

BALÁZS CSANÁD CSÁJI'S CURRICULUM VITAE

Office Address

Department of Electrical and Electronic Engineering
School of Engineering, The University of Melbourne
240 Grattan Street, Parkville, VIC 3010, Australia
Email: bcsaji@unimelb.edu.au

Home Address

627 / 118 Franklin Street, CBD
Melbourne, VIC 3000, Australia
Phone: (+61) 451090364
Website: www.sztaki.hu/~csaji

Current Position

Research Fellow, Department of Electrical and Electronic Engineering, The University of Melbourne

Education and Degrees

Ph.D. in Computer Science, Eötvös Loránd University, Budapest, Hungary, 2008

Subject: Reinforcement Learning & Stochastic Scheduling; Result: defended with 100 %

M.A. in Philosophy, Faculty of Humanities, Eötvös Loránd University, Budapest, Hungary, 2006

Subject: Social Choice Theory & Paradoxical Collective Decisions; Grade: excellent

M.Sc. in Computer Science and Mathematics, Eötvös Loránd University, Budapest, Hungary, 2001

Subject: Artificial Neural Networks & Constructive Approximation; Grade: excellent

Honors and Awards

Finalist (top 5), *Cor Baayen Award*, European Res. Cons. for Informatics and Mathematics, 2009

Junior Award for Research Excellence, Hungarian Academy of Sciences, 2009

Publication Award, Computer and Automation Research Institute, Budapest, 2009

Young Researcher Prize, Computer and Automation Research Institute, Budapest, 2006

Best Paper Award, Int'l Workshop on Emergent Synthesis, University of Tokyo, Japan, 2006

Best Ph.D. Student Award, Computer and Automation Research Institute, Budapest, 2006

Prize for Excellence (2×), Computer and Automation Research Institute, Budapest, 2004 and 2009

First Prize, Informatics Session, Scientific Student Conference, Eötvös Loránd University, 2000

Research Interests

Computer Science: statistical machine learning, scheduling and resource allocation

Mathematics: system identification, control theory, stochastic approximation

Philosophy: philosophy of science, foundations of mathematics, logic

Computer Skills

C/C++ (.Net), Assembly (x86), Java, Matlab, Maple, ILOG, Win32/64, Unix, L^AT_EX, SQL, XML

Language Skills

Hungarian: fluent; English: fluent (CAE, British Council); German: good (ZMP, Goethe Institute)

Teaching Experience

Reinforcement Learning (organized by Csaba Szepesvári), Comp. and Autom. Res. Inst., 2005–2006

Theory of Operating Systems, Department of Information Systems, Eötvös Loránd University, 2002

Programming Methodology, Department of Software Technology, Eötvös L. University, 2000–2002

Research Visits

Long-Term Visits:

- Department of Electrical and Electronic Engineering, *The University of Melbourne*, Australia, 2009–2011, 2 years, research fellow, host: Erik Weyer
- Department of Mathematical Engineering, *Catholic University of Louvain*, Belgium, 2009, 8 months, postdoctoral fellowship, hosts: Vincent Blondel and Paul Van Dooren
- Institute for Applied Knowledge Processing, *Johannes Kepler University*, Austria, 2003, 4 months, CEEPUS scholarship, hosts: Roland Wagner and Josef Küng
- Radical Multimedia Lab, BTextact Technologies, *British Telecom*, United Kingdom, 2002, 3 months, IAESTE exchange program, hosts: Daniel Ballin and Marco Gillies
- Faculty of Mathematics and Computing Science, *Technical University of Eindhoven*, Netherlands, 2001, 5 months, ERASMUS scholarship, host: Huub ten Eikelder

Short-Term Visits:

- Department of Electrical Engineering and Computer Science, *University of Liège*, Belgium, 2009
- Dalle Molle Institute for Artificial Intelligence (IDSIA), *University of Lugano*, Switzerland, 2009
- IPAB Institute, School of Informatics, *University of Edinburgh*, United Kingdom, 2008
- Gatsby Neurosci. and Mach. Learning Unit, *University College London*, United Kingdom, 2008
- Alberta Ingenuity Center for Machine Learning, *University of Alberta*, Canada, 2007

Research Projects

- European Union Supported Projects (5th and 6th Framework): *Coll-Plexity*: Collaborations as Complex Systems (internal project leader), 2005–2009; *MultiSens*: Cameras as Multifunctional Sensors for Automated Processes, 2004–2006; *MPA*: Modular Plant Architecture, 2000–2004
- National Research Fund & Nat. Res. and Dev. Programme (Hungary): *VITAL*: Real-Time, Cooperative Enterprises, 2004–2007; and OTKA (2×): 2005–2007 & 2008–2010
- Other Projects: Data Mining in Cellular Mobile Networks, Catholic University of Louvain, 2009; Machine Learning in Flexible Databases, Johannes Kepler University, 2003; Physics Engine, British Telecom, 2002; Augmented Reality for Parkinson Patients, Eötvös University, 2000–2001

Publications and Bibliometrics

All Publications: 38 Independent Citations: 106 Impact Factors: 12.059 Erdős number: 3
Journal Articles: 12 Book Chapters & LNCS: 6 Conference Papers: 20 Invited Lectures: 10

Reviewing Activities

Reviewer for Journals:

- IEEE Tr. on Automatic Control
- IEEE Tr. on Automation Sci. and Eng.
- Advanced Engineering Informatics
- Information Sciences
- Computers in Industry
- Acta Cybernetica

Reviewer for Conferences:

- World Congress of the Int'l Fed. of Autom. Control
- Int'l Joint Conference on Artificial Intelligence
- IEEE Conference on Decision and Control
- IEEE Int'l Conference on Communications
- European Control Conference
- Intelligent Systems Symposium

Hobbies and Interests

developing a chess program, playing soccer, taking photographs, fine art

Selected Publications

1. Csáji, B. Cs.; Jungers, R. M.; Blondel, V. D.: PageRank Optimization in Polynomial Time by Stochastic Shortest Path Reformulation, *Proc. of the 21st Int. Conf. on Algorithmic Learning Theory (ALT 2010)*, Lecture Notes in Computer Science, Vol. 6331, Springer, 2010, pp. 89–103
2. Csáji, B. Cs.; Monostori, L.: Value Function Based Reinforcement Learning in Changing Markovian Environments, *Journal of Machine Learning Research (JMLR)*, Vol. 9, 2008, 1679–1709, 2008
3. Csáji, B. Cs.; Monostori, L.: Adaptive Stochastic Resource Control: A Machine Learning Approach, *Journal of Artificial Intelligence Research (JAIR)*, AAAI Press, Vol. 32, 2008, pp. 453–486.
4. Csáji, B. Cs.; Monostori, L.; Kádár, B.: Reinforcement Learning in a Distributed Market-Based Production Control System, *Advanced Engineering Informatics* (formerly known as Journal of Artificial Intelligence in Engineering), Elsevier, Vol. 20, No. 3, 2006, pp. 279–288.
5. Csáji, B. Cs.; Monostori, L.: Adaptive Sampling Based Large-Scale Stochastic Resource Control, Proceedings of the *21st National Conference on Artificial Intelligence (AAAI 2006)*, July 16–20, Boston, Massachusetts, 2006, pp. 815–820.
6. Monostori, L.; Csáji, B. Cs.: Stochastic Dynamic Production Control by Neurodynamic Programming, *Annals of the CIRP – Manufacturing Technology*, Vol. 55, No. 1, 2006, pp. 473–478.
7. Csáji, B. Cs.; Monostori, L.: Adaptive Algorithms in Distributed Resource Allocation, Proceedings of the *6th International Workshop on Emergent Synthesis (IWES 2006)*, University of Tokyo, Japan, 2006, pp. 69–75. [Paper received the *Best Paper Award*]

Ph.D. and Masters Theses

1. *Ph.D. Thesis*: Adaptive Resource Control (Information Science and Technology), Machine Learning Approaches to Resource Allocation in Uncertain and Changing Environments, Faculty of Informatics, Eötvös Loránd University (ELTE-IK), Budapest, Hungary, 2008
Supervisor: László Monostori
Computer and Automation Research Institute (SZTAKI); and
Budapest University of Technology and Economics (BME), Hungary
2. *M.A. Thesis*: Paradoxes in Rational Collective Decisions (Philosophy of Science), Faculty of Humanities, Eötvös Loránd University (ELTE-BTK), Budapest, Hungary, 2006
Supervisor: Miklós Rédei
Department of Philosophy, Logic and Scientific Method,
London School of Economics and Political Science (LSE), United Kingdom
3. *M.Sc. Thesis*: Approximation with Artificial Neural Networks (Computer Science with Mathematics major), Faculty of Science, Eötvös Loránd University (ELTE-TTK), Budapest, Hungary, 2001
Supervisor: Huub ten Eikelder
Department of Biomedical Engineering,
Eindhoven University of Technology (TU/e), Netherlands

Last Updated: April 15, 2011