

RNDr. Václav Pavlík, Ph.D.

Researcher | Scientific Editor | Lecturer | Science Communicator

Junior member of IAU (Division C, G, J, and Executive Committee WG Junior Members)

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WORK AND RESEARCH EXPERIENCE

- 01/2024 – present **“MERIT” Research Fellow** *Astronomical Institute, Czech Academy of Sciences, CZE*
supported through **Marie Skłodowska-Curie Actions – COFUND** <https://meritcb.eu/>
Investigating the evolution of star clusters and their stellar remnant populations on cosmological time scales.
- 07/2023 – 12/2023 **Associate Scientific Editor** *Publishing house Aventinum s.r.o., Prague, CZE*
Editorial and referee work for a publishing house specialising in natural science publications (e.g., astronomy, botany, geology, zoology, etc.), encyclopedias, and children’s literature.
- 08/2022 – 05/2023 **Visiting Lecturer** *Physics Department, Indiana University Bloomington, USA*
Primary instructor for two courses per semester with the supervision of one Assistant/Grader per course.
SPRING 2023 **Physics 3: Modern Physics (PHYS-P 301) | Basic Physics of Sound (PHYS-P 105)**
FALL 2022 **Physics 3: Modern Physics (PHYS-P 301) | Basic Physics of Sound (PHYS-P 105)**
- 09/2020 – 05/2023 **Postdoctoral Fellow** *Astronomy Department, Indiana University Bloomington, USA*
mentor: Prof Enrico Vesperini
Investigating the impact of the initial kinematics of stars on the global dynamical evolution of star clusters.
- 11/2019 – 08/2020 **Postdoctoral Researcher** *Astronomical Institute, Czech Academy of Sciences, CZE*
mentors: Prof Vladimír Karas, Dr Peter Nemeth
Studying the early evolution of star-forming regions with numerical models.

EDUCATION

(all levels at Charles University, Prague, CZE)

- 2014 – 2019 **Ph.D. in Theoretical Physics, Astronomy and Astrophysics** *awarded Sep 6, 2019*
Thesis: *Perturbed stellar motions in dense star clusters* | advisor: Dr Ladislav Šubr
- 2017 – 2018 **Examen rigorosum in Natural Sciences** *(RNDr. – Rerum naturalium doctor)*
- 2012 – 2014 **Graduate studies in Astronomy and Astrophysics** *(Mgr. – Master’s degree)*
Thesis: *Modelling the Orion Nebula Cluster* | supervisor: Dr Ladislav Šubr
- 2009 – 2012 **Undergraduate studies in Physics** *(Bc. – Bachelor’s degree)*
Thesis: *Formation and evolution of dynamical binaries* | supervisor: Dr Ladislav Šubr

TEACHING ACTIVITIES

MSC THESES SUPERVISION

- 2023 – present **Co-advisor** *Astronomical Institute, Charles University, Prague, CZE*
student: Matyáš Fuksa | advisor: Prof Vladimír Karas | another co-advisor: Prof Steven N. Shore
Thesis: *Long-term stability of captured planetary systems*
- 2021 – 2022 **Co-advisor** *Department of Physics, University in Pisa, ITA*
student: Paolo Suin (defended with honours on Feb 8, 2022) | advisor: Prof Steven N. Shore
Thesis: *Environmental influences on the dynamical evolution of star clusters in turbulent molecular clouds*

STUDENT PROJECTS

- 03/2022 **Future career advisor** *(for a student at Zionsville Middle School, IN, USA)*
- 2019 – 2020 **Mentoring on star cluster models analysis** *student: Daria-Teodora Harabor*
(Vasile Alecsandri National College, Galati, ROU | now at Harvard University)

CZECH ASTRONOMY OLYMPIAD (AO)

- 2012 – present **Board member and co-organizer** olympiada.astro.cz
- 2016 – present **LOC member and lecturer** of yearly student workshops | **SOC chair (2018–2022)** *(see also section Grants)*
- 2014 – present Author of the \LaTeX style for typesetting exercises for AO astroolymp.sty

INTERNATIONAL ASTRONOMY OLYMPIAD (IAO)

- 2016 – 2019 **Czech team leader** at XXI – XXIV IAO
Czech student’s awards: 3 Diploma-II, 9 Diploma-III and 1 Diploma for the best observational round

PLANETARIUM PRAGUE

- 01/2018 – 08/2020 **Educator & specialist** (full-time staff position) planetum.cz

TUTORING

09/2018 – 06/2019 **Lecturer** for “MUDRstart”

Intensive physics course for students applying to the Faculty of Medicine of Charles University.

PROFESSIONAL REFERENCES

These contacts can provide further information on my employment, academic career and character:

Prof Enrico Vesperi (evesperi@indiana.edu, co-author and postdoctoral supervisor at Indiana University)

Prof Catherine Pilachowski (cpilacho@indiana.edu, chair of Astronomy Department, Indiana University)

Prof Steven Shore (steven.neil.shore@unipi.it, co-author and mentor, University in Pisa)

Prof David Baxter (baxterd@indiana.edu, former chair of Physics Department, Indiana University)

CERTIFICATIONS

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

AWARDS AND HONOURS

2021 **IU Bicentennial Public Science and Math Award Lecture**
from the College of Arts and Sciences, Indiana University Bloomington, IN, USA

2019, 2018, 2017, 2016 **Commemorative Diplomas for representing the Czech Republic in international competitions as a Czech Team Leader**
from the Czech Minister of education, youth and sports

2014 **Master's thesis awarded 3rd place in Czechoslovak Student Scientific Conference in Physics**
co-organised by the Faculty of Mathematics and Physics of Charles University, Prague, CZE

GRANTS, FUNDING & PROJECT SUPPORT

SCIENTIFIC

2016 – 2018 **PI** of “Perturbed stellar motions in dense star clusters” *~20 700 EUR*
project GAUK-186216 (Grant Agency of Charles University) *(success rate ~30 %)*

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

While this type of support is not conventional, it is specific to my research since numerical models require a lot of computational resources, often in parallel architectures. Access to “free” computational time usually requires similar processes as seeking funding, i.e., submitting applications, providing yearly summaries, and reporting publications.

03/2022 – present **PI** of “Dynamical evolution of star clusters with anisotropic velocity distributions”
Indiana University Information Technology Services *(CPUs and GPUs, with extended 15 TiB quota)*

12/2014 – present Access to the Czech national grid MetaCentrum (MetaVO, Cesnet, e-INFRA)
subject to yearly evaluation *(CPUs, 30 TiB quota | used 5 000+ CPU-days | 14 outcomes/publications)*

05/2010 – 05/2014 Access to the “KK” computer cluster of the Department of Physics
Department of Physics, Charles University, Prague, CZE *(CPUs, 1 TiB quota | used for Bc. thesis)*

EDUCATION

2022 **PI** of “Workshop for younger students of the Astronomy Olympiad” *~3 900 EUR*
“Giftedness strategy 2022” project 0025/7/NAD/2022 (Czech Ministry of Education, Youth and Sports)

2021 **PI** of “Workshop for younger students of the Astronomy Olympiad” *~3 900 EUR*
“Giftedness strategy 2021” project 0051/7/NAD/2021 (Czech Ministry of Education, Youth and Sports)

2020 **PI** of “Workshop for younger students of the Astronomy Olympiad” *~3 900 EUR*
“Giftedness strategy 2020” project 0018/7/NAD/2020 (Czech Ministry of Education, Youth and Sports)

2019 **PI** of “Workshop for younger students of the Astronomy Olympiad” *~3 900 EUR*
“Giftedness strategy 2019” project 0003/7/NAD/2019 (Czech Ministry of Education, Youth and Sports)

2018 **PI** of “Workshop for younger students of the Astronomy Olympiad” *~3 900 EUR*
“Giftedness strategy 2018” project 0043/7/NAD/2018 (Czech Ministry of Education, Youth and Sports)

REFEREE WORK

I serve as a referee for **Astronomy & Astrophysics** and **MNRAS**, and I have been a content reviewer of several publications by **Aventinum**, **Albatros Media**, and **Slovart** publishing houses in the Czech Republic.

CONFERENCE ORGANISATION

SCIENTIFIC

12/2018 **LOC** of “ $(M + 3)^{\text{rd}}$ Aarseth N -body Meeting”
Astronomical Institute, Charles University, Prague, CZE

EDUCATION & PUBLIC OUTREACH

09/2019 **LOC and lecturer** at “Space Educational Festival” (*conference & workshop for teachers*)
Planetarium Prague, CZE

11/2019, 11/2018, 11/2017 **LOC** of “Day with Astropis”
Planetarium Prague, CZE; Czech Academy of Sciences, Prague, CZE

EXTENDED VISITS FOR WORK

01/2020 **University of Edinburgh, UK** (*invited by Dr Anna Lisa Varri*)

08/2019, 11/2018, 11/2017 **University in Pisa, ITA** (*invited by Prof Steven N. Shore*)

11/2017 **University of Rome, ITA** (*invited by Prof Roberto Capuzzo Dolcetta*)

04/2016 – 05/2016 **University of Edinburgh, UK** (*invited as a visiting student by Prof Douglas C. Heggie*)

LANGUAGES

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

COMPUTER SKILLS

PROGRAMMING Python | \LaTeX | shell scripting (e.g., Bash, AWK) | HTML5/CSS/PHP | C/C++ | Fortran

SOFTWARE Adobe Photoshop & InDesign | Office Suite | video editing | Blender 3D modelling

OPERATING SYSTEMS Linux | Windows | Mac

MISCELLANEOUS parallel computing (CPUs and GPUs) | digital planetarium operator (SkyScan DS2)

PUBLICATIONS

ORCID: [0000-0002-3031-062X](https://orcid.org/0000-0002-3031-062X). The full list of publications is also in my [ADS library](#)

RESEARCH

2023 Livernois, Vesperini & **Pavlík** *Evolution of binary stars in the early evolutionary phases of ultra-faint dwarf galaxies*
MNRAS, vol. 521, no. 2, pp. 4395–4405 [arXiv:2303.12841](#), [DOI:10.1093/mnras/stad826](#)

2022 Suin, Shore & **Pavlík** *Environmental influences on the dynamical evolution of star clusters in turbulent molecular clouds*
A&A, vol. 667, id. A69 [arXiv:2207.01634](#), [DOI:10.1051/0004-6361/202243579](#)

2022b **Pavlík** & Vesperini *Mass segregation and dynamics of primordial binaries in star clusters with a radially anisotropic velocity distribution*
MNRAS, vol. 515, no. 2, pp. 1830–1838 [arXiv:2206.11905](#), [DOI:10.1093/mnras/stac1776](#)

2022a **Pavlík** & Vesperini *Evolution towards energy equipartition in star clusters: effects of the tidal field, primordial binaries, and internal velocity anisotropy*
MNRAS, vol. 509, no. 3, pp. 3815–3825 [arXiv:2110.14646](#),
[DOI:10.1093/mnras/stab3157](#)

2021 Shore & **Pavlík** *How a fake Kepler portrait became iconic*
Physics Today, vol. 74, no. 9, pp. 10–11 Both authors are equal contributors. [arXiv:2108.02213](#), [DOI:10.1063/PT.3.4825](#)

2021 **Pavlík** & Shore *Close encounters with the Death Star: Interactions between collapsed bodies and the Solar System*
A&A Letters, vol. 648, id. L2 [arXiv:2103.12745](#), [DOI:10.1051/0004-6361/202140454](#)

2021 **Pavlík** & Vesperini *New insights into star cluster evolution towards energy equipartition*
MNRAS Letters, vol. 504, no. 1, pp. L12–L16 [arXiv:2103.06272](#), [DOI:10.1093/mnrasl/slab026](#)

2020b **Pavlík** *Primordial mass segregation of star clusters with primordial binaries*
A&A, vol. 638, id. A155 [arXiv:2004.14389](#), [DOI:10.1051/0004-6361/202037490](#)

2020a **Pavlík** *Primordial mass segregation of star clusters: The role of binary stars*
Contributions of the Astronomical Observatory Skalnaté Pleso, vol. 50, no. 2, pp. 456–460 [arXiv:2001.01450](#), [DOI:10.31577/caosp.2020.50.2.456](#)

2019 **Pavlík** *Perturbed stellar motion in dense star clusters*
PhD thesis [ADS:2019PhDT.....111P](#)

2019 **Pavlík**, Kroupa & Šubr *Do star clusters form in a completely mass-segregated way?*
A&A, vol. 626, id. A79
[arXiv:1905.09289](#), [DOI:10.1051/0004-6361/201834265](#)

- with *VizieR Online Data Catalog: ONC stars masses from literature* (Pavlík+, 2019) [J/A+A/626/A79](#)
- 2018 Pavlík & Šubr *The hunt for self similar core collapse* A&A, vol. 620, id. A70 [arXiv:1808.05230](#), [DOI:10.1051/0004-6361/201833854](#)
- 2018 Fragione, Pavlík & Banerjee *Neutron stars and millisecond pulsars in star clusters: implications for the diffuse γ -radiation from the Galactic Centre* MNRAS, vol. 480, no. 4, pp. 4955–4962 All authors are equal contributors. [arXiv:1804.04856](#), [DOI:10.1093/mnras/sty2234](#)
- 2018 Pavlík, Jeřábková, Kroupa & Baumgardt *The black hole retention fraction in star clusters* A&A, vol. 617, id. A69 [arXiv:1806.05192](#), [DOI:10.1051/0004-6361/201832919](#)

INVITED REVIEWS

- 2018 Varri, Cai, Concha-Ramírez, Dinnbier, Lützgendorf, Pavlík, Rastello, Sollima, Wang & Zocchi *A MODEST review* Computational Astrophysics and Cosmology, vol. 5, no. 1, id. 2 All authors are equal contributors and are listed in alphabetical order, the first author coordinated the manuscript writing. [arXiv:1810.07532](#), [DOI:10.1186/s40668-018-0024-6](#)

EDUCATION

- in print **Czech Astronomy Olympiad et al.** *Problem Booklet 2022/23* [DOI:10.5281/zenodo.8381055](#) (reserved, not active yet)
- 2021 **Czech Astronomy Olympiad et al.** *Problem Booklet 2019/20 and 2020/21* ISBN 978-80-907341-2-8, [DOI:10.5281/zenodo.8368818](#)
- 2019 **Czech Astronomy Olympiad et al.** *Problem Booklet 2018/19* ISBN 978-80-907341-1-1, [DOI:10.5281/zenodo.8353720](#)
- 2018 **Czech Astronomy Olympiad et al.** *Problem Booklet 2017/18* ISBN 978-80-907341-0-4, [DOI:10.5281/zenodo.8353714](#)
- 2017 **Czech Astronomy Olympiad et al.** *Problem Booklet 2016/17* ISBN 978-80-270-2697-5, [DOI:10.5281/zenodo.8353652](#)
- 2017 Kožuško & Pavlík *Information and communication technologies in Astronomy Olympiad* in proceedings of “Modern trends in physics teaching” (in Czech), vol. 8, pp. 105–107 ISBN 978-80-261-0797-2
- 2016 **Czech Astronomy Olympiad et al.** *Problem Booklet 2015/16* [DOI:10.5281/zenodo.8353642](#)

OUTREACH

I have been involved in these activities: **reviewer and translator** for the publishing houses *Albatros Media*, *Slovart* and *Aventinum* (here I also currently work as an **associate scientific editor**) | **editor and author** for *Astropis* magazine (ISSN 1211-0485) since 2012 | **author** for *Czechoslovak journal of physics* (ISSN 0009-0700) | **key speaker** for *Parabolic Vision Media* (in 2021) | **educator and specialist** at *Planetarium Prague* (2018 – 2020).

This following list includes a selection of my works (the original titles or their translations to English are given).

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|---|---|
| 2023 Rühl & Pavlík <i>O Rozpůlené Hvězdě [children's book about Venus]</i> Aventinum, ISBN 978-80-7442-151-8 | 2021 Shore & Pavlík <i>How a fake Kepler portrait became iconic</i> Astropis 128, p. 33 |
| 2023 Pavlík <i>Interview with Thomas Hertog: “On the origin of time”</i> Czechoslovak journal of physics, vol. 73, pp. 251–256 | 2021 Pavlík <i>Star clusters and stellar kicks</i> Astropis 125, pp. 26–28 |
| 2022 – 2023 Libý & Pavlík <i>Observations of the sky</i> Astropis 129–136, pp. 22–25 | 2021 Pavlík & Žďárská <i>Stellar dynamics – Interview with Václav Pavlík beyond astronomy</i> Czechoslovak journal of physics, vol. 71, pp. 402–409 |
| 2022 Pavlík <i>Unique photo of the Solar eclipse</i> Astropis 134, pp. 22–23 | 2020 Pavlík <i>Mountaineering and star clusters (interview with Sverre Aarseth)</i> Astropis 123, pp. 29–34 |
| 2022 Pavlík <i>Interview with Nobel Prize laureate James Peebles</i> Astropis 132, pp. 15–19 | 2020 Pavlík <i>Can a star cluster collapse?</i> Astropis 122, pp. 29–31 |
| 2022 book translation (EN→CZ) <i>The World according to Physics</i> Slovart, author: Al-Khalili, ISBN: 978-80-2760-302-2 | 2020 Pavlík <i>Interview with Nobel Prize laureates William Phillips and Wolfgang Ketterle</i> Astropis 1/2020, pp. 12–14 |
| 2022 key speaker <i>Hubble space telescope documentary</i> Parabolic Vision Media, educational film | 2020 book translation (EN→CZ) <i>Stephen Hawking: A Memoir of Friendship and Physics</i> Slovart, author: Mlodinov, ISBN 978-80-2760-095-3 |
| 2012 – 2021 Pavlík & Ondřích <i>Observations of the sky</i> Astropis, 4 volumes per year, pp. 22–25 | 2020 translation cooperation (EN→CZ) <i>The Adventures of Rosetta & Philae</i> Planetarium Prague, movie |
| 2021 Pavlík & Shore <i>Is Betelgeuse the Death Star?</i> Astropis 128, pp. 17–19 | 2019 Pavlík <i>How do star clusters form?</i> Astropis 4/2019, pp. 30–32 |
| 2021 Shore (translation EN→CZ: Pavlík) <i>Microquasars</i> Astropis 128, pp. 31–33 | 2019 book cover illustration <i>Prisoners of Mars</i> Aven- |

tinum, author: Pokorný, ISBN 978-80-7151-278-3

2019 **Pavlík** *Interview with Nobel Prize laureate Rainer Weiss* Astropis 3/2019, pp. 15–19

2019 review and update *Pocket planisphere* Aventinum, author: Rühl, ISBN 978-80-7151-277-6

2019 **full-dome show translation** (CZ→EN) and remake collaboration *Night Sky in 8K* Planetarium Prague

2019 **Pavlík** *Interview with Nobel Prize laureate Kip Thorne* Astropis 2/2019, pp. 11–14

2019 translation cooperation (EN→CZ) *Horizon* Planetarium Prague, full-dome show

2018 book editor *Astronomy: 100+1 intriguing questions* Aventinum, authors: Mikulášek, Pokorný & Gabzdyl, ISBN 978-80-7442-061-0

2018 **book translation** (EN→CZ) *Celestial Atlas: A Journey in the Sky through Maps* Slovart, author: Percivaldi, ISBN 978-80-7529-642-9

2018 **full-dome show translation** (EN→CZ) *Two Little Pieces of Glass* Planetarium Prague

2018 translation cooperation (EN→CZ) *Our Violent Planet* Planetarium Prague, full-dome show

2018 remake collaboration *Movements of the Earth* Planetarium Prague, Czech full-dome show

2018 remake collaboration *Maps of Foreign Worlds* Planetarium Prague, Czech full-dome show

2015 book editor *Constellations* Aventinum, author: Rühl, ISBN 978-80-7442-061-0

2015 **Pavlík** *Exoplanets* Astropis Special/2015, pp. 22–23

2012 **Pavlík**, Prouza & Ondřich *Observation of Venus transit* Astropis Special/2012, pp. 28–33

2012 **Pavlík** *Asterisms* Astropis 1/2012, pp. 20–21

CONFERENCES & LECTURES

I gave **10 invited talks/seminars/lectures**, and presented 9 contributed talks and 3 posters at scientific conferences. I also presented **6 invited public talks/lectures**. Some are listed below.

SCIENTIFIC

09/2023 poster “The impact of velocity anisotropy on the dynamics of star clusters and their binary stars” ESO conference “Two in a Million”, Garching, GER (*Pavlík & Vesperini*, DOI:10.5281/zenodo.8335237)

06/2023 **invited talk** “Doomsday dynamical scenarios” General Meeting of the Indiana Astronomical Society, Mooresville, IN, USA

03/2023 **guest lecture** “The dance of planets and dying stars” within the course PHYS-P 508: “Current research in physics”, Indiana University, USA

10/2022 **invited seminar** “Using GPU-accelerated systems in studying astrophysical systems” workshop “Big Red 200 and AI Day”, Indiana University Research Technologies, Bloomington, IN, USA

08/2022 seminar “The role of velocity anisotropy in star clusters evolution” series “Tea Talks”, Indiana University, IN, USA

04/2022 contrib. talk “Effects of radially anisotropic velocity distribution on the dynamics of star clusters” “DDA 53rd Annual Meeting”, AAS, NY, USA (*Pavlík & Vesperini*, ADS:2022DDA....5310103P)

04/2022 poster “Environmental influences on the dynamical evolution of star clusters in turbulent molecular clouds” “DDA 53rd Annual Meeting”, AAS, NY, USA (*Suin, Shore & Pavlík*, ADS:2022DDA....5310807S)

05/2021 **invited seminar** “Doomsday dynamical scenarios” Astronomical Inst., Charles University, Prague, CZE (*authors: Pavlík & Shore*)

05/2021 contributed talk “Energy equipartition in star clusters” “DDA 52nd Annual Meeting”, AAS, online (*Pavlík & Vesperini*, ADS:2021DDA....5220103P)

03/2021 seminar “Close encounters of all kinds” series “Lunch Talks”, Indiana University, IN, USA

01/2020 **invited seminar** “Life of a star cluster” series “Coffee Talk”, Institute for Astronomy, University of Edinburgh, UK

01/2020 **invited seminar** “Mass segregation and binaries in young star clusters” series “Theory Lunch”, Institute for Astronomy, University of Edinburgh, UK

12/2019 contributed talk “Star clusters: primordial mass segregation and binaries” “(M+4)th Aarseth N-body Meeting”, Astronomical Inst., Charles University, Prague, CZE

09/2019 contributed talk “Primordial mass segregation of star clusters: The role of binary stars” Masaryk University, University Centre Telč, CZE

08/2019 **invited seminar** “Dynamical evolution of star clusters” Department of Physics, University in Pisa, ITA

12/2018 contributed talk “Do star clusters form completely mass segregated?” “(M+3)rd Aarseth N-

- body Meeting”, Astronomical Inst., Charles University, Prague, CZE
- 11/2018 **invited seminar** “Cosmic Calcio: BH kicks and star clusters” Department of Physics, University in Pisa, ITA
- 06/2018 contributed talk “The black hole retention fraction in star clusters” “Modest-18”, Santorini, GRC
- 05/2017 seminar “The black hole retention fraction in star clusters” Astronomical Inst., Charles University, Prague, CZE
- 12/2017 contributed talk “The black hole retention fraction in star clusters” “ $(M+2)^{\text{nd}}$ Aarseth N -body Meeting”, Astronomical Inst., Charles University, Prague, CZE
- 11/2017 **invited seminar** “Core collapse in star clusters” Sapienza, Dept. of Physics, Univ. of Rome, ITA
- 11/2017 **invited seminar** “Introduction to N -body methods” Dept. of Physics, University in Pisa, ITA
- 09/2017 conference poster “The black hole retention fraction in star clusters” “Modest-17”, Charles University, Prague, CZE (*authors: Pavlík & Jeřábková*)
- 09/2017 contributed talk “Fitting self-similar core collapse in N -body models” “Modest-17”, Charles University, Prague, CZE (*authors: Pavlík & Šubr*)
- 01/2017 seminar “Core collapse in N -body clusters” Astronomical Inst., Charles University, Prague, CZE
- 12/2016 conference poster “Fitting self-similar core collapse to N -body models” “Stellar aggregates over mass and spatial scales”, Bad Honnef, GER (*authors: Pavlík, Heggie & Šubr*)
- 08/2021 **invited talk** “Stellar Billiards” series “Astronomy on Tap”, Bloomington, IN, USA
- 02/2019 **invited lecture** “How to retain black holes” (in Czech) Observatory in Rokycany and Plzeň, CZE
- 11/2018 **invited lecture** “Evolution of black holes in star clusters” (in Czech) series “Day with Astropis”, Czech Academy of Sciences, CZE
- 04/2018 **invited lecture** “Black holes and star clusters” (in Czech) Senec observatory, SVK

PUBLIC EDUCATION AND OUTREACH

- 11/2022 **invited talk** “Stellar Billiards – Revisited” Science Cafe, Bloomington, IN, USA
- 06/2021 **invited talk** “What do we learn from the stars?” College Public Science Symposium, Indiana University Bloomington, IN, USA

OTHER ATTENDED WORKSHOPS

- | | | |
|---------|--|---|
| 03/2020 | JWST Master Class | Czech Technical University, Prague, CZE |
| 10/2017 | Astro-GR 2017 | Institute of Space Sciences, Barcelona, ESP |
| 08/2014 | 3rd Scientific Writing for Young Astronomers | org. by EDP Sciences in Tihany, HUN |