

**doc. Ing. Jiří Houška, Ph.D.**

Date of birth: *August 13th, 1979*; Place of birth: *Rokycany, Czech Republic*; Nationality: *Czech*

***Current occupation***

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since 11/2011 associate professor (*docent*), University of West Bohemia, Faculty of Applied Sciences, [Department of Physics](#) and [research centre NTIS](#)

***Employment***

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6/2011-11/2012 Humboldt Fellowship awardee, RWTH Aachen University (Germany)  
2/2010-10/2011 assistant professor, University of West Bohemia, Department of Physics (since 1/2011 also research centre NTIS)  
3/2007-3/2009 postdoctoral fellow, Ecole Polytechnique de Montreal (Canada)  
1/2003-1/2010 research fellow, University of West Bohemia, Department of Physics (full time since 1/2006; unpaid leave during research stays abroad)

***Education***

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3/2004-1/2007 Ph.D. University of Sydney (Australia), School of Physics  
9/2002-1/2007 Ph.D. University of West Bohemia, Faculty of Applied Sciences  
9/1997-6/2002 Ing. University of West Bohemia, Faculty of Applied Sciences

***Research interests***

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solid state physics and physics of thin films, preparation of thin film materials (especially magnetron sputtering), modelling of atom-by-atom film growth by classical MD, ab-initio calculations of structures and properties of thin film materials, design of multilayered coatings (especially thermochromic), characterization of thin films (especially optical properties and phase composition), methodology of atomic-scale simulations and new ways how to use them to support the experiment

***Academical stays abroad***

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2011-2013 (6 months) [RWTH Aachen University](#) (Germany)  
2007-2009 (24 months) [Ecole Polytechnique de Montreal](#) (Canada)  
2004-2005 (12 months) [University of Sydney](#) (Australia)

***Project experience***

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2024-2026 co-investigator of the project "Research and development unique technology of toning of anti-reflective glasses" (Czech Technological Foundation TAČR, CZK 3 984 000 = EUR 160 000 [share of UWB])  
2019-2021 principal investigator of the project "Design of novel functional materials, and pathways for their reactive magnetron sputtering, using advanced computer simulations" (Czech Science Foundation GAČR, CZK 5 173 000 = EUR 200 000)  
2015-2017 principal investigator of the project "Design of new functional materials, and pathways for their atom-by-atom preparation, using advanced computer simulations" (Czech Science Foundation GAČR, CZK 3 714 000 = EUR 135 000)  
2011-2012 principal investigator of the project "Physics-based description of the TiO<sub>2</sub> growth during ion bombardment" (Alexander von Humboldt Foundation, EUR 58 500)  
since 2002 investigator of small projects of contract research (6×IHI Ionbond Netherlands b.v.), team member of 16 other research projects (6×Czech Science Foundation; 7×Czech Ministry of Education [including Operational Programmes of EU]; 2×Natural Sciences and Engineering Research Council of Canada; H2020 of EU), 2× principal coordinator and 1× co-coordinator of development projects (University of West Bohemia; University Development Fund FRVŠ)

### ***Selected teaching and student supervision experience***

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- guarantor and lecturer of the courses [Solid State Physics 1 and 2](#)
- guarantor and lecturer of the course [Modelling of Plasma and Solid State](#)
- supervisor of 9 finished undergraduate theses and 1 finished Ph.D. thesis

### ***Publications***

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- [92 refereed journal papers](#)
- 48 refereed journal papers as a first and corresponding author (37×) or his supervisor (10×) (3×Acta Materialia, ACS Applied Materials & Interfaces, 2×Solar Energy Materials & Solar Cells, 4×Computational Materials Science, 2×Applied Surface Science, Physical Review B, etc.)
- Web of Science: >900 citations without autocitations (currently >100/year), h-index 22
- >10 plenary/invited/keynote conference talks: ICMCTF 2010 and 2022 (San Diego, USA); AEPSE 2015 (Jeju, S. Korea); PSE 2018 and 2020 (GaPa/Erfurt, Germany); IUVESTA 2018 (Vadstena, Sweden); EMRS 2019 (Nice, France); IVC 2019 (Malmo, Sweden); ISSP 2024 (Kyoto, Japan), etc.

### ***Awards***

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- 2018 Prize of the president of the Czech Science Foundation *GAČR* ([text](#), [video](#), [national TV](#)) (project of the year in the field of technical sciences)
- 2018 and 2022 supervisor of the winner of the first prize at the Student Scientific Conference of the Faculty of Applied Sciences
- 2016 Outstanding reviewer award of Journal of Physics D: Applied Physics
- 2010 participant of 60<sup>th</sup> Nobel laureate meeting with selected young scientists in Lindau, Germany
- 2007 Dean's prize (physics thesis of the year)
- 1996 and 1997 member of Czech team at the International Physics Olympiad

### ***Conference organization***

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| 2022      | European Materials Research Society Spring Meeting (Strasbourg, France): chairman and organizer of the symposium O   |
| 2020-2022 | International Conference on Plasma Surface Engineering (Erfurt, Germany): member of the International Program Committee  |
| 2013-2018 | International Conference on Metallurgical Coatings and Thin Films (San Diego, USA): chairman and organizer of session B5 (2013-2015) and symposium B (2016-2018) |

### ***Selected other activities***

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- member of the evaluation panel "Materials Science and Engineering" (P108) of the Czech Science Foundation *GAČR* (2015-2019 and 2021-2025)
- member of the team for preparation of the Strategic Plan of the Faculty of Applied Sciences, and plans of its realization (since 2018)
- reviewer for impacted journals: >330 reports for >50 journals (most often Surf. Coat. Technol., Thin Solid Films, Appl. Surf. Sci., J. Phys. D: Appl. Phys., Vacuum)
- reviewer of theses and member of committees at other universities (Linköping University, University of Sydney, Charles University, University of Pardubice, Czech Technical University)