

Raphaël Fabio Duque

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Personal data

Birth **October 3rd 1994, Paris**
Citizenships **USA, France**

Languages

French, English, Spanish (Mother tongues).
Mandarin Chinese (basic skills).

Education

- Since 2018 **Graduate studies in Astrophysics – Sorbonne Université, Paris, France**, Ph.D. dissertation entitled "The Physics of Gamma-ray Bursts in the Gravitational Era" (defense in June 2021).
- 2017 – 2018 **Master's degree in Astronomy, Astrophysics and Space Engineering – Université Paris-Diderot, Paris, France**, Specializing in compact objects and high-energy astrophysics.
- 2014 – 2017 **École Polytechnique – Université Paris-Saclay, Palaiseau, France**, Polytechnique Multidisciplinary Engineering Diploma, specializing in astrophysics and high-energy physics – *Prize for remarkable final internship at the European Gravitational Observatory (Cascina, Italy)*.

Teaching experience

- Summer 2019 **Tutored Master-level interns in gamma-ray burst modeling**, Entailed guiding for analytical and numerical calculations in high-energy astrophysics, project reporting and oral defense.
- Since 2018 **Tutored various practical and exercise sessions for the Master's curriculum of the Observatoire de Paris**, Courses were "Astronomical Instrumentation and Observations", "Astronomical Data Analysis and Image Reduction" and "Statistical Physics".
- Since 2018 **Gave courses and tutored practical sessions for adults in General Astronomy**, Comprised tutoring a yearly one-week observing session with professional astronomical facilities at the Observatoire de Haute-Provence.
- 2015 **Responsible for correcting and marking of mathematics final exams**, Marked 150 algebra papers from first year students in engineering preparatory curriculum.

Seminars, conferences and workshops (selected)

- Fall 2020 **Astrophysics Seminars (invited)**, Jagiellonian University (Poland), TAPIR at Caltech (USA), Hebrew University Jerusalem (Israel), Osservatorio Astronomico Brera (Italy).
- December 2019 **Texas Symposium, Portsmouth, UK**, Contributed talk – *Prize for best student talk in the "X-ray messenger" session*.
- May 2019 **Nanjing GRB Conference & SVOM mission workshop, Nanjing, China**, Contributed talk.
- March 2019 **Asterics Radioastronomy Conference, Groningen, Netherlands**, Contributed talk & poster.
- October 2018 **Eighth Fermi Symposium, Baltimore, USA**, Contributed poster.
- August 2018 **Lunch talk (invited), Beijing, China**, Kavli Institute for Astronomy and Astrophysics.

Publications (selected)

- A&A 639 **Probing high-density neutron star mergers with afterglow counterparts**, *R. Duque, P. Beniamini, F. Daigne, R. Mochkovitch*.
(2020)
- MNRAS 492 **X-ray plateaus in gamma-ray bursts' light curves from jets viewed slightly off-axis**, *P. Beniamini, R. Duque, F. Daigne, R. Mochkovitch*.
(2020)
- A&A 631 **Radio afterglows of binary neutron star mergers: a population study for current and future gravitational wave observing runs**, *R. Duque, F. Daigne, R. Mochkovitch*.
(2019)