ZUZANA VÁCLAVÍKOVÁ

5 January 1976
married, born Divišová

KONTAKT

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Zuzana Václavíková

Education:

- 2026: Habilitation (doc.) – Information and communication technologies in education, Faculty of Science, UHK
- 2003: Doctoral degree (Ph.D.) – Applied mathematics, Faculty of Science, UO
- 2003: Advanced Master's Thesis (RNDr.), Applied algebra, Faculty of Science, UO
- 1999: Master's degree (Mgr.) – Teaching of mathematics-physics, Faculty of Science, UO

Work experience:

- 03/2023 onwards: Dean of the Faculty of Science, University of Ostrava
- 11/2021 - 02/2023: Head of the Department of Mathematics, Faculty of Science, University of Ostrava
- 04/2012 - 02/2023 Secretary of the Dept. of Mathematics, Faculty of Science, University of Ostrava
- 10/2001 onwards: assistant lecturer, Dept. of Mathematics, Faculty of Science, University of Ostrava
- 10/2014 - 2018: Educational programme coordinator in the Science learning centre, Vítkovice Lower Area, DPP
- 01/2012 - 09/2014: Educational programme coordinator in the Science Learning Centre, Science and Technology Centre, Vítkovice Lower Area half-time contract

Academic experience:

- 03/2023 onwards: Chairperson of the Scientific Board of the Faculty of Science, University of Ostrava
- 03/2023 onwards: member of the Association of Deans of Faculties of Science CR
- 05/2021 - 02/2023: Chairperson of the Academic Senate of the University of Ostrava
- 05/2021 - 02/2023: member of the Forum of Academic Senate Chairpersons
- 06/2021 - 02/2023: member of the Council for Internal Evaluation of the University of Ostrava
- 09/2015 - 02/2023: member of the Academic Senate of the University of Ostrava
- 4/2015 - 04/2018: Chairpersons of the Academic Senate of the Faculty of Science, Un. of Ostrava
- 04/2009 - 11/2021: member of the Academic Senate of the Faculty of Science, Un. of Ostrava
- 2007 onwards: guarantor of the life-long learning programme in Mathematics

Teaching and pedagogical activities

- More than 20 years of teaching practice in courses of mathematics and didactics of mathematics.
- Implementation of new optional courses.
- Participation in accreditation documentation preparation, in Bachelor's, consecutive Master's, and doctoral degree programmes. Participation in preparations of conferral of habilitation and professorship procedure.
- Over 60 successfully defenced Bachelor's and Diploma theses, dozens of successfully defended life-long learning works in the programme of Extended study of Mathematics.

Selected publications

Articles in scholarly journals:

- Maršálek, R., Trčková, K., Václavíková, Z.: 3D Printing of an Electrolyzer and its Validation for School Educational Purposes, Journal of Chemical Education, 102 (8), pp. 3653-3660, 2025.
- Václavíková, Z., Maršálek, R., Trčková, K. Mathematics in the Background of a Virtual Escape Game. Journal of Physics: Conference Series. 2025, 3037(2025), ISSN 1742-6588.
- Tóth, JT, Filip, F., Svitek, S., Václavíková, Z.: Characterization of Monotone Sequences of Positive Numbers Prescribed by Means. Mathematics. 2025, 13(5), ISSN 2227-7390.
- Maršálek, R., Trčková, K. and Václavíková, Z. Interactive chemistry escape game as a tool of distance education: a case study of a pilot test from the first escape room. Frontiers in Education. 2024, ISSN 2504-284X.
- Trčková, K., Maršálek, R. and Václavíková, Z. Saving the Earth: Mini Online Escape Game. Journal of Chemical Education. 2023, 101(1), pp. 215-222. ISSN 0021-9584.
- Konečná, P., Smolka, P., Trčková, K., Václavíková, Z. and Žáček, M. Innovation of pedagogical practices of future teachers. Education Science. 2023, 13(4), ISSN 2227-7102.
- Uzcátegui Contreras, D., Goyeneche, D., Turek, O. and Václavíková, Z. Circulant matrices with orthogonal rows and off-diagonal entries of absolute value 1. Communications in Mathematics. 2021, 29(1), pp.15-34. ISSN 1804-1388.
- Krčmarský, D., Mišík, L. and Václavíková, Z. On small sets of distribution functions of ratio block sequences. Uniform Distribution Theory. 2016, vol. 11, no. 11, pp. 165-174. ISSN 1336-913X.
- Václavíková, Z., Paštéka, M. Some remarks on permutations which preserve the weighted density. Tatra Mountains Mathematical Publications. 2013, vol. 2013, no. 56, pp. 35-45. ISSN 1210-3195.
- Václavíková, Z. Properties of transformation matrices between the normal bases in the orders of cubic field. Mathematica Slovaca. 2013, vol. 2013, no. 63, pp. 63-68. ISSN 0139-9918.
- Divišová, Z., Kostra, J. and Pomp, M. On transformation matrix connected to normal bases in orders. JP Journal of ALgebra Number Theory and Applications. 2003, vol. 3, pp. 43-52. ISSN 0972-5555.
- Divišová, Z., Kostra, J. and Pomp, M. On transformation matrix connected to normal bases in cubic fields. Acta Acad. Paed. Agriensis. 2002, vol. 29, pp. 61-66.
- Divišová, Z. On cycles of polynomials with integral rational coefficients. Mathematica Slovaca. 2002, pp. 537-540.

Chapters in books and publications:

- Benešová, T. (eds.), Kundrát, J., Peigerová, H., Diego-Mantecón, J. M., Ortiz-Laso, Z., Armani, S., Morselli, F., Robotti, E., Oľhová, S., Václavíková, Z.: Mathematics eduLARP – Educational Live Action Role Playing Game in Mathematical Context, VSB – Technical University of Ostrava, Ostrava, 2022.

- Václavíková, Z. Game: Experience as an Educational Tool. In: Deliyannis, I., editor. Game Design and Intelligent Interaction. London: IntechOpen; 2019.
- Václavíková, Z. Science education – formal versus informal education. In: New Challenges in Education. Ružomberok: VERBUM, 2013. pp. 260-277. ISBN 978-80-561-0065-3.
- Václavíková, Z. Interactivity – how to prepare study module. In: Entertainment-education in science education. Kraków: Pedagogical University of Cracow, 2017. pp. 97-108. ISBN 978-83-8084-056-0.
- Václavíková, Z. Creative science – the way how to improve the knowledge and skills of children. In: Mathematica V. 1. ed. Verbum, 2015. pp. 91-96. Scientific Issues. ISBN 978-80-561-0296-1.

15 contributions in conference proceedings indexed in the Web of Science (WoS), focusing on number theory, mathematics education (gamification, eduLARP), and numerical mathematics. More than 30 additional contributions and articles in edited volumes, as well as 23 teaching materials covering algebra, numerical mathematics, complex analysis, foundations of mathematics, the history of mathematics, and mathematics education. Numerous lectures and presentations at international and national conferences in the fields of number theory and mathematics education.

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Web of Science ResearcherID: E-8065-2014
AU-ID ("Václavíková, Zuzana" 42162299700)
AU-ID ("Divišová, Z." 57200642205)
Researchgate: https://www.researchgate.net/profile/Zuzana-Vaclavikova?ev=hdr_xprf
Google Scholar: https://scholar.google.com/citations?hl=en&authuser=1&user=zI90EjoAAAAJ

Projects:

- GAAV, A1187101, Algebraické struktury, teorie čísel a její aplikace, investigation 01/2001 - 12/2003
- FRVŠ 42/2010, Technická matematika zajímavě (main investigator), investigation: 01/2010 - 12/2010
- FRVŠ 2232/2011, Inovace matematických předmětů s ohledem na potřebu technicky orientovaných oborů (main investigator), investigation: 01/2011 - 12/2011
- FRVŠ 921/2012, Matematika zaměřená na technické obory (main investigator), investigation: 01/2012 - 12/2012
- CZ.02.3.68/0.0/0.0/16_011, PŘÍRodovědné Oborové Didaktiky A praktikující učitel (project executive manager), investigation: 12/2017 - 12/2019
- Projekt PPSŘ_OU, Priority strategického rozvoje PřF – podpora synergií a komplementarit (main investigator), investigation: 07/2023 - 12/2023
- CZ.1.07/1.2.00/08.0135, Zkvalitňování procesu vzdělávání dětí a žáků nadaných a žáků se specifickými poruchami učení, investigation: 10/2009 - 09/2010 (Note: project holder: Soukromá základní škola, spol. s r.o. Ostrava -- Vítkovice)
- CZ.1.07/1.2.10/02.0051, Zkvalitňování procesu vzdělávání dětí a žáků nadaných a žáků se specifickými poruchami učení, investigation: 01/2010 - 12/2010
- CZ.1.07/1.3.05/11.0011, Modulový systém dalšího vzdělávání pracovníků škol a školských zařízení v Moravskoslezském kraji, investigation: 01/2010 - 12/2010
- CZ.1.07/3.2.07/02.0033, Tvorba distančních vzdělávacích modulů pro celoživotní vzdělávání dle §60 zákona č.111/1998 Sb. o VŠ na Přírodovědecké fakultě Ostravské univerzity, investigation: 02/2012 - 08/2012
- CZ.1.07/2.2.00/15.0026, Zvyšování odborných kompetencí akademických pracovníků Ostravské univerzity v Ostravě a Slezské univerzity v Opavě, investigation: 01/2012 - 01/2013
- SGS08/PřF/2014-2015: Analytické a pravděpodobností metody teorie čísel, investigation: 01/2014 - 12/2015
- CZ.1.07/2.2.00/29.0006, Podpora terciárního vzdělávání studentů se specifickými vzdělávacími potřebami na OU, investigation: 02/2012 - 01/2015

- CZ.1.07/1.3.44/01.0020, Zvyšování odborných kompetencí pracovníků škol a školských zařízení v MSK v oblasti matematiky, VT a využívání ICT ve školách, investigation: 03/2012 - 04/2014
- Marie Curie IRSES, LIE-DIFF-GEOM, No. 317721, investigation: 01/2013 - 06/2016
- CZ.1.07/2.3.00/45.0004, Okna vědy dokořán, investigation: 06/2014 - 07/2015
- CZ.02.2.69/0.0/0.0/15_004/0000294, Smart akcelerátor RIS 3 strategie, investigation: 01/2017 - 07/2018
- SKCZ304011T963, IBSE ako nástroj pre získanie spôsobilostí a postojov žiakov a učiteľov k technickému a prírodovednému vzdelávaniu s ohľadom na požiadavky trhu práce, investigation: 03/2020 - 07/2021
- SGS01/PřF/2020-2021: Podpora vědecké činnosti studentů v dílčích oblastech matematiky, investigation: 01/2020 - 12/2021
- NFP304010AZC7, Adaptace výzkumně laděné koncepce přírodovědného a technického vzdělávání pro distanční a on-line vyučování / zkoumání v éteru, investigation: 01/2022 - 06/2023
- NPO_OSU_MŠMT-16610/2022, NPO: FlexibilitOU k rozvoji profesních dovedností, investigation: 10/2022 - 12/2024
- CZ.02.02.XX/00/23_019/0008272, Implementace reformy učitelské přípravy na OU: kompetenční vzdělávání založené na praxi, výzkumu, internacionalizaci a spolupráci s klinickou školou, investigation: 05/2024 06/2026

Internships and mobility

Student internships:

- University of Liverpool. Great Britain, Erasmus, PhD student, summer semester 2000 (Numbers, groups and codes, Number theory, Chaos theory).
- Technische universitat Graz. Austria. Ceepus, 1. – 30. 6. 2001.

Academic internships and mobility:

- University of Liverpool, Great Britain, (academic one-month internship), 10. 1. – 14. 2. 2002.
- University of Augsburg. Erasmus (academic one-month internship),1. 5. – 1. 6. 2002.
- Karl-Franzens University, Graz, Austria, (academic one-month internship), 20. 1. – 16.2. 2003.
- Rhodes University, Grahamstown, Eastern Cape, RSA, within the Marie Curie IRSES, LIE-DIFF-GEOM No. 317721, 3. – 30. 4. 2015.
- University of Oulu, Department of Mathematical Science, Oulu, Finland, Erasmus+ (academic mobility), 13. 5. – 22. 5. 2017.
- Palermo. Italy, Erasmus+ (academic mobility), 11. – 16. 3. 2018.
- University of Liverpool, Liverpool, Great Britain, Erasmus+, (academic mobility), 22. – 26. 1. 2018.
- University of Liverpool, Liverpool, Great Britain, Erasmus+, (academic mobility), 28. 1. – 1. 2. 2019.
- Chongqing University Chongqing. China, Erasmus+ (ICM mobility), 23. 4. – 1. 5. 2019.
- Instituto Politecnico de Portalegre, Erasmus+ (International week), Portalegre, Portugal, 11. – 18. 5. 2019.
- University of Liverpool, Liverpool, Great Britain, Erasmus+, (academic mobility), 19. – 25. 1. 2020.
- CanTho University, Vietnam, Erasmus (ICM mobility), 6. – 15. 5. 2022.
- Escola Superior de Tecnologias de Fafe, Portugal, Erasmus+, (academic mobility), 13. – 18. 11. 2022.
- Hague University of Applied Sciences, Haag, Nizozemsko, 28. 2. – 2. 3. 2024, preparation and provision of a workshop within Triplet PLC.
- Orebro Universitet, Orebro, Sweden, Erasmus+ (academic mobility), 11. – 18. 6. 2023.
- University of Kigali, Rwanda, ICM mobility, 23. – 30. 3. 2025.

Several Ceepus mobility stays, mostly Slovakia (University of Žilina, STU Bratislava, J. Selye University, Komárno; period: 2015–2020).

Event organization

Participation in the organization of the following conferences and seminars organized or co-organized by the Department of Mathematics, Faculty of Science, University of Ostrava: Czech and Slovak Number Theory Conference, Czech and Polish Conference on Number Theory, Ph.D. Students Mathematical Conference, Summer School on Number Theory, Central European Number Theory Conference, International Symposium on Intelligent Systems and Algorithms, and others.

Organization of exhibitions and educational events for schools and general public:

- *A Journey into the Depths of Film Technology*, exhibition at CineStar, 2012
- *Film Technology: From the Cinema to the Home*, exhibition at the Ostrava City Library, 2010
- *The History of Calculating Machines: From Fingers to Computers*, exhibition accompanied by lectures, Ostrava City Library, Daliborova Branch, 2010
- *How People Used to Calculate*, exhibition accompanied by lectures, Ostrava, 2014
- *Summer Science School*, educational event for gifted pupils, Ostrava, 2017
- *A Journey through the World of Film*, popular science exhibition accompanied by lectures on animated film and film technology, Klub Atlantik, Ostrava, 2022

Further involvement in the organization of regular events for schools, the educational community, and the general public, including the Vojtěch Jarník International Mathematical Competition, *Windows into Nature*, professional workshops for teachers, Researchers' Night, Science and Technology Week, Chemistry at the Castle, and others.