

# RNDr. Václav Pavlík, Ph.D.

Researcher | Astronomical Institute, Czech Academy of Sciences | ORCID: 0000-0002-3031-062X

Junior member of IAU (Divisions C, G, J, and Executive Committee WG Junior Members) | pavlik@asu.cas.cz | website

## WORK AND RESEARCH EXPERIENCE

- 01/2024 – present **Marie Skłodowska-Curie Postdoctoral Fellow** *supervisor: Prof Vladimír Karas*  
funded by MSCA-COFUND project “MERIT”, Astronomical Institute, Czech Academy of Sciences, CZE (see Grants)
- 07/2023 – 12/2023 **Associate Scientific Editor** *full-time staff position*  
Publishing house Aventinum s.r.o., Prague, CZE
- 08/2022 – 05/2023 **Visiting Lecturer** *i.e. visiting professorship (primary lecturer of 2 courses per semester) | supervising one teaching assistant (grader) per course*  
Physics Department, Indiana University Bloomington, Bloomington, IN, USA
- SPRING 2023** **Physics 3: Modern Physics** (PHYS-P 301, required) | **Basic Physics of Sound** (PHYS-P 105)
- FALL 2022** **Physics 3: Modern Physics** (PHYS-P 301, required) | **Basic Physics of Sound** (PHYS-P 105)
- 09/2020 – 05/2023 **Postdoctoral Fellow** *financial support from my mentor Prof Enrico Vesperini*  
Astronomy Department, Indiana University Bloomington, Bloomington, IN, USA | I maintain collaboration and I am still affiliated with Indiana University, currently as a no-pay employee.
- 11/2019 – 08/2020 **Postdoctoral Researcher** *part-time | financial support from Prof Vladimír Karas, Dr Peter Nemeth*  
Astronomical Institute of the Czech Academy of Sciences, Prague and Ondřejov, CZE
- 01/2018 – 08/2020 **Educator & Specialist** *full-time staff position | concurrently with PhD studies*  
Planetarium Prague (Planetum), Prague, CZE

## EDUCATION

(all levels at Charles University, Prague, CZE)

- 2014 – 2019 **Ph.D. in Theoretical Physics, Astronomy and Astrophysics** *awarded Sep 6, 2019*
- 2017 – 2018 **Examen rigorosum in Natural Sciences** *(RNDr. – Rerum naturalium doctor)*
- 2012 – 2014 **Graduate studies in Astronomy and Astrophysics** *(Mgr. – Master’s degree)*
- 2009 – 2012 **Undergraduate studies in Physics** *(Bc. – Bachelor’s degree)*

## MENTORING ACTIVITIES

- 2025 – present **Supervisor of M. Nedoma’s student’s project**  
Biskupské gymnázium, Žďár nad Sázavou, CZE
- 2024 – present **Advisor of M. Trnka’s MSc thesis** *supervisor: Prof Václav Šmídl*  
Faculty of Electrical Engineering, Czech Technical University, Prague, CZE
- 2024 – present **Advisor of A. Lattanzi’s MSc thesis** *supervisor: Prof Steven N. Shore*  
Department of Physics, University of Pisa, ITA
- 2024 **Supervisor of Erasmus+ Traineeship of L. Großekathöfer** *co-supervisor: Prof Vladimír Karas*  
MSc and PhD student mobility between the University of Köln (GER) and the Czech Academy of Sciences (CZE)
- 2023 – 2025 **Advisor of M. Fuksa’s MSc thesis** *supervisor: Prof Vladimír Karas, co-advisor: Prof Steven N. Shore*  
Astronomical Institute, Charles University, Prague, CZE *(defence: Sep 5, 2024 | state exam: Feb 5, 2025)*
- 2021 – 2022 **Advisor of P. Suin’s MSc thesis** *supervisor: Prof Steven N. Shore*  
Department of Physics, University of Pisa, ITA *(defence and exam: Feb 8, 2022, with honours)*

## OTHER EDUCATIONAL ACTIVITIES

### CZECH

- 2012 – present **Board member and co-organizer of Czech Astronomy Olympiad (AO)** *olympiada.astro.cz*
- 2016 – 2022 **LOC chair and lecturer** of yearly student workshops within AO *(see also section Grants)*

### INTERNATIONAL

- 2024 **Czech team leader** at 3rd International Olympiad on Astronomy and Astrophysics Junior
- 2016 – 2019 **Czech team leader** at XXI – XXIV International Astronomy Olympiad

## REFEREE WORK

**ARTICLES** Astronomy & Astrophysics, Monthly Notices of the Royal Astronomical Society, Astrophysical Journal

**GRANT PROPOSALS** Commission No. 2 for Earth and Space sciences of VEGA (the Scientific Grant Agency of the Ministry of Education, Research, Development and Youth of the Slovak Republic, and of the Slovak Academy of Sciences)

**PUBLICATIONS** Aventinum, Albatros Media, Slovart (publishing houses in the Czech Republic)

## PUBLICATIONS, CONFERENCES & LECTURES

---

### RESEARCH

**Articles in high-impact journals:** 7 in *A&A*, 1 in *A&A Letters*, 4 in *MNRAS*, 1 in *MNRAS Letters* | **Other peer-reviewed articles:** 1 in *CoSka*, 1 in *Physics Today* | Co-author of an **invited review** in *Computational Astrophysics and Cosmology* | 1 *VizieR* and 1 *Zenodo* online **data catalogue** | Author of several **conference proceedings**, e.g., in *Bulletin of the AAS* or *Revisita Mexicana de Astronomia y Astrofisica Conference Series* | **Editor of conference proceedings** for *Meeting in Prague – Appearance and dynamics of accretion onto black holes* | The full list of publications is in my **ADS library** | I also gave several invited talks, lectures and seminars both in the Czech Republic and internationally (at conferences, workshops and foreign universities), and presented a number of contributed talks and posters at international scientific conferences.

### EDUCATION AND OUTREACH

**Author of two children's books** on astronomy (published in *Aventinum*) | Co-author and editor of **7 Problem Booklets** and other educational materials for the Astronomy Olympiad (all Open Access) | Co-author of conference proceedings in “Modern trends in physics teaching” and “III Workshop on Astronomy Beyond the Common Senses for Accessibility and Inclusion” | **Key speaker** for HST documentary (*Parabolic Vision Media*, in 2021) | **3 translated books** for *Slovart* publishing house | **Content reviewer** for *Albatros* and *Aventinum* publishers | **Editor and author** for *Astropis* (ISSN 1211-0485) with 50+ observational articles, 20+ outreach articles, and 10+ conducted interviews with famous physicists and astronauts (including 6 Nobel Prize laureates) | **10+ invited public/educational lectures** in the Czech Republic, Slovakia and USA | I have also been **interviewed by magazines** *Československý časopis pro fyziku* (ISSN 0009-0700) and *Tajemství Vesmíru* (ISSN 1805-5249), and **invited** to the Czech National TV.

## GRANTS, FUNDING & PROJECT SUPPORT

---

### SCIENTIFIC

- 01/2024 – 06/2026    **PI of Marie Skłodowska-Curie Actions – COFUND** project “ECLIPSE – Exploring Compact stellar remnants and their Impact on Star Clusters Evolution” ~170 400 EUR  
30-month funding from the European Union's Horizon Europe and the Central Bohemian Region under the Grant agreement ID 101081195 (“MERIT”, [meritcb.eu](https://meritcb.eu))
- 01/2025 – 12/2025    **Co-PI** of project “Artificial Intelligence at Astronomical Institute” ~4 200 EUR  
within “Strategy AV21 - AI in Science” from the Czech Academy of Sciences
- 01/2016 – 12/2018    **PI** of project “Perturbed stellar motions in dense star clusters” ~20 700 EUR  
project GAUK-186216 (Grant Agency of Charles University)
- 05/2013 – 11/2013    “Searching for a ‘runaway-mass’ black hole in the Orion Nebula Cluster” ~3 600 EUR  
Trainee of ESAC project (PIs: M. Guianazzi, J. Svoboda, H. Bouy) (declined due to personal reasons)

### COMPUTATIONAL TIME

- 03/2022 – present    **PI** of project “Dynamical evolution of star clusters with anisotropic velocity distributions”  
Indiana University Information Technology Services (fair-share access to CPUs and GPUs, extended 15 TiB quota)
- 12/2014 – present    account at the Czech national grid MetaCentrum (e-INFRA)  
subject to yearly evaluation (fair-share access to CPUs and GPUs, 30 TiB quota)

### EDUCATION

- 2018 – 2022    **PI** of “Workshop for younger students of the Astronomy Olympiad” ~3 900 EUR per project  
“Giftedness strategy” projects 0043/7/NAD/2018, 0003/7/NAD/2019, 0018/7/NAD/2020, 0051/7/NAD/2021, and 0025/7/NAD/2022 (funded by the Czech Ministry of Education, Youth and Sports)

## AWARDS AND HONOURS

---

- 2025    **Jan Frič Award for the series of works “A Detailed Study of Stellar Dynamics and Cluster Evolution”**  
from the Astronomical Institute of the Czech Academy of Sciences for my research results between 2019 and 2024 that contributed to the prestige of the Institute in international comparison Czech Wiki | ~4 790 EUR
- 2021    **IU Bicentennial Public Science and Math Award Lecture**  
from the College of Arts and Sciences, Indiana University Bloomington, IN, USA
- 2016, 2017, 2018, 2019    **Commemorative Diplomas from the Czech Ministry of Education, Youth and Sports**  
for representing the Czech Republic in international competitions as a Team Leader
- 2014    **3rd place in Czechoslovak Student Scientific Conference in Physics for my MSc thesis**  
co-organised by the Faculty of Mathematics and Physics of Charles University, Prague, CZE

## LANGUAGES AND ADDITIONAL CERTIFICATIONS

---

**Czech** (native) | **English** (fluent) | **French** (advanced; DALF C1, Ministère Français de L'Éducation Nationale, 2009)

- 07/2022    **Teaching Science at University** awarded Jul 26, 2022 (grade 96.66%)  
5-week online course authorised by University of Zurich<sup>UZH</sup> verify at Coursera