

Curriculum Vitae

T. Tiihonen¹

Personal

- Born Dec. 5th, 1960 in Kangasniemi, Finland, Finnish citizen, married, 4 children

Languages

- Finnish(native), English(fluent), French(working), German(working), Swedish.

Education

- Candidate in Philosophy (MSc) in mathematics, University of Jyväskylä, 1983,
- Licentiate in Philosophy in applied mathematics, University of Jyväskylä, 1985,
- Diplome des etudes approfondes, Numerical analysis, University of Nice, 1986,
- Doctor of Philosophy, University of Jyväskylä, 1987.

Employment

- Assistant (applied mathematics), Univ. Jyväskylä 1/83 – 2/88,
- Assistant (applied mathematics), Univ. Augsburg (Germany) 3/88 - 7/89,
- Docent in information technology, Univ. Jyväskylä, 90 - present,
- Senior assistant, Senior researcher, Associate Professor (temp., information technology), Univ. Jyväskylä, 8/89 - 12/94, 1-5/ 96, 6/97-4/98,
- Professor (applied mathematics, temp.), Univ. Jyväskylä, 1 - 12/95,
- Sabbatical (grant for senior scientist, Academy of Finland), 6/96 - 5/97,
- Professor (Mathematical modeling and simulation), 5/98 - present

Research Grants

- Academy of Finland: Numerical methods for free boundary problems, 1990 - 92, Mathematical and numerical analysis of radiative heat transfer, 1995 - 98, Mathematical and numerical modeling of multiphase systems, 1996.
- TEKES: Modeling of behavior of paper during copying, 1994 - 95, Free fluid surfaces (with Maritime Institute of Finland), 1995 - 98.

Post-graduate students (status 10/11)

1. A. Eljendy: Exact controllability and stabilization of hyperbolic systems through boundary control, 1992,
2. J. Hämmäläinen: Mathematical modelling and simulation of fluid flows in the headbox of papermachines, 1993,
3. K. Hiltunen: Mathematical and numerical modelling of consolidation processes in paper machines, 1995,
4. J. Järvinen: Mathematical modelling and numerical simulation of Czochralski silicon crystal growth, 1996,
5. M. Laitinen: Mathematical modelling of conductive-radiative heat transfer, 2000,
6. K. Kärkkäinen: Shape sensitivity analysis for numerical solution of free boundary problems, 2005,
7. S. Nikitin: Dynamic aspects of industrial middleware architectures, 2011,

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8. T. Puranen: Metaheuristics meet metamodels - A modelling language and a product line architecture for route optimization systems, 2011.
- 7 PhLic theses,
 - 2 PhD students.
 - External referee for PhD thesis at ENSMP - Sophia Antipolis, (1996), (1997), TKK, (1998), (1999), Univ. of Latvia (2008).

International experience

- Studies for D.E.A. in Univ. of Nice 10/85 - 7/86, (French grant),
- Visiting researcher Univ. Augsburg 9 - 11/87, (Academy of Finland),
- Assistant of applied mathematics, Univ. Augsburg, 3/88 - 7/89,
- ECMI Modelling weeks, (tutor in Eindhoven 91, Linz 92, organizer Jyväskylä, 96),
- Attended to several conferences and summer schools since 1983,
- Contractor of Tempus grants (JEP 2001, SCM 2007, 2011-14).

Industrial contacts

- Simulation of the vaneer making process, Schaumann Engineering, Jyväskylä, 1982,
- Numerical simulation of the paper making process, Valmet Papermachinery, Jyväskylä, 1990 - 97,
- Modelling and simulation of Czochralski crystal growth, Ocmetic and CSC, 1991 - 98,
- Mathematical modelling of a hydraulic engine, Tanacorp, Jyväskylä, 1991,
- Numerical modelling of peat drying, VTT/Energy, 1995.

Other scientific activities

- Organizer of Summer Schools: Free Boundary Problems, Jyväskylä, 1996, Computational Electromagnetism, Jyväskylä, 1998.
- Organizer of ENUMATH99 Conference, Jyväskylä, 1999, ECCOMAS Conf. on Computational Analysis and Optimization, Jyväskylä, 2011.
- Evaluator for docentship at TKK, (1999).
- Referee for SIAM J. of Num. Anal., SIAM J. of Appl. Math., SIAM J. of Control and Optim., Euro. J. of Appl. Math., Math. Mod. Meth. Appl. Sci., J. Comp. Phys., J. Math. Anal. Appl., Ann. Acad. Sci. Fenn., Fin. Elem. Anal. Des.

Administrational experience

- University of Jyväskylä: Head of Department of Mathematical Information Technology, 10/98 - 7/02, Vice-Dean of Faculty of Information Technology, 10/98 - 12/00, 1/10 - present. Dean of Faculty of Information Technology, 1/01 - 8/02 (curriculum reform, coordination of ESR-funded master programs (8 projects, total 2Me/year)), Vice-rector, 9/02 - 12/09 (reform of internal budgeting, reorganisation of IT infrastructure).
- Academy of Finland: Member of the Research Council of Technology, 1992 - 94.
- Ministry of Education: Member of two national working groups 2005 - 07, Chair of Steering Group of National RAKETTI-TUTKI -project, 9/2009 - 8/2011.
- National Course 191 of National Defence, 2009