Juha-Matti Huusko juha-matti.huusko@aalto.fi tel. +358 40 528 2815

Curriculum vitae

1. Personal details and the date of the CV

- Huusko, Juha-Matti Aleksanteri
- ORCID: <u>https://orcid.org/0000-0001-8389-6436</u>
- This document was made on October 30th 2022.

2. Degrees

- 15.06.2017, Doctor in Philosophy, mathematics, University of Eastern Finland, Joensuu, Finland.
- 20.09.2013, Master of Science, teacher in mathematics and physics, University of Eastern Finland, Joensuu, Finland.

3. Other education and expertise

• studies in computer science, University of Eastern Finland

4. Language skills

- Finnish native
- English excellent
- Swedish mediocre
- Bengali mediocre
- German basics

5. Current employment

- 10/2022-, university teacher, Aalto University
- akateeminen tutkijanuravaihe, porras 2
- part-time student: University of Eastern Finland, Joensuu, computer science

6. Previous work experience

- 3/2022-9/2022, university teacher, University of Eastern Finland (UpTech project)
- 6/2021-5/2022, university teacher, University of Eastern Finland, (Linear analysis project Ministry of Education and Culture)
- 9/2020-5/2021, part-time teacher in mathematics, University of Eastern Finland
- 8/2019-12/2019, university teacher, University of Eastern Finland
- 12/2018-7/2019, postdoctoral researcher, University of Eastern Finland
- 9-10/2018, part-time teacher, University of Eastern Finland
- 2-12/2018, IT helping person, University of Eastern Finland
- 10-12/2017, part-time teacher, Savonia UAS
- 7-9/2017, postdoctoral researcher, University of Eastern Finland

7. Career breaks

• no breaks, one child

8. Research funding and grants

- doctoral school funding, University of Eastern Finland, 10/2013-6/2017
- travel grant, 2500€, Väisälä, 2019.
- travel grant, 1000€, Oskar Öflunds Stiftelse, 2017.

9. Research output

In total 8 peer-reviewed publications.

- Pesonen, H.A., J.-M. Huusko, X. Zang, A.T. Friberg, J. Turunen and T. Setälä, Partial spectral and temporal coherence of plane-wave pulse trains in second-harmonic generation, J. Opt. (2021).
- Hu, G., J.-M. Huusko, J. Long, Y. Sun, Linear differential equations with solutions lying in weighted Fock spaces, Comp. Var. Ell. Eq., Volume 66, 2021.
- Pesonen, H., A. Halder, J.-M. Huusko, A.T. Friberg, T. Setälä and J. Turunen, Spatial coherence effects in second harmonic generation of scalar light fields, Journal of Optics, Volume 23, Number 3
- Huusko, J.-M., T. Vesikko, On Becker's univalence criterion, Journal of Mathematical Analysis and Applications, 458 (1), 781-794.
- Huusko, J.-M., Methods for complex ODEs based on localization, integration and operator theory, Publications of the University of Eastern Finland. Dissertations in Forestry and Natural Sciences, 268
- Gröhn, J., J-M. Huusko, J. Rättyä, Linear differential equations with slowly growing solutions, Trans. Amer. Math. Soc. 370 (2018), 7201-7227.
- Huusko, J.-M. and M. Martin, Criteria for bounded valence of harmonic mappings, Comput. Methods Funct. Theory (2017).
- Huusko, J.-M., T. Korhonen, A. Reijonen, Linear Differential Equations With Solutions in the Growth Space, Ann. Acad. Sci. Fenn. Math. 41 (2016), no. 1, 399 416.
- Huusko, J.-M., Localisation of Linear Differential Equations in the Unit Disc by a Conformal Map, Bull. Aust. Math. Soc. 93 (2016), 260–271.

Other publications are available at http://integraali.com/phpcv/order4.php

The online version includes links to teaching related visualizations.

10. Research supervision and leadership experience

• second supervisor for a PhD 9/2021 -

11. Teaching merits

I am a teacher in mathematics and physics. I have created many online materials and I have a vast teaching expericence. Next, I will explain these things in more detail.

- **Pedagogical qualification.** I completed my pedagogical studies (60 ECTS) in my Master of Science degree, awarded on September 20th 2013.
- **Developing online materials.** I worked in the Department of Physics and Mathematics, in University of Eastern Finland, in the following projects:
 - Multidisciplinary university level ensemble in linear analysis, Ministry of Education and Culture, 2021-2022. University teacher position started 6/2021 and ended 5/2022. I prepared materials to courses: Linear algebra a and b; and Introduction to numerical computing.
 - Continuous learning project by University of Eastern Finland, 2019-2020. University teacher position started 8/2019 and ended 7/2020. The project was shared by Department of Physics and Mathematics (Joensuu) and Department of Appled Physics (Kuopio). I prepared online materials for courses: Integral Calculus and Basics in Mathematics.

My work included typesetting mathematical text to Digicampus Moodle platform by using HTML and MathJax-library which enables the use of LaTeX codes. I prepared static and dynamic pictures by using TikZ-package and JSXGraph JavaScript library. In addition, I made various teaching videos via tablet/PC where I used self-made slideshows and Matlab visualizations. For the Moodle courses, I have prepared automatic evaluation exercises, randomized STACK exercises and CodeRunner programming exercises.

• **Teaching experience in general.** In 2015-2021, I have taught in University of Eastern Finland a vast selection of courses in mathematics (Introduction to topology, Algebra a, Euclidean geometry, Measure and integration theory, Introduction to Fourier analysis, Differential calculus in several variables). In addition, I have taught exercises in these courses and also in Analysis III, Numerical analysis, Topolgoy, Complex analysis a, Introduction to mathematics, and Introduction to analysis. In total, I have lectured courses spanning 38 ECTS, and supervised exercises in courses spanning 36 ECTS.

12. Awards and honours

• UEF DSA Julian Assange award (Given for an excellent critical journalism and support of freedom of expression)

13. Other key academic merits

- editor-in-chief UEFDSA newspaper (2019-2022)
- editor-in-chief, Metodologia, international, peer-reviewed (2020-)

14. Scientific and societal impact

15. Other merits