

Curriculum Vitae

Tero Juhani Harju

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Education:

Graduation, Kouvola Lyseum	1971
Master of Arts in mathematics (University of Turku)	1975
Licentiate of Philosophy in mathematics (University of Turku)	1977
Doctor of Philosophy in mathematics (University of Turku)	1979

Current position from 2005 onwards:

Professor in mathematics, Department of Mathematics, University of Turku

Professional appointments:

Teaching assistant, mathematics (Univ. of Turku), 6 months during	1973 – 75
Acting assistant, mathematics (Univ. of Turku), 20 months during	1975 – 76
Research assistant, Academy of Finland	1977 – 79
Assistant, mathematics (Univ. of Turku)	1978 – 86
Post doctoral fellow (Univ. of Waterloo, Canada), 6 months	1980
Acting associate professor, mathematics (Univ. of Turku)	1983
Senior assistant, mathematics (Univ. of Turku)	1986 – 99
Acting professor, mathematics (Univ. of Turku), 5 months	1995
Research fellow, Academy of Finland	1999 – 2004
Professor, mathematics (Univ. of Turku)	2005 onwards.

Longer visits (at least one month):

- Department of Computer Science, University of Waterloo, Canada,
(Post-doctoral fellow) 6 months in 1980
- Department of Mathematics and Computer Science, Leiden University,
The Netherlands, (Visiting researcher) 2 months in 1990
- Department of Mathematics and Computer Science, Leiden University,
The Netherlands, (Visiting researcher) 1 month in 1991
- Department of Mathematics and Computer Science, Leiden University,
The Netherlands, (Visiting researcher) 1 month in 1992
- Institut de Mathématiques de Luminy, Marseille, France,
(Visiting Professor) 1 month in 1999
- Department of Mathematics and Computer Science, Leiden University,
The Netherlands, (Visiting researcher) 1 month in 1999
- Department of Mathematics and Computer Science, Leiden University,
The Netherlands, (Visiting researcher) 1 month in 2001

Membership in scientific societies:

Member of the *Finnish Academy of Sciences and Letters* (elected 2009)
AMS (American Mathematical Society)
CiE (Computer Science in Europe)
EATCS (European Association for Theoretical Computer Science)
EMS (European Mathematical Society)
MAA (Mathematical Association of America)
SMY (Finnish Mathematical Society)

Projects with funding:

- Finnish team leader for the EMCC
(European Molecular Computing Consortium) 1999–2004, funded by European Union.
- Principal researcher in GETGRATS (Leiden group)
(General Theory of Graph Transformation Systems
a Research Network funded by the European Community) 1996-2001, funded by EU.
- Scientific correspondent in the APPLIGRAPH-project
(Applications of Graph Transformations; ESPRIT working group 22565
funded by EU) during 1997 – 2002
- Project leader of MolCoNet in Turku (EU thematic network
on molecular computing covering 12 European universities) 2001 - 2004
Funded by European Union for 3 years 2002-2004
- Project “Discrete Mathematics and Graph Theory”
Funded by the Academy of Finland for 3 years 2002-2004
- Project “Combinatorial Mathematics”
Funded by the Academy of Finland for 3 years 2007-2009

Doctoral Students:

- Jurriaan Hage*, LIACS, Leiden University (co-coordinator),
currently at University of Utrecht, defended 2001.
- Vesa Halava*, TUCS, University of Turku (advisor), defended 2002 (laudatur).
Prize for the best thesis in Finland in 2002 awarded by
Foundation of Information Processing Research
- Dirk Nowotka*, TUCS, University of Turku (advisor),
currently at University of Kiel, defended 2004 (laudatur).
- Tommi Kärki*, TUCS, University of Turku (advisor),
defended 2008 (with honours).

Opponent in Ph.D. defences:

- Paulien ten Pas*, Department of Mathematics and Computer Science,
Leiden University, The Netherlands, 1995
- Matti Peltola*, Department of Mathematics, University of Oulu, Finland, 1999
- Jurriaan Hage*, LIACS, Leiden University, The Netherlands, 2001
- Sergey Verlan*, Université de Metz, France, 2004
- Robert Brijder*, LIACS, Leiden University, The Netherlands, 2008

Invited talks:

- Conference *Recent Developments in Formal Languages*, Bologna 1997
“Systems of Word Equations”
- Conference *Finnish Science Days in Hungary*, Budapest 1999
“Switching of Graphs”
- Conference *Development in Formal Languages (DLT)*, Wien 2001
“Decidability Questions for Integer Matrices”
- *International PhD School in Formal Languages and Applications*,
Tarragona 2002, 2003 and 2004 “Combinatorics on Words”
- *Workshop on DNA Computing and Graph Transformation*, Barcelona 2002
“Micronuclear Gene Patterns” and
“Loop Decomposition Structure of Gene Assembly”
- Conference *the First Joint International Meeting between the American Mathematical Society (AMS) and the Real Sociedad Matemática Española (RSME)*
Special session Biomolecular Mathematics, Sevilla 2003
“Mathematics in Gene Assembly”
- Conference *Biological Computation at CiE 2005*, Amsterdam 2005
“Combinatorial Models of Gene Assembly”
- Workshop on *Finite-State Methods and Natural Language Processing*, Helsinki 2005
“Characterizations of Regularity”
- Conference on *Algorithmic Information Theory*, Linz 2007
“Decision Problems of Small Matrices” (Cancelled)
- *Workshop on Natural Computing and Graph Transformations*, Leicester 2008
“Graph Transformations Related to Gene Assembly”
- Conference *Development in Formal Languages (DLT)*, Stuttgart 2009
“Post Correspondence Problem and Small Dimensional Matrices”
- Conference *Combinatorics on Words*, Oberwolfach 2010
“Weinbaum Factorizations”
- Conference *Highlights of AutoMathA*, Wien 2010
“Transducers and Rational Transductions”

Evaluations and reviews:

- Evaluated 4 Ph.D. theses (University of Helsinki, Université de Metz, University of Oulu, University of Waterloo).
- Two evaluations of projects for National Science Foundation.
- An evaluation for professorship (SUNY New Paltz, USA).
- Two evaluations for docentship (Tampere University, Tampere Technical University).
- Reviewer in *Zentralblatt für Mathematik* (158 reviews 1983–2010).
- A referee to many journals and conferences in mathematics and theoretical computer science since 1976.
- Supervised 34 Master’s Theses .

Editorial merits:

- Editor of the journal *Fundamenta Informaticae* 2003–2011
- Edited 4 conference proceedings
- Edited a special issue of the journals *Theoretical Computer Science* (2004 and 2009),
International Journal of Foundations of Computer Science (2008),
Theoretical Informatics and Applications (2008)

Membership in program committees:

- International Colloquium on Automata, Languages and Programming (ICALP) Lund 1994
- Developments in Language Theory (DLT), Aachen 1999
- 7th Nordic Combinatorial Conference (NCC), Turku 1999
- 8-eme Journees Montoises d’Informatique Theorique, Marne-la-Vallee 2000
- 13th International Symposium on Fundamentals of Computation Theory (FCT), Riga 2001
- The 8th International Conference on Implementation and Application of Automata (CIAA), Santa Barbara 2003
- The EMCC Spring Meeting, Turku 2003.
- 4th International Conference on Words (WORDS), Turku 2003.
- Developments in Language Theory (DLT), Auckland 2004.
- 9-th International Conference on Implementation and Application of Automata (CIAA), Kingston 2004.
- 10th Journees Montoises d’Informatique Theorique, Liege 2004.
- 10th International Conference on Implementation and Applications of Automata (CIAA), Sophia Antipolis 2005.
- Workshop on Finite-State Methods and Natural Language Processing (Also in the Steering Committee) Helsinki 2005.
- 11th International Conference on Implementation and Applications of Automata (CIAA), Taipei 2006.
- Workshop on Fibonacci Words (Cochair), Turku 2006.
- Workshop on Algorithms on Words (Cochair), Turku 2007.
- 1st International Conference on Language and Automata Theory and Applications (LATA), Tarragona 2007.
- Developments in Language Theory (DLT) (Cochair), Turku 2007.
- Computer Science Symposium in Russia (CSR), Ekaterinburg 2007.
- 12th International Conference on Implementation and Applications of Automata (CIAA), Prague 2007.
- International Conference on Nanotechnology and Applications (NANA), Crete 2008.
- 2nd International Conference on Language and Automata Theory and Applications (LATA), Tarragona 2008.
- Developments in Language Theory (DLT), Kyoto 2008.
- 13th International Conference on Implementation and Applications of Automata (CIAA), San Francisco 2008.
- Workshop on Natural Computing and Graph Transformations, Leicester 2008.
- Workshop AutomathA, Liege 2009.
- 15th International Conference on Implementation and Applications of Automata (CIAA), Winnipeg 2010.

Organized workshops and conferences:

- Seventh Nordic Combinatorial Conference (NCC), Turku 1999.
- ICGT Tutorial on Graph Transformation and DNA Computing, Barcelona 2002.
- The EMCC Spring Meeting, Turku 2003.
- Formal Languages. Colloquium in Honour of Arto Salomaa, Turku 2004.
- ICGT Tutorial on Graph Transformation and DNA Computing, Rome 2004.
- Workshop on Fibonacci Words, Turku 2006.
- Workshop on Algorithmic Combinatorics on Words, Turku 2007.
- Developments in Formal Languages (DLT), Turku, Finland, 2007.
- Session in Discrete Mathematics, Mathematics Days in Finland, Jyväskylä, 2010.
- Unconventional Computing, Turku, 2011.

Publications:

2 books, over 150 research papers in mathematics and theoretical computer science.