Curriculum Vitae — Márk Jelasity

Academic Degrees

2014 DSc degree, Hungarian Academy of Sciences.

2011 Feb. Habilitation (teaching related degree), University of Szeged, Hungary.

2001 Jan. 25. PhD degree, Universiteit Leiden, The Netherlands. Loránd University, Budapest, Hungary.

1996–2000 MSc degree in theoretical linguistics, University of Szeged, Hungary

1991–1996 MSc degree in mathematics and software engineering, University of Szeged, Hungary.

Publications

1. MTMT: `https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10017593`
2. DBLP: `https://dblp.org/pid/99/618.html`
3. Scholar: `https://scholar.google.com/citations?user=ScDJx68AAAAJ&hl=en`
4. Citations: Google Scholar: 9398, MTMT (Scopus and WoS): 4163 (independent: 3554)
5. Hirsch-index: Google Scholar: 41, MTMT (Scopus and WoS): 28

Positions Held

2016- Full Professor at the Department of Algorithms and AI, University of Szeged, Hungary.

2015-2016 Research Advisor (full research professor), USZ-HAS Research Group on Artificial Intelligence, Szeged, Hungary.

2003-2015 Senior researcher, USZ-HAS Research Group on Artificial Intelligence, Szeged, Hungary.

2006 May-Jul. Visiting researcher (with Geoff Canright), Telenor R&D, Fornebu, Norway.

2006 Mar.-Apr. Visiting researcher (with Anne-Marie Kermarrec), IRISA/INRIA Rennes, France.

2003-2006 Researcher (with Ozalp Babaoglu), Dept. of Computer Science, Univ. of Bologna, Italy.

2001-2003 Researcher (with A.E. Eiben and Maarten van Steen), Computational Intelligence Group, Dept. of Artificial Intelligence, Vrije Universiteit Amsterdam, The Netherlands.

2000 Researcher (with A.E. Eiben), Leiden Institute of Advanced Comp. Sci., The Netherlands.

1996-2002 Research assistant, USZ-HAS Research Group on AI, Szeged, Hungary.

Scholarships and Awards

1. Bolyai Plaquette. Awarded to about 10% of Bolyai Scholarship holders by the Hungarian Academy of Sciences.
2. 10 years best paper award at the ACM/IFIP/USENIX Middleware Conference, 2014 December.
3. Best paper award at the 14th IEEE International Conference on Peer-to-Peer Computing (P2P 2014).
4. Best paper award at the 7th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2013).
5. Scientific Award of the Faculty of Science and Informatics, University of Szeged, Hungary, 2013.
6. Fulbright Scholarship to visit Cornell University, Ithaca, NY, USA, 2013 March-July.
7. Bolyai Scholarship, 2007–2010 and 2011–2014. Awarded to young researchers by the Hungarian Academy of Sciences for research excellence.
8. Pro Scientia Medal of the Council of National Scientific Students' Associations (OTDT), 1997. Awarded to students for research excellence.
9. Outstanding Student Award, 1997, Faculty of Sciences, University of Szeged, Hungary.
10. Scholarship of the Hungarian Republic, 1995–1996. Full year scholarship awarded to students with an outstanding scholastic record, by the Ministry of Education.

Research Experience

2022–2027. "Machine Learning: robustness, interpretability, applications", a research group supported by the Hungarian Research Network (HUN-REN) (Research Group Leader).

2018-2021 "Mathematical foundations of AI" project, as part of the Artificial Intelligence National Excellence Program of the National Research, Development and Innovation Office of Hungary (University of Szeged coordinator). Research connected to the problem of adversarial input in machine learning models and interpretability.

2017-2021 "IoLT" project, as part of the EU funded national "GINOP 2.3.2" program (subproject coordinator). Design and implementation of efficient decentralized machine learning algorithms.

2012-2015 "FuturICT.hu" project, as part of the EU funded national "TÁMOP 4.2.2.C" program (project coordinator). Applications of modern ICT for solving societal problems with the tools of network theory and data mining.

2009-2013 "QLectives" EU FP7 project (University of Szeged principal investigator). Design and implementation of several fully distributed recommender and data mining algorithms for P2P systems, as well as the development of a Web 2.0 social platform for scientific information exchange and publication.

2003-2006 "BISON" EU FP5 project (postdoc). Design and implementation of several biology-inspired protocols that tolerate extremely large, heterogeneous, dynamic networked environments. In particular, special emphasis on epidemic (or gossip) protocols, that have been used to implement not only information dissemination, but also distributed data mining (data aggregation), and the creation and maintenance of a wide variety of overlay networks. In addition, crucial part in the design and maintenance of PeerSim, a scalable simulator for peer-to-peer protocols written in Java, and available from the SourceForge website.

2000-2003 "DREAM" EU FP5 project (postdoc). Design and implementation of a fully distributed environment for executing parallel evolutionary optimization algorithms in a robust and scalable fashion.

1996-2000 Automatic speech recognition. Design and implementation of segment-based approaches: segmentation, feature extraction and matching to dictionary.

1995-2002 Methodological and theoretical issues in the field of evolutionary computing; structural properties of fitness landscapes. In particular, approaches to characterize hardness of optimization problems for local hillclimber heuristics, and in general, attempting to develop a deeper understanding of the search process, the interaction of the search space structure and the features of the local optimizer.

1993-1998 Design and implementation of heuristics for global optimization (GAS, UEGO), capable of discovering several local optima at the same time.

Graduated PhD Students

1. István Megyeri. *Applications of Adversarial Robustness Analysis in Machine Learning.* 2024.
2. Gábor Danner. *Efficient Gossip Algorithms for Machine Learning.* 2022.
3. Árpád Berta. *Collaborative Mobile Gossip Learning.* 2020.
4. István Hegedűs. *Gossip Based Machine Learning in Fully Distributed Environments.* 2017.
5. Róbert Ormándi. *Applications of Support Vector-Based Learning.* (50% supervision), 2014.
6. Vilmos Bilicki. *Infrastructure Aware Applications.* 2010.

Organization (Recent)

1. TPC chair: The 16th IFIP International Conference on Distributed Applications and Interoperable Systems (DAIS'16), Heraklion, Greece, June 6-9, 2016.
2. TPC chair: The 7th International Workshop on Modeling, Simulation, and Optimization of Peer-to-peer Environments (MSOP2P'13), Special session of Euromicro PDP 2013, Belfast, Northern Ireland, February 27-March 1, 2013.
3. PC co-chair: The 11th IEEE International Conference on Peer-to-Peer Computing (IEEE P2P'11), Tokyo, Japan, August 31-September 2, 2011.
4. General Co-Chair: The 4th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2010), Budapest, Hungary, September 27-October 1, 2010.
5. Track Co-Chair: Self-Organizing Systems Track, 12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2010), New York City, USA, September 20-22, 2010.
6. Publication Chair: The 2nd IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SASO 2008), Isola di San Servolo (Venice), Italy, October 20-24, 2008.
7. PC co-chair: 1st IEEE Int. Conf. on Self-Adaptive and Self-Organizing Systems (SASO 2007).

8. PC vice chair: European Conf. on Parallel Computing (Euro-Par) 2005 and 2006, Peer-to-Peer and Web Computing Track.
9. Co-organizer: The Fourth Int. Workshop on Engineering Self-Organising Applications (ESOA'06), Hakodate, Japan, May 2006. Co-editor of post-proceedings, appeared as volume 4335 of LNCS, Springer, 2007.
10. Co-editor: IEEE Intelligent Systems, 21(2), 2006. Special Issue: Self-Management through Self-Organization in Information Systems.

Szeged, 2024. April 18.

Dr. Márk Jelasity