

Dr. Felipe Navarrete

Full name: Felipe Hernán Navarrete Noriega

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Employment History

- 01.2025 – **Scientist** – Climate Service Center Germany (GERICS), Hamburg, Germany.
- 10.2023 – 12.2024 **Postdoctoral Fellow** – Institute of Space Sciences, Barcelona, Spain.
- 12.2019 – 08.2023 **Doktorand** – Hamburger Sternwarte, Universität Hamburg, Hamburg, Germany.
- 08.2017 – 11.2017 **Tutor for Theoretical Astrophysics** – Universidad de Concepción, Concepción, Chile.
- 08.2016 – 03.2019 **Assistant Researcher** – Universidad de Concepción, Concepción, Chile.

Education

- 10.2019 – 08.2023 **Dr. rer. nat., Universität Hamburg** – PhD in Physics.
Thesis title: *Eclipsing Time Variations from 3D Magnetohydrodynamical Simulations*.
Supervisor: Prof. Dr. Robi Banerjee
- 03.2017 – 05.2019 **M.Sc., Universidad de Concepción** – Master's in Physics.
Thesis title: *Magnetic Fields in Close Binaries*.
- 03.2013 – 12.2016 **Bachelor, Universidad de Concepción** – Bachelor in Astronomy.




Funding and Awards

- 10.2023 – 12.2024 **Fellowship** – ICE Postdoctoral Fellow.
- 03.2022 – 06.2022 **Fellowship** – Visiting PhD fellow at the Nordic Institute for Theoretical Physics.
- 10.2019 – 08.2023 **Scholarship** – From the German Academic Exchange Service (DAAD) to pursue doctoral studies.
- 03.2018 – 03.2019 **Scholarship** – From the Chilean National Science and Technology Agency (Anid/CONICYT) to pursue master studies.
- 2019 **Award** – *Universidad de Concepción Award* for the best grade of each graduation year.







Conferences

- 09.2024 **Pencil Code User Meeting, Institute of Space Sciences, Barcelona.** Organizing committee.
- 10.2023 **Munich Institute for Astro-, Particle and BioPhysics, Garching.** Conference attendance: *Stellar Magnetic Fields from Protostars to Supernovae*.




Conferences (continued)

- 10.2022 – 11.2022  **Isaac Newton Institute, Cambridge.** Conference attendance: *Frontiers in Dynamo Theory: From Planets to Stars*.
- 05.2022 – 06.2022  **Nordic Institute for Theoretical Physics, Stockholm.** Conference attendance: *Magnetic Field Evolution in Low Density or Strongly Stratified Plasmas*.
- 03.2020  **Nordic Institute for Theoretical Physics, Stockholm.** Conference attendance: *The Shifting Paradigm of Stellar Convection: From Mixing Length Concepts to Realistic Turbulence Modeling*.



Talks

- 10.2023  **Munich Institute for Astro-, Particle, and BioPhysics, Germany.**
- 02.2022  **Nordita Astrophysics Seminars, Sweden.**
- 06.2020  **Virtual Nordic Dynamo Seminars, Nordita, Sweden.**
- 03.2019  **Chilean Astronomical Society, Chile.**
- 12.2017  **University of Göttingen, Germany.**
- 11.2017  **LASTRO, EPFL, Geneva Observatory, Switzerland.**

Skills

- Languages  Spanish (native), English (fluent), German (basic).
- Coding  Python, Fortran, Bash.
- Misc.  HPC, SLURM, Linux, L^AT_EX, git.

Other Experience and Skills

- since 2021  **Thesis supervision.**
- since 2017  **High-Performance Computing.**

Scientific Publications

Journal Articles

- 1 J. P. Hidalgo, P. J. Käpylä, D. R. G. Schleicher, C. A. Ortiz-Rodríguez, and **F. H. Navarrete**, “Magnetohydrodynamic simulations of A-type stars: Long-term evolution of core dynamo cycles,” *A&A*, vol. 691, A326, A326, Nov. 2024. [DOI: 10.1051/0004-6361/202449977](#). arXiv: 2409.18066 [astro-ph.SR].
- 2 **F. H. Navarrete**, P. J. Käpylä, D. R. G. Schleicher, and R. Banerjee, “Effects of the centrifugal force in stellar dynamo simulations,” *A&A*, vol. 678, A9, A9, Oct. 2023. [DOI: 10.1051/0004-6361/202346768](#). arXiv: 2305.01312 [astro-ph.SR].
- 3 C. A. Ortiz-Rodríguez, P. J. Käpylä, **F. H. Navarrete**, *et al.*, “Simulations of dynamo action in slowly rotating M dwarfs: Dependence on dimensionless parameters,” *A&A*, vol. 678, A82, A82, Oct. 2023. [DOI: 10.1051/0004-6361/202244666](#). arXiv: 2305.16447 [astro-ph.SR].
- 4 **F. H. Navarrete**, P. J. Käpylä, D. R. G. Schleicher, C. A. Ortiz, and R. Banerjee, “Origin of eclipsing time variations: Contributions of different modes of the dynamo-generated magnetic field,” *A&A*, vol. 663, A90, A90, Jul. 2022. [DOI: 10.1051/0004-6361/202243252](#). arXiv: 2102.11110 [astro-ph.SR].
- 5 **F. H. Navarrete**, D. R. G. Schleicher, P. J. Käpylä, C. A. Ortiz-Rodríguez, and R. Banerjee, “Origin of eclipsing time variations in post-common-envelope binaries: Role of the centrifugal force,” *A&A*, vol. 667, A164, A164, Nov. 2022. [DOI: 10.1051/0004-6361/202243917](#). arXiv: 2205.03163 [astro-ph.SR].
- 6 **F. H. Navarrete**, D. R. G. Schleicher, P. J. Käpylä, J. Schober, M. Völschow, and R. E. Mennickent, “Magnetohydrodynamical origin of eclipsing time variations in post-common-envelope binaries for solar mass secondaries,” *MNRAS*, vol. 491, no. 1, pp. 1043–1056, Jan. 2020. [DOI: 10.1093/mnras/stz3065](#). arXiv: 1906.06787 [astro-ph.SR].
- 7 **F. H. Navarrete**, D. R. G. Schleicher, J. Zamponi Fuentealba, and M. Völschow, “Applegate mechanism in post-common-envelope binaries: Investigating the role of rotation,” *A&A*, vol. 615, A81, A81, Jul. 2018. [DOI: 10.1051/0004-6361/201732425](#). arXiv: 1803.07637 [astro-ph.SR].
- 8 V. Perdelwitz, **F. H. Navarrete**, J. Zamponi, *et al.*, “Long-term variations in the X-ray activity of HR 1099,” *A&A*, vol. 616, A161, A161, Aug. 2018. [DOI: 10.1051/0004-6361/201732222](#). arXiv: 1806.03033 [astro-ph.SR].

Conference Proceedings

- 1 J. P. Hidalgo, P. J. Käpylä, C. A. Ortiz-Rodríguez, **F. H. Navarrete**, B. Toro, and D. R. G. Schleicher, “Origin of magnetism in early-type stars,” vol. 64, Aug. 2023, pp. 50–52. [DOI: 10.48550/arXiv.2303.10707](#). arXiv: 2303.10707 [astro-ph.SR].
- 2 C. A. Ortiz-Rodríguez, D. R. G. Schleicher, P. J. Käpylä, and **F. H. Navarrete**, “Simulations of fully convective M dwarfs: dynamo action with varying magnetic Prandtl numbers,” vol. 63, Jul. 2022, pp. 62–64. [DOI: 10.48550/arXiv.2206.14123](#). arXiv: 2206.14123 [astro-ph.SR].