Personal details and date of CV

Name: Orponen, Olli Pekka
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Date of CV: 4 January 2025

Degrees

Title of Docent, Dec 1990 Computer Science, University of Helsinki (dosentti, tietojenkäsittelyoppi)
PhD, April 1986 Computer Science, University of Helsinki (FT, tietojenkäsittelyoppi)
MSc, April 1983 Computer Science, University of Helsinki (FK, tietojenkäsittelyoppi)

Current employment

Sep 2001 – ongoing: Professor (Computer Science and Engineering/tietojenkäsittelytekniikka), Department of Computer Science, Aalto University School of Science (until Dec 2009 Helsinki University of Technology TKK)

Previous work experience

Aug 1996 – Aug 2001: Professor (Applied Mathematics and Computing/sovellettu matematiikka ja tietojenkäsittely), Department of Mathematics, University of Jyväskylä
Aug 1995 – July 1996: Professor (Intelligent Systems/älykkäät järjestelmät), Department of Computer Science, University of Helsinki
June 1994 – July 1995: Associate Professor (apulaisprofessori), Department of Computer Science, University of Helsinki
Aug 1990 – May 1994: Assistant Professor (yliassistentti), Department of Computer Science, University of Helsinki
Aug 1987 – July 1990: Senior Research Fellow (vanhempi tutkija), Academy of Finland
Oct 1984 – Aug 1986: Research Associate (tutkimusassistentti), Academy of Finland

Long-term research visits

May 2024: Dissipative and Life Physics Department, Kyoto University, Japan
Apr – May 2024: Dept. Computer and Network Eng., Univ. Electro-Communications, Tokyo, Japan
Feb – Mar 2024: Interdisciplinary Nanoscience Center, Aarhus University, Denmark
Oct – Nov 2023: Hamilton Institute, Maynooth University, Ireland
May – July 2017: Physik-Department, TU München, Germany
Apr 2017: Institut für Informatik, Univ. Paderborn, Germany
Mar 2017: Dept. of Mathematical and Computing Sciences, Tokyo Inst. of Technology, Japan
Jan – Feb 2017: Dept. Computer and Network Eng., Univ. of Electro-Communications, Tokyo, Japan
Oct – Dec 2016: Dept. Informationstechnologie und Elektrotechnik, ETH Zürich, Switzerland
Mar & Oct 2011: Chinese Academy of Sciences, Beijing, China
Feb 2011: Dept. de Llenguatges i Sistemes Informàtics, Univ. Politècnica de Catalunya, Spain
Mar 2004 – Apr 2004: The Santa Fe Institute, USA
Mar 1997 – Apr 1997: Dept. of Computer Science, Boston University, USA
Jan 1997 – June 1997: Dept. of Computer Science, Univ. of Edinburgh, United Kingdom
Sep 1994 – July 1995: Institute for Theoretical Computer Science, TU Graz, Austria
Jan 1989 – June 1990: Dept. of Computer Science, Univ. of Toronto, Canada

Recent research funding and grants (all in PI role)

2023: Personal grant (6 mos) for project "DNAforge: Design Tools for DNA Nanotechnology" from the Finnish Cultural Foundation

2017–2021: 7 py (personyears) for project "Algorithmic Designs for Biomolecular Nanostructures" from the Academy of Finland

2008–2013: 5 py to fund the appointment of Erik Aurell (Professor and Chair of Biological Physics, KTH, Stockholm) to TKK as Finland Distinguished Professor, from the Academy of Finland

2011: Personal grant (Senior scientist appropriation) for project "Modern Algorithmics and Its Interdisciplinary Applications" from the Academy of Finland

2009–2011: 3 py for project "Online Optimisation and Production Planning" from the Academy of Finland (Joint application with Esko Niemi, TKK Dept. of Engineering Design and Production)

2009–2011: 5 py for project "ICT SHOK Programme Future Internet WP6: Data Security" from Tekes – National Technology Agency of Finland

Research supervision (graduated doctoral students)

- Abdulmelik Mohammed, "Algorithmic Design of Biomolecular Nanostructures", Aalto University, Nov 2018
- Lauri Ahlroth, "Online Algorithms in Resource Management and Constraint Satisfaction", Aalto University, Dec 2012
- André Schumacher, "Distributed Optimization Algorithms for Multihop Wireless Networks", Aalto University, Dec 2010
- Satu Elisa Schaeffer, "Algorithms for Nonuniform Networks", Helsinki University of Technology, Apr 2000
- Antti Autere, "Extensions and applications of the A^* Algorithm", Helsinki University of Technology, Dec 2005
- Petteri Kaski, "Algorithms for Classification of Combinatorial Objects" (co-supervised with Prof. Patric Östergård), Helsinki University of Technology, June 2005
- Harri Haanpää, "Constructing Certain Combinatorial Structures by Computational Methods", (co-supervised with Prof. Patric Östergärd), Helsinki University of Technology, Feb 2004
- Sam Sandqvist, "Aspects of Modelling and Simulation of Genetic Algorithms: A Formal Approach" (co-supervised with Prof. Emer. Leo Ojala), Helsinki University of Technology, Nov 2002
- Petri Myllymäki, "Mapping Bayesian Networks to Stochastic Neural Networks: A Foundation for Hybrid Bayesian–Neural Systems" (co-supervised with Prof. Esko Ukkonen), University of Helsinki, Dec 1995
- Patrik Floréen, "Computational Complexity Problems in Neural Associative Memories", (co-supervised with Prof. Esko Ukkonen), University of Helsinki, Nov 1992

Awards and honours

- Knight First Class, Order of the White Rose of Finland, 2021
- Member, Finnish Academy of Science and Letters (Suomalainen Tiedeakatemia), 2013

Recent academic administrative positions and positions of trust

- Member of National Review Panel for Computer Science R & D Units, Foundation for Science and Technology Portugal, 2024
- Informatics Europe (Association of European Computer Science Departments). Board Member 2018 – 2024
- Aalto University Tenure Track Committee, Jan 2020 – Dec 2022
- Aalto University School of Science Tenure Track Committee Jan 2015 – Dec 2016, Apr 2018 – Dec 2022 (Chair Sep 2022 – Dec 2022)
- Aalto University Science Institute. Director Jan 2015 – Aug 2016
- Department of Computer Science, Aalto University School of Science. Vice-Head of

Department (Research), Jan 2015 – May 2016, Head of Department June – July 2016
- Department of Information and Computer Science, Aalto University School of Science (until Dec 2009 Helsinki University of Technology TKK). Head of Department Jan 2008 – Dec 2014 (on leave 2011)

Recent editorial board memberships

- Theoretical Computer Science C: Natural Computation, 2003 – ongoing
- IEEE Transactions on Neural Networks, 1999 – 2002

Recent program committee memberships

*21st International Conference on Unconventional Computation and Natural Computation (UCNC 2024, Pohang, Republic of Korea, June 2024), 29th International Conference on DNA Computing and Molecular Programming (DNA29, Sendai, Japan, Sep 2023), 20th International Conference on Unconventional Computation and Natural Computation (UCNC 2023, Jacksonville FL, Mar 2023), 28th International Conference on DNA Computing and Molecular Programming (DNA28, Albuquerque NM, Aug 2022), 19th International Conference on Unconventional Computation and Natural Computation (UCNC 2021, Espoo, Oct 2021; **Local Organisation Chair and PC Co-Chair**), 27th International Conference on DNA Computing and Molecular Programming (DNA27, Oxford/Online, Sep 2021), 26th International Conference on DNA Computing and Molecular Programming (DNA26, Oxford/Online, Sep 2020), 25th International Conference on DNA Computing and Molecular Programming (DNA25, Seattle WA, Aug 2019), 18th International Conference on Unconventional Computation and Natural Computation (UCNC 2019, Tokyo, June 2019), Nucleic Acid Nanotechnology 2019 (NANTECH 2019, Espoo, Finland, May 2019; **Local Organisation and PC Co-Chair**), 14th European Computer Science Summit (ECSS 2018, Gothenburg, Sweden, Oct 2018; **PC Co-Chair**)*

Societal positions of trust, promoting open science

- Finnish Cultural Foundation. Association Board Member Oct 2003 – Sep 2012, Supervisory Board Member Oct 2012 – Sep 2021. (Suomen Kulttuurirahasto, kannatusyhdistys/johtokunta, säätiö/hallintoneuvosto)
- National Publication Forum Evaluation Task Force (JUFO). Computer Science Panel, Member 2018 – 2024
- Council of Finnish Academies, National Committee on Data. Chair June 2015 – May 2022. (Suomen Tiedeakatemiat, data-asiain kansalliskomitea)
- National Open Data Expert Group. Chair Nov 2018 – May 2020. (Avoimen tieteen kansallinen koordinaatio, avoimen datan asiantuntijaryhmä)
- Local organising committee member and PC co-chair, *14th Plenary Meeting of the Research Data Alliance* and *CODATA-Helsinki Workshop on FAIR RDM in Institutions* (Espoo and Helsinki, Oct 2019)