

Curriculum Vitae

Personal details

Name: Balogh, Tamás
Place of birth: Győr, Hungary
Date of birth: September 27, 1994
Phone: +36306629993
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Education

2019 – 2023 PhD studies, Department of Applied Mechanics,
Budapest University of Technology and Economics
Dissertation submitted for final review in June 2024

2017 – 2019 MSc in Mechatronics, Budapest University of Technology and Economics
Specialization in Vehicle Mechatronics
Overall classification of the qualification: 4.91 – excellent with highest honors

2013 – 2017 BSc in Mechatronics, Budapest University of Technology and Economics
Specialization in Mechanical Engineering Modelling
Overall classification of the qualification: 4.99 – excellent with highest honors

Languages

English General Intermediate (B2), Combined (C) Language Exam (2012, no. 1461116)
Hungarian Native

Awards and academic scholarships

2022 – 2023 New National Excellence Program, Research Scholarship for PhD Students

2018 – 2019 National Higher Education Scholarship

2018 Special Prize at the Scientific Conference of Students, Applied Mechanics

2017 1st Place at the Scientific Conference of Students, Analytical Mechanics

2017 György Kozmann Special Award, Scientific Conference of Students

2017 3rd Place at BME Mathematics Competition

Professional experience

2023 – 2024 HUN-REN–BME Dynamics of Machines Research Group, Research assistant

2019 – 2021 MTA-BME Lendület Human Balancing Research Group, Research assistant

2016 MESHINING Engineering Kft., Summer internship

Experiences abroad

- 2022 Université Paris-Saclay, Laboratoire des Signaux et Systèmes (2-week stay)
- 2022 European Embedded Control Institute, International Graduate School on Control, Analysis and Design Methods for Time Delay Systems (course participation)
- 2019 International Centre for Mechanical Sciences (CISM), Controlling Delayed Dynamics: Advances in Theory, Methods and Applications (course participation)
- 2019 Université Paris-Saclay, Laboratoire des Signaux et Systèmes (2- and 1-week stays)

Computer skills

Autodesk Inventor, ANSYS, LMS Imagine.Lab AMESim

C/C++, LabVIEW, Wolfram Mathematica, MATLAB

LaTeX, Microsoft Office, ECDL certificate (2008, no. HU-GMS0483000000219)

Conference presentations

- 2023 XIV. Magyar Mechanikai Konferencia
- 2023 6th International Conference on Dynamics, Vibration and Control (ICDVC 2023)
- 2022 17th IFAC Workshop on Time Delay Systems (TDS 2022)
- 2022 10th European Nonlinear Dynamics Conference (ENOC 2022)
- 2021 10th ECCOMAS Multibody Conference
- 2020 International Conference on Nonlinear Dynamics and Control (ICNDC 2020)
- 2020 21st IFAC World Congress
- 2019 15th IFAC Workshop on Time Delay Systems (TDS 2019)
- 2019 XIII. Magyar Mechanikai Konferencia
- 2018 XXVI. Nemzetközi Gépészeti Konferencia (OGÉT 2018)

Publications (journal papers)

Balogh T., Kovacs B. A., Insperger T.: Human performance in virtual stabilization of a fractional-order system with reaction delay. *Journal of the Royal Society Interface*, 21(215): 20230685 (2024).

Balogh T., Insperger T.: Extending the admissible control-loop delays for the inverted pendulum by fractional-order proportional-derivative controller. *Journal of Vibration and Control*, 30(11-12): 2596-2604 (2024).

Balogh T., Varszegi B., Insperger T.: On the admissible control-loop delay for the inverted pendulum subject to detuned PDA feedback. *Journal of Sound and Vibration*, 529: 116898 (2022).

Balogh T., Boussaada I., Insperger T., Niculescu S.-I.: Conditions for stabilizability of time-delay systems with real-rooted plant. *International Journal of Robust and Nonlinear Control*, 32(6): 3206-3224 (2022).

Molnar C. A., Balogh T., Boussaada I., Insperger T.: Calculation of the critical delay for the double inverted pendulum. *Journal of Vibration and Control*, 27(3-4): 356-364 (2021).

A complete list of publications is available at

<https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10067219>

Budapest, August 20, 2024

Balogh, Tamás