

CURRICULUM VITAE

PERSONAL

Name: Barnabás Deme
Place and date of birth: Gyöngyös, 17th January 1995.
Marital status: Married, 1 child
E-mail: deme.barnabas@gmail.com
Webpage: demebarnabas.web.elte.hu



EDUCATION

2018-(2022): Eötvös University, Astrophysics PhD, Budapest
2016-2018: Eötvös University, Astronomer MSc, Budapest
2013-2016: Eötvös University, Physics BSc, Budapest
2013-2018: Szent Ignác Jesuit College for Advanced Studies, Budapest

RESEARCH INTEREST

- Hamiltonian dynamics, celestial mechanics
- Gravitational three-body problem, Zeipel—Lidov—Kozai mechanism
- Black hole dynamics, gravitational waves

THESES

- *The stochastic Kozai-Lidov effect* (MSc thesis, in English, supervisor: Dr. Bence Kocsis, 2018)
- *Dynamics of cold cores in nebulae* (Thesis for the National Scientific Students' Association (OTDK) competition, in Hungarian, supervisors: Dr. L. Viktor Tóth, Dr. Zsolt Sándor, 2017)
- *Centaur in the Solar System* (BSc thesis, in Hungarian, supervisor: Dr. Bálint Érdi, 2016)

PUBLICATIONS

- **Deme, B.**, Kocsis, B. *A Canonical Transformation to Eliminate Resonant Perturbations*. The Astronomical Journal, Volume 162, Issue 1, id.22, 11 pp. (2021)
- **Deme, B.**, Hoang, B.-M., Naoz, S., Kocsis, B. *Detecting Kozai-Lidov Imprints on the Gravitational Waves of Intermediate-mass Black Holes in Galactic Nuclei*. The Astrophysical Journal, Volume 901, Issue 2, id.125, 7 pp. (2020)
- **Deme, B.**, Meiron, Y., Kocsis, B. *Intermediate-mass Black Holes' Effect on Compact Object Binaries*. The Astrophysical Journal, Volume 892, Issue 2, id.130, 10 pp. (2020)

- **Deme, B.**, Tóth, L. V., Érdi, B. *The restricted three-body problem in cylindrical clouds*. *Celestial Mechanics and Dynamical Astronomy*, Volume 130, Issue 11, article id. 73, 11 pp. (2018)

TALKS AND POSTERS

- *A Canonical Transformation to Eliminate Resonant Perturbations*. Talk at the 'Triple Evolution and Dynamics 3' Online Conference (2021)
- *Intermediate-mass Black Holes' Effect on Compact Object Binaries*. Poster at the 'MODEST-19' IAU Symposium, Bologna (2019)
- *Intermediate-mass black holes in galactic nuclei*. Talk at the 'Young astronomers on galactic nuclei' Conference, Budapest (2018)

AWARDS

- New National Excellence Program (ÚNKP) of the Ministry for Innovation and Technology (2020)
- Excellent Student of the Faculty of Sciences, Eötvös University (2018)
- National Scientific Students' Association (OTDK) competition (Section of Physics and Geosciences, Category of numerical and analytical astronomical models), I. prize (2017)
- Presentation competition of Hungarian Association of Physics Students, I. prize (2013)
- Eötvös József National Rhetorical Competition, I. prize (2012)

TEACHING

- *Celestial Mechanics*, Astronomer MSc, Eötvös University (2021)
- *Futurology and Space Sciences*. Young Talent Programme, Mathias Corvinus Collegium (2017-2021)
- *Astronomical Observations*. Physics and Geosciences BSc, Eötvös University (2018-2020)
- *Easy Astrophysics*. Szent Ignác Jesuit College for Advanced Studies (2018-2020)

POPULAR SCIENCE ACTIVITY

- Guidings at the Pannon Observatory (2017-2019)
- Presentations at the Night of Researchers (2018-2021)

TRAVELS

- Summer practice at the Max Planck Institut für Astronomie, Heidelberg (2017)
- Collaboration visit at the University of California, Los Angeles (2019)

LANGUAGES

- Hungarian (mother tongue)
- English (intermediate level, B2)
- German (basic)

Budapest, October 2021