

Curriculum Vitae

Name: András Lukács

Personal site: <http://www.cs.elte.hu/~lukacs>

Email: lukacs@cs.elte.hu

Current affiliation: Eötvös Loránd University,
Faculty of Science, Institute of Mathematics,
Department of Computer Science



Positions:

2012-present Senior researcher at Department of Computer Science, Institute of Mathematics, Eötvös Loránd University, from 2013 assistant professor

2003-2011 Part time research position at the Eötvös Loránd University, from 2005 senior researcher

2000-2011 Researcher at the Informatics Laboratory of the Computer Science and Automation Institute of the Hungarian Academy of Science, from 2003 senior researcher, from 2008 head of the Data Mining and Web Search Group

1998-2000 Postdoctoral position at Centrum voor Wiskunde en Informatica (The National Research Institute for Mathematics and Computer Science in the Netherlands), Amsterdam, The Netherlands

1995- 1998 Research position at the Informatics Laboratory of the Computer Science and Automation Institute of the Hungarian Academy of Science

Research interest:

Data mining and visualization, networks/graphs, combinatorics, probability and their applications

R&D Projects:

2014 *Load and performance testing in telecommunication processes*, R&D contract
Partner: Entel Engineering Research and Consulting Ltd.
Role: senior researcher

2012 *Root cause analysis from hardware logs*, R&D contract
Partner: iFlow IT Consulting Ltd. (Fornax group)
Role: senior researcher

2012-2014 *FIRST - Future Internet Research, Services and Technology*, R&D project financed by TÁMOP 4.2.2/C grant, <http://first.tamop422.unideb.hu/>
Main partner: University of Debrecen, Inter-University Cooperative Research Centre
Role: scientific leader of Theme 4.2 A collaborative framework for data mining

2011-2012 *System log analysis*, R&D project granted by the Hungarian Research and Technology Innovation Fund under the program GOP-2009-1.1.1, <http://kurt-security.com/about-us/palyazati-projektjeink/gop-1-1-1/> and <https://www.logdrill.hu>
Partner: KÜRT Information Management and Data Recovery Co.

Role: senior researcher

2011 *Equipment to examine stress responses in the area of law (Touchless Infradiagnostic Polygraph System)*, R&D contract

Partner: HEXIUM Technical Development Co.

Role: senior researcher

2010-2012 *SCIIMS - Strategic crime and immigration information management system*, EU FP7 Security project, <http://www.sciims.co.uk/>

Main partners: BAE Systems, Indra Sistemas

Role: senior researcher

2009-2011 *Data asset utilization*, R&D contract

Partner: AEGON Hungary General Insurance Plc.

Role: scientific leader

2008 *Designing diagnostic test*, R&D contract

Partner: GenID Molecular Diagnostic Laboratory

Role: project leader

2006-2008 *eScience Regional Knowledge Centre*, R&D project granted by the Hungarian Research and Technology Innovation Fund, <http://www.escience.elte.hu/>

Role: scientific leader of theme *Dynamics of Networks*

2006-2008 *i-TRACS - Counter terrorism Identification and Advanced Tracking System using the Analysis of Communication, Financial and Travel Data*, EU PASR project, ftp://ftp.cordis.europa.eu/pub/fp7/security/docs/i-tracs_en.pdf

Main partners: BAE Systems, Thorpeglén, Privacy International, Pride S.p.A,

Role: senior researcher

2005-2007 *Data mining in telecommunication data warehouses*, R&D project financed by GVOP AKF R&D grant

Partners: Budapest University of Technology and Economics, Magyar Telekom Plc.

Role: senior researcher

2005-2008 *ASTOR - Adaptive Security Tools for Operational Risk Mitigation*, R&D project granted by the Hungarian Research and Technology Innovation Fund (Jedlik 2/004/05)

Partners: Fornax Technical and Economic Consulting Plc., HEXIUM Technical Development Co., Budapest University of Technology and Economics, Budapest Stock Exchange

Role: senior researcher

2005-2007 *scrIN-SILICO - Finding Promising Drug Candidates Against Tuberculosis with Multidisciplinary Protocol Based Non-Conventional Search*, EU FP6 Health (No. 012127), http://ec.europa.eu/research/health/infectious-diseases/poverty-diseases/projects/106_en.htm

Main partners: Institute of Enzymology HAS, EMBL Hamburg Outstation,

Combinature Biopharm AG

Role: senior researcher

2005 *Discovering communities and modelling churn*, R&D contract

Partner: Emitel Telecommunications Plc. (Magyar Telekom group)

Role: project leader

2004-2007 *Language Miner - Unsupervised learning of natural languages and their utilization in office environments*, R&D project granted by the Hungarian Research and Technology Innovation Fund (NKFP 2004)

Main partners: Research Institute for Linguistics HAS, Omega Consulting Ltd., Point Solution Computer Services Ltd.

Role: senior researcher

2004-2005 *Data mining in chemical databases*, R&D contract

Partner: Richter Gedeon Plc.

Role: project leader.

2004 *Analog – similarity search for multilingual web contents*, R&D project granted by IHM-ITEM program

Role: project leader

2003-2004 *Ranker - quality measurement of web contents*, R&D project granted by IHM-ITEM program

Role: project leader.

2002-2005 *Data Riddle - intelligent toolkit for data mining*, R&D project granted by the Hungarian Research and Technology Innovation Fund (NKFP-2/0017/2002)

Partners: Axelero Plc. (Magyar Telekom group), econet.hu Informatics Plc., Budapest University of Technology and Economics

Role: project leader

2000-2003 *Combinatorial Probability*, postdoctoral research project granted by Hungarian National Research, Development and Innovation Office (OTKA D34560)

Role: principal investigator

1996-1998 *A New Degree Course Programme: Applied Mathematics*, a TEMPUS project (No. S_JEP 11097-96), <http://www.cs.elte.hu/tempus/sjep11097/>

Partners: István Széchenyi College Győr, Montanuniversität Leoben, Technischen Universität Dresden, Queen Mary and Westfield College, Johannes Kepler Universität Linz

Role: contractor

5 most cited publications:

Z. Dezso, E. Almaas, A. Lukács, B. Rácz, I. Szakadát, A.-L. Barabási: The Dynamics of Information Access on the Web, *Physical Review E* 73 (6) 2006, 066132.

A. Vazquez, B. Rácz, A. Lukács, A.-L. Barabási: Impact of non-Poissonian activity patterns on spreading processes, *Phys. Rev. Lett.* 98 (15) 2007, 158702

Rácz, A. Lukács: High density compression of log files, In: Proceedings of Data Compression Conference (DCC'04), IEEE 2004, 557.

A. A. Benczúr, K. Csalogány, A. Lukács, B. Rácz, C. István, S. Máté, U. L. Végh: Architecture for mining massive web logs with experiments, In Proceedings of the HUBUSKA Open Workshop on Generic Issues of Knowledge, 2005.

A. Lukács, N. Seifter: Finite contractions of graphs with polynomial growth, European Journal of Combinatorics 22 (1) 2001, 85-90.

Fellowships and awards:

2006 Institutional Award by Computer Science and Automation Institute of the Hungarian Academy of Science

2000-2003 Postdoctoral Fellowship by the Hungarian National Research, Development and Innovation Office

1992-1993 DAAD scholarship at the Universitat zu Köln

1993-1996 Doctoral Fellowship of the Hungarian Academy of Sciences

1990-1992 Fellowship of the Republic

Teaching experience:

Several lectures and seminars mostly at the Department of Computer Science, Eötvös Loránd University, Budapest (ELTE) as follows:

2014-present *Visual Analytics*, special courses, ELTE

2013-present *Graphs and Algorithms*, BSc and MSc lectures, ELTE

2011-2012 *Data Mining I. & II.*, lectures in English, Aquincum Institute of Technology

2003-present *Data Mining*, BSc, MSc and PhD lectures and seminars, ELTE

2002-present *Data Mining Seminar*, MSc and PhD courses, ELTE

2001 *Random Walks and Combinatorial Probability*, special course, ELTE

1995 *Random walks on graphs*, special course, ELTE

1993-1998 *Discrete mathematics*, seminar, ELTE

1990-1992 *Numerical analysis*, seminar, ELTE

Supervising more than 25 theses (BSc and MSc theses in *Mathematics* at Eötvös Loránd University and MSc theses in *Mathematics* or *Informatics* at Budapest University of Technology and Economics)

PhD students:

2015 (expected) Ádám Novák, Eötvös Loránd University, Doctoral School of Informatics, co-advisor: István Miklós

Title: Statistical sequence alignment with applications in evolutionary footprinting and protein secondary structure prediction

2013 Dániel Varga, Eötvös Loránd University, Doctoral School of Informatics, co-advisor András Kornai

Title: Natural Language Processing of Large Parallel Corpora

2012 Csaba István Sidló, Eötvös Loránd University, Doctoral School of Informatics

Title: Business intelligence on scalable architectures

2010 István Bíró, Eötvös Loránd University, Doctoral School of Informatics

Title: Classification with Latent Dirichlet Allocation

Education:

1998: Ph.D. (candidate) degree in Mathematics given by the Hungarian Academy of Science, title of thesis: *Symmetric structures and random walks*

1994-1995: FWF scholarship, Montanuniversitat Leoben, Austria; Institut für Geometrie und Angewandte Mathematik

Topics: graph theory

1993-1996: Ph.D. (candidate) program at the Eötvös Loránd University

Supervisor: Miklós Simonovits

1992-1993 DAAD scholarship, Institut für Informatik, Universität zu Köln, Germany

Topics: combinatorics, combinatorial optimization

1992 Master degree in Mathematics, Eötvös Loránd University

1992 TEMPUS scholarship, Katholieke Universiteit Nijmegen, Netherlands

Topics: application of linear algebra, numerical methods

1986-1992 Studies in Mathematics, Eötvös Loránd University, Budapest, Hungary

1982-1986 József Attila High School, Budapest

Languages:

Hungarian (IRL5), English (IRL4), German (IRL2+), Russian, Dutch (IRL1+)

Activities related to science:

1993- present member of the *János Bolyai Mathematical Society*

1995- present member of *Institute of Combinatorics and its Applications*

1996-1998 managing editor of the international mathematical journal *Combinatorica*

1996 2nd European Congress of Mathematics member of organizing committee

2006- present member of the *Hungarian Society for Bioinformatics*; 2006-2009 member of Supervisory Committee