.84-86.

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.

Computer Skills

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

Languages

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

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.