

CURRICULUM VITAE

Name	Daróczy, Bálint Zoltán
Birth date	February 12, 1983
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Web	https://sztaki.hun-ren.hu/en/organisation/departments/ilab/balint-zoltan-daroczy



WORK EXPERIENCE

- Employer AI Laboratory, Institute for Computer Science and Control, Hungarian Academy of Sciences, Hungarian Academy of Sciences (MTA SZTAKI), 1111 Budapest, Lágymányosi u. 11., Hungary
<https://sztaki.hun-ren.hu/en/organisation/departments/ilab>
- Date from December 2007
- Position senior research fellow from March 2025
- Projects
 - main research projects as researcher:
 - EDF 101103386 (2022-2026): “Frugal And Robust AI for Defence Advanced Intelligence”, <https://faradai.eu/>
 - EC FP7 FET NADINE (2012-2015): “New tools and algorithms for directed network analysis”, https://cordis.europa.eu/result/rcn/156020_en.html
 - EC FP7 LAWA (2010-2013): “Longitudinal Analytics of Web Archive Data”, https://cordis.europa.eu/project/rcn/95489_en.html
 - EC FP7 JUMAS (2008-2010): “Digital library techniques in judicial domain”, https://cordis.europa.eu/project/rcn/85783_en.html
 - 2018-1.2.1-NKP-00008 (2018-2021): “Exploring the Mathematical Foundations of Artificial Intelligence.”
 - collaborations among others with researchers from
 - Université de Lille
 - Université catholique de Louvain
 - Ericsson Hungary
 - Eötvös Loránd University (ELTE)
 - Budapest University of Technology and Economics (BME)
 - Central European University (CEU)
 - University of Debrecen
 - University of Toulouse
 - Aalto University
 - Northeastern University (NU)
 - Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig
- Employer Université catholique de Louvain, ICTEAM, INMA, 1348, Place de l'Université Louvain-la-Neuve, Belgium
<https://uclouvain.be/fr/node/2107>

- Date from November 2020 till October 2022
- Position postdoctoral researcher
- Projects F.R.S-FNRS (<https://www.frs-fnrs.be>) funded project "Learning from Pairwise Comparisons"
- Employer Research Center of Vehicle Industry, Széchenyi István University, H-9026 Győr, Egyetem sq. 1, Hungary
- Date from July 2018 - October 2020
- Position part time research associate
- Projects ÚNKP FIKP 2017

EDUCATION AND RESEARCH ABROAD

- Duration 2006 – 2009
- Institute name and type Eötvös Loránd University (ELTE), Faculty of Informatics (IK), Budapest, Hungary
- Title of qualification PhD in Information Science and Technology (2017)
- Duration 2001 – 2006
- Institute name and type Budapest University of Technology and Economics, Faculty of Electrical Engineering and Informatics (BME VIK), Budapest, Hungary
- Title of qualification Master of Science in Engineering (2006)
First four semesters in German

SCHOLARSHIPS, FELLOWSHIPS, AWARDS

- 2025 PI, HUN-REN – NTU AI Research Cooperation Program 2025, title: "Theoretical aspects of the capacity of large sequence-to-sequence models"
- 2023 - 2024 co-PI, CNRS EAI, title: " Stabilité des algorithmes d'apprentissage pour les réseaux de neurones profonds et récurrents en utilisant la géométrie et la théorie du contrôle via la compréhension du rôle de la surparamétrisation"
- 2018 - 2021 MTA Premium Postdoctoral research fellowship, title: "Manifolds and deep structures"
- 2019 Publication award, MTA SZTAKI
- 2018 Young researcher award, MTA SZTAKI
- 2003/2004 Autumn DAAD - German Academic Exchange Service scholarship at Universität Karlsruhe (UniKA, now KIT), Fakultät für Informatik

LANGUAGES

- Native language Hungarian
- Additional languages English, German, French

COMPUTER SKILLS AND EXPERIENCES

- Programming languages daily use of python, unix shell and C/C++
- Additional experiences Open Compute Library Image Feature Framework (CLIFF), some experience in NumPy, Pandas, OpenCL, CUDA, Matlab/Octave, Xcode, Gnuplot, OpenCV, Latex and several graph propagation frameworks (TensorFlow, Chainer, GraphLab, PyTorch)

TEACHING EXPERIENCES

- As supervisor 8 MSc, 10 BSc theses and 4 Student Research Competitions (TDK), and one ongoing PhD student in the Doctoral School of Mathematics at Eötvös Loránd University
- Lectures/Seminars Data Mining, theoretical machine learning and complex network related MSc, BSc and PhD courses both in hungarian and english at Budapest University of Technology and Economics (BME), Budapest, Hungary and at Aquincum Institute of Technology (AIT), Budapest, Hungary, and at Corvinus University, Budapest, Hungary, and at Université catholique de Louvain.

PUBLICATIONS AND RESEARCH INTEREST

Main interest: kernel methods and manifolds, generalization theory
Co-author of over 35 international journal, conference and workshop proceedings in ACM WebConf/WWW, IEEE CDC, ACM RecSys, AAAI ICWSM, Scientific Reports, NeurIPS, ICML, TMLR, JISF, IEEE VTC, ESANN, SIAM OPT
Google Scholar: <https://scholar.google.hu/citations?user=IbZ6D08AAAAJ&hl=en>

