# Curriculum Vitae
## prof. RNDr. Jiří Podolský, CSc., DSc.

**Born:** September 28, 1963 in Mladá Boleslav, Czech Republic.
**Address:** Charles University, Faculty of Mathematics and Physics, Institute of Theoretical Physics, V Holešovičkách 2, 180 00 Prague 8, Czech Republic.
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**Education and academic qualifications:** In 1982–87 studies of Mathematical Physics (RNDr. degree), in 1987–93 Ph.D. student at the Faculty of Mathematics and Physics, Charles University in Prague, supervisor Prof. Bičák (CSc. degree). In 2001 Habilitation (doc. degree) in Theoretical Physics, Charles University in Prague. In 2006 awarded a Doctor of Science degree (DSc.) by the Academy of Sciences of the Czech Republic. In 2011 Professor (prof. degree) in Theoretical Physics, Charles University in Prague.

**Scientific career and current position:** Graduate Assistant (1990–91) at the Department of Physics and Astronomy, University of New Mexico (Albuquerque, USA). Assistant (1991–95), Senior Assistant (1995–2001), Associate Professor (2002–11) and Full Professor (since 2012) at the Institute of Theoretical Physics, Faculty of Mathematics and Physics, Charles University, Prague.

**Recent research in relativity:** Theoretical studies in Einstein's general relativity and quadratic gravity. In particular, mathematical investigation and physical interpretation of exact solutions of the Einstein field equations which represent gravitational waves (spacetimes with a cosmological constant, impulsive waves in flat and curved backgrounds, gyratons, asymptotic behavior of fields, geodesic deviation, chaotic motion of particles). Classification and interpretation of other types of spacetimes, including the study of rotating and accelerating black holes. Exact solutions of Einstein's equations in higher and lower dimensions, their classification and analysis. In recent 5 years also further generalizations of Einstein's gravity, namely general quadratic gravity, Einstein–Weyl, Gauss–Bonnet and critical gravity.

**Monographs:**
With Jerry B. Griffiths author of monograph *Exact Space-Times in Einstein's General Relativity* published in the series Cambridge Monographs on Mathematical Physics: Cambridge University Press, 2009, 540 pages. Revised paperback edition in 2012, 548 pages.

***Citations (October 2022):*** SCOPUS: 566, without self-citations 527.

Co-author of monograph *Gravitation: Following the Prague Inspiration*, A Volume in Celebration of the 60th Birthday of Jiří Bičák, Singapore: World Scientific, 2002.

Co-author of book *Einstein Again in Prague – Physics in the TV Series Genius*, Prague: MatfyzPress, 2021.

**Articles:**
Currently, 109 articles in refereed international journals (Living Reviews in Relativity, Physical Review Letters, Journal of High Energy Physics, Physical Review D, Classical and Quantum Gravity, General Relativity and Gravitation, Physics Letters A, Journal of Mathematical Physics, etc.), of which 19 during the past 5 years. More than 25 contributions to conference proceedings. Referee of papers submitted to leading professional journals, diploma theses, dissertations and research proposals.

***Citations (October 2022):***

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| WOS: | 2027, | h-index 25, | |
| SCOPUS: | 2210, | h-index 25, | |
| INSPIRE-HEP: | 2303, | h-index 27 | (without self-citations 1700). |

**Foreign contacts and research stays (selection):** Since 1996 Prof. Griffiths, Loughborough University, UK (25 joint publications and monograph *Exact Space-Times in Einstein's General Relativity*, Cambridge, 2009). Collaboration with Dr. Ortaggio, University of Trento, Italy (since 2000, 9 publications) and Prof. Steinbauer, University of Vienna, Austria (since 1999, 8 publications). Other contacts during short-term

visits, e.g., with Prof. Finley and Prof. Cahill, University of New Mexico, Albuquerque, USA (1990–91), Prof. Kramer, Friedrich-Schiller Universität, Jena, Germany (1995), Prof. Frolov and Dr. Zelnikov, University of Alberta, Edmonton, Canada (2009, 2 publications), Prof. Edgar, Linköping University, Sweden (2009), DAMPT, University of Cambridge, UK (2011), Dr. Kubizňák, Perimeter Institute, Waterloo, Canada (2015), Prof. Maeda, Hokkai-Gakuen University, Sapporo, Japan (2018, 2 publications).

**Membership in academic organizations, collaborations, organizing committees and boards:**
*International Society on General Relativity and Gravitation* (since 2003). In 2022 elected for 9 years as a member of the ISGRG International Committee representing Central/Eastern Europe region. Organization of the related triennial GR conferences:

- Chair of the A1 Session: Exact solutions and their interpretation, GR21, New York, USA, 2016.
- Member of the Scientific Organizing Committee, GR22, Valencia, Spain, 2019.

*Union of Czech Mathematicians and Physicists*, and also *Czech Physical Society* (since 2006), related to:

- Editorial Board Member of *Advances in Mathematics, Physics and Astronomy* (since 2006).

*International Astronomical Union* (since 2009).
*Associate Member of the LISA Consortium* (since 2018).
*Member of the Observational Science Board of the Einstein Telescope*, Fundamental Physics (since 2021).

**Academic recognition:**
Honorable Mention, Awards for Essays by Gravity Research Foundation (1992).
The First Prize in Physics, Bolzano Foundation, Prague (1998).
Significant Activity in Popularization of Physics Award, Czech Physical Society (2007).
The Best Monograph Award, Dean of the Faculty, Charles University (2009).
The Outstanding Representation of the Faculty Award, Dean of the Faculty, Charles University (2021).

**Grants (principal investigator or co-investigator):** 6 visiting grants from the Royal Society and the London Mathematical Society, 1997–2004, and the UK EPSRC grant *Exact properties of spinning and accelerating black holes*, 2005–07 (with Griffiths). GAČR grant 202/08/018 *Exact solutions in higher dimensional and classical gravity*, 2008–11. GAČR grant P203/12/0118 *Spacetimes and fields in higher dimensional and classical gravity*, 2012–16. Austria-Czechia Project 7AMB13AT003, *Mathematical aspects of impulsive gravitational waves*, 2013–14 (with Steinbauer). GAČR grant 17-01625S *Spacetimes and fields in Einstein's theory of gravity and its generalizations*, 2017–19. GAČR grant 20-05421S *Exact spacetimes in Einstein's theory, quadratic gravity, and other generalizations*, 2020–22.

**Participation in other grants:** 6 GAČR grants *Relativistic physics and astrophysics*, 1993–2013 (Bičák). 4 GAUK grants on *Relativistic theory of gravitation, astrophysics and cosmology*, 1993–2003 (Bičák). *Centre for theoretical astrophysics*, 2006–11 (Palouš). Research program *Physical study of objects and processes in the solar system and in astrophysics*, 2007–13 (Bičák). GAČR Excellence in Basic Research grant *Albert Einstein center for gravitation and astrophysics*, 2014–18 (Bičák). GAČR grants *Black-hole and radiative spacetimes: exact methods*, 2019–21, and *Black-hole spacetimes in a general dimension, their properties and interpretations*, 2022–24 (Krtouš).

**Pedagogical activities:** Lectures on classical mechanics, electrodynamics, general relativity, gravitational waves, mathematical methods of physics, differential geometry, history of physics etc. Supervisor of 6 Ph.D., 11 Master and 6 Bachelor students. Teaching Coordinator (garant) for Bachelor and Master Study Programs of Physics at the Faculty of Mathematics and Physics, Charles University, Prague (since 2004).

**Outreach:**
Translation of 17 popular-science books on various topics of theoretical physics and astronomy.
More than 40 pedagogical or popularizing articles in Czech journals and newspapers.
More than 100 public lectures and lectures for secondary school students.

**Media outreach:**
Series of more than 50 lectures on modern physics and history of physics (YouTube, since 2013).
Science advisor for 10-episode TV series *Genius: Einstein* by the National Geographic, shot in Czechia from September 2016 to March 2017; described in our book *Einstein Again in Prague* (MatfyzPress, 2021).