

Noé Brucy

Curriculum Vitae

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Research experience

- 2022- **Postdoc**, *Institut für Theoretische Astrophysik, Universität Heidelberg, Germany*.
Studying turbulence in the Milky-Way - ERC Ecogal.
- 2019-2022 **PhD in Astrophysics**, *CEA Saclay, Paris*, pending.
From galactic dynamics to star formation: towards exascale computing in Astrophysics.
- 2019 **Research internship**, *Astrophysics department, CEA, Paris*, 15 weeks.
Autogravity in Protoplanetary Discs
- 2018 **Research internship**, *Maison de la Simulation, CEA, Paris*, 13 weeks.
Modeling Protoplanetary Discs with the Adaptive Mesh Refinement Code CanOP.
- 2017 **Research internship**, *Argonne National Laboratory, Chicago*, 14 weeks.
Modeling Active Galactic Nuclei in the Large-scale Cosmological Code HACC.
- 2016 **Research Internship**, *Team ASD, IMCCE, Observatoire de Paris, Paris*, 8 weeks.
Algorithms for greatest common divisors of multivariate polynomials

Teaching

- 2019-2022 **Teacher Assistant**, *Université Paris-Saclay, UFR de Mathématiques et Polytech, Orsay*.
Mathematics (124 hours), Numerical analysis (66 hours).

Education

- 2017-2019 **Master of Astrophysics**, *Observatory of Paris (PSL), Paris*.
Hamiltonian Mechanics, Statistical & Quantum physics, Gravitation & Relativity, Magneto-Hydro-Dynamics, Galaxies, Compact Objects, Cosmology
- 2015-2017 **Bachelor & Master (first year) of Computer science**, *ENS Rennes, University of Rennes 1, Rennes*.
Compilation, UNIX systems, SAT solvers, Machine learning, Signal processing, Model checking
- 2015-2017 **Bachelor of Mathematics**, *ENS Rennes, University of Rennes 1, Rennes*.
Integration, Topology, Probabilities, Arithmetic, Complex analysis, Number's theory.

Languages

- French **Mother tongue**
- Italian **Mother tongue**
- English **Confirmed**



Publications

- 2022 **Large-scale turbulent driving regulates star formation in high-redshift gas-rich galaxies II: Influence of magnetic field and turbulent compressive fraction.**
Brucy, N; Hennebelle, P; Colman, T; Iteanu, S; submitted to A&A.
- 2022 **The signature of large-scale turbulence driving on the structure of the interstellar medium.**
Colman, T; Robitaille, J; Hennebelle, P; Miville-Deschênes, M; Brucy, N, Klessen, R; Glover, S; Soler, J; Elia, D; Traficante, A; Molinari, S; Testi, L; published in MNRAS.
- 2021 **A two-step gravitational cascade for the fragmentation of self-gravitating discs.**
Brucy, N; Hennebelle, P; published in MNRAS.
- 2020 **Large-scale Turbulent Driving Regulates Star Formation in High-redshift Gas-rich Galaxies.**
Brucy, N; Hennebelle, P; Bournaud, F; Colling, C; published in ApJL.