Mara VLAŠIĆ

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Work Experience

OCTOBER, 2022 - CURRENT

TEACHING AND RESEARCH ASSISTANT | FACULTY OF ELECTRICAL ENGINEERING AND APPLIED COMPUTING, UNIVERSITY OF DUBROVNIK | Dubrovnik, Croatia

- Mathematics I, Mathematics II, Mathematics IV, Mathematical Analysis, Probability and Statistics, Applied Mathematics, Mathematical Software Tools

SEPTEMBER, 2021 – OCTORBER, 2022

MATHEMATICS AND PHYSICS TEACHER | GYMNASIUM DUBROVNIK | Dubrovnik, Croatia

Education

OCTOBER, 2022 – CURRENT

DOCTORAL STUDY | UNIVERSITY OF ZAGREB, FACULTY OF SCIENCE, DEPARTMENT OF MATHEMATICS | Zagreb, Croatia

Courses:

- Partial Differential Equations, Control of partial differential equations, Homogenization and topology optimization;
- Numerical Mathematics, Data driven computational analysis of nonlinear dynamics;
- Research frameworks in mathematics education.

Seminars:

- Seminar for differential equations and numerical analysis
- Seminar for applied mathematics and control theory

OCTOBER, 2016 – SEPTEMBER, 2021

MASTER'S DEGREE IN MATEMATICS AND PHYSICS EDUCATION | UNIVERSITY OF ZAGREB, FACULTY OF SCIENCE, DEPARTMENT OF MATHEMATICS | Zagreb, Croatia

Training

JUNE 23 – JUNE 27, 2025

"CONTROL, INVERSE PROBLEMS AND SPECTRAL THEORY" | Institut de Mathématiques de Toulouse, University of Toulouse | Toulouse, France

- The summer school is organized and funded by the MINT Graduate School
- Inverse problems in the wave equation: from stability to parameter reconstruction, A few techniques to achieve invisibility in acoustic waveguide, Spectral geometry: old questions and new answers, Spectral geometry: old questions and new answers

MAY 12 – MAY 16, 2025

"DISSIPATIVITY IN OPTIMAL CONTROL - TURNPIKES, PREDICTIVE CONTROL, AND UNCERTAINTY" (M09 PARIS-SACLAY module) | Paris, France

- IEECI-IGSC 2025: International Graduate School on Control 2025 organized by EECI – European Embedded Control Institute and IEEE CSS and IFAC – International Federation of Automatic Control.
- Attendend the 21-hours lecture series and passed the final examination

JULY 22 - AUGUST 16, 2024

"SCUOLA MATEMATICA INTERUNIVERSITARIA" | Perugia, Italy

- Participated and completed the following courses: Differential Equations of Mathematical Physics and Applications, Functional Analysis

JULY 1-5, 2024

"CONTROL AND MACHINE LEARNING" (M18 DUBROVNIK module) | Dubrovnik, Croatia

- IEECI-IGSC 2024: International Graduate School on Control 2024 organized by EECI – European Embedded Control Institute and IEEE CSS and IFAC – International Federation of Automatic Control.
- Attendend the 21-hours lecture series and passed the final examination

FEBRUARY 19-23, 2024

"MODEL REDUCTION FOR OPTIMIZATION AND CONTROL" | Dubrovnik, Croatia

- COST Action: CA18232 - Mathematical models for interacting dynamics on networks

Projects

OCTOBER, 2025 – OCTOBER, 2029

INTERACTIONS BETWEEN CONTROL THEORY AND MACHINE LEARNING (InterCoML), COST Action CA24136

JANUARY, 2025 – DECEMBER, 2026

ENSEMBLE CONTROLLABILITY: THEORY, NUMERICS AND APPLICATIONS
bilateral HR-FR project/ Cogito 2025. / 2026.

FEBRUARY, 2024 – JANUARY, 2028

OPTIMAL CONTROL AND MODEL REDUCTION FOR EVOLUTION AND DATA DRIVEN PROBLEMS
Research project funded by Croatian Science Foundation

JANUARY, 2023 – DECEMBER, 2024

MANAGEMENT OF PDJ SYSTEMS WITH INCOMPLETE DATA
bilateral HR-DE project/ MZO-DAAD 2023. / 2024.

Conference, congress and symposium

SEPTEMBER 8-12, 2025

THE EIGHTH NAJMAN CONFERENCE ON SPECTRAL THEORY AND DIFFERENTIAL EQUATIONS | Dubrovnik, Croatia

- Contributed talk - Twofold Control: Joint Optimization of Initial State and Control Input

JUNE 23-27, 2025

"CONTROL, INVERSE PROBLEMS AND SPECTRAL THEORY" - Summer school | Institut de Mathématiques de Toulouse, University of Toulouse | Toulouse, France

- Poster session - Twofold Control: Joint Optimization of Initial State and Control Input

APRIL 28-29, 2025

THE 9TH FACULTY OF SCIENCE PHD STUDENT SYMPOSIUM 2025 | University of Zagreb, Faculty of Science | Zagreb, Croatia

SEPTEMBER 23-27, 2024

APPLMATH24 - the 12th in a series of conferences on applied mathematics and scientific computing | Dubrovnik, Croatia

Language

Native tongue: CROATIAN
Other language: ENGLISH

Honours and Awards

- ACADEMIC SCHOLARSHIP AWARDED BY THE CITY OF DUBROVNIK (FOR 5 YEARS)
- DEAN'S AWARD FOR EXCEPTIONAL SUCCESS IN THE STUDY OF MATHEMATICS AND PHYSICS, TEACHING MAJOR