

1. Personal details

Name: PLOSILA, Juha Petteri

ORCID: <http://orcid.org/0000-0003-4018-5495>;

Research Gate: https://www.researchgate.net/profile/Juha_Plosila;

Google Scholar: <https://scholar.google.com/citations?user=em4kCrUAAAAJ>

Year of birth: 1965; Nationality: Finland

Website: <https://asl.utu.fi/> (under constant construction).

2. Education and degrees completed

28.2.2006 *Docent (Adjunct Professor)* in Digital Systems Design (Univ. of Turku, Finland).

12.11.1999. *Doctor of Philosophy* (Univ. of Turku, Finland) in Electronics and Communication Technology. Thesis: "Self-Timed Circuit Design: The Action Systems Approach".

26.08.1993. *Master of Science* (Univ. of Turku, Finland) in Electronics and Communication Technology. Thesis: "Software and Hardware Implementation of a Hybrid Cryptosystem".

3. Current position

Professor (professori) in Autonomous Systems and Robotics. Univ. of Turku, Dept. of Computing . 01/2019 - .

4. Previous work experience

Associate Professor (yliopistonlehtori – University Lecturer) in Embedded Computing; Univ. of Turku, Dept. of Future Technologies; 08/2011 - 12/2018. *Academy Research Fellow* (akatematutkija); Academy of Finland & Univ. of Turku, Dept. of IT; 08/2006 - 07/2011. *Professor* (professori) in Digital and Computer Systems; Univ. of Turku, Dept. of IT; fixed term: 10/2004 - 07/2006. *Assistant Professor* (yliassistentti – Senior Assistant) in Digital and Computer Systems; Univ. of Turku, Dept. of IT; 01/2000 - 09/2004. *Senior Researcher* (erikoistutkija); Åbo Akademi University, Turku, Dept. of CS; 08/2000 - 12/2002. *Research Associate* (assistentti - Assistant) in Electronics and Communication Technology; Univ. of Turku, Dept. of Applied Physics; 09/1996 - 12/1999. *Researcher* (tutkija). Åbo Akademi University, Turku, Dept. of CS; 01/1994 - 08/1996. *Research Assistant* (tutkimusassistentti); Univ. of Turku, Dept. of Applied Physics; 08/1993 - 12/1993. *Intern* (harjoittelija); Univ. of Turku, Dept. of Applied Physics; 05/1991 - 08/1991.

5. Research projects (with external funding)

ADAFI (Adaptive-Fidelity Digital Twins for Robust and Intelligent Control Systems); PI; Academy of Finland, 01/2021 - 12/2023; Partners: Univ. of Turku, Turku Univ. of Applied Sciences. **AURORA** (Autonomous Performance Management in Digital Manufacturing); PI; Academy of Finland, 09/2020 - 08/2023; Partners: Univ. of Turku, VTT. **LARA** (Learning and Assessing Risks for Enhancing Dependability of Autonomous Socio-Technical Systems); Co-PI; Academy of Finland, 01/2018 - 12/2019; Partners: Åbo Akademi Univ., Univ. of Turku. **FORESAIL** (Finnish Centre of Excellence in Research of Sustainable Space); Senior Member in the UTU team (PI: prof. Rami Vainio); Academy of Finland, 2018 – 2022. Partners: Univ. of Helsinki, Univ. of Turku (Dept. of Physics and Astronomy & Dept. of Computing), Aalto Univ. and Finnish Meteorological Institute. **TACLe** (Timing Analysis on Code Level); MC Member; EU COST Action IC1202, 2012 - 2016. A collaboration network of research units from 20 European countries. **MEDIAN** (Manufacturable and Dependable Multicore Architectures at Nanoscale); MC Member; EU COST Action IC1103, 2011 - 2015. A collaboration network of research units from 24 European countries. **AMEBA** (Agent-Based Management of Embedded Data Reserves); Co-PI; Academy of Finland, 01/2012 - 12/2014; Partners: Åbo Akademi Univ., Univ. of Turku. **AGENT** (Agent-Based Management of CMOS Hyper Cores); PI; Academy of Finland, 01/2011 - 12/2013; Partners: Univ. of Turku, Aalto Univ, VTT. **VirtuES** (Embedded Multicore Systems Using Virtual Machine Approach); PI; Academy of Finland, 01/2009 - 06/2012. **DIJON** (Distributed Jointly Operating Networks); Co-PI; Academy of Finland, 01/2008 - 12/2011; Partners: Åbo Akademi Univ., Univ. of Turku. **Academy Research Fellow's project** (Fault-Tolerant Nano-Scale Network-on-Chip Platform: Enabling Technologies and Design Methods); PI; Academy of Finland, 08/2006 - 07/2011. **REAL-JAVA** (Low-Power Java Co-Processor with Improved Real Time Performance and Predictability); PI; The Federation of Finnish Technology Industries, 01/2006 - 12/2008. **Prompt2Implementation** (Parallel Processing Dedicated, Rapid Optimised Mapping Platform for Telecom Applications to Implementation). Co-PI; EU FP5 ITEA, 2002 - 2004; Partners: Nokia (Finland), Univ. of Turku (Finland), Tampere Univ. of Technology (Finland), THALES (France), ESTEREL (France), INRIA (France), LIFL (France), Artisan Software (UK). **ACID-WG** (Asynchronous

Circuit Design Working Group); Co-PI of TUCS Turku Centre for Computer Science team; EU FP5, 2000 – 2004; A collaboration network of excellence/expertise with altogether 21 European university/industry partners.

6. Research leadership and supervision experience

- Lead of the Autonomous Systems Laboratory (ASL) at Univ. of Turku, 2019-
- Lead of the Embedded Computer and Electronics Systems research group (ECES) and co-lead of the Resilient IT Infrastructures research programme (RITES) at TUCS Turku Centre for Computer Science, 2012 - 2018.
- Supervised post docs (8): Hashem Haghbayan, 02/2018 - . Liang Guang, 2013 - 2014. Masoud Daneshtalab, 2012 - 2013. Thomas Canhao Xu, 09/2012 - 03/2013. Tero Sääntti, 2009 - 06/2012. Leonidas Tsiopoulos, 07/2011 - 12/2011. Tomi Westerlund, 2008 - 2010. Johanna Tuominen, 01/2010 - 06/2010.
- Supervised PhD Theses (21): Amleset Kelati, KTH, 2014-2021; Mohammad Fattah, 2011-2021; Amin Majd, 2015-2019. Hashem Haghbayan, 2013 – 2018. Fahimeh Farahnakian, 2012 – 2016. Tuomas Poikela, in collaboration with CERN, 2011 – 2015. Sergey Ostroumov, Åbo Akademi University, 2012 - 2015. Syed Jafri, in collaboration with KTH, 2010 – 2015. Kameswar Rao Vaddina, 2008 - 2014. Bo Yang, 2009 - 2013. Masoumeh Ebrahimi, 2010 - 2013. Liang Guang, 2009 - 2012. Ville Rantala, 2008 - 2012. Amir Rahmani, 2009 - 2012. Masoud Daneshtalab, 2009 - 2011. Ethiopia Nigussie, 2005 - 2010. Johanna Tuominen, 2004 - 2009. Teijo Lehtonen, 2005 - 2009. Tero Sääntti, 2004 - 2008. Tomi Westerlund, 2003 - 2007. Pasi Liljeberg, 2000 - 2005.
- Current PhD students (9): Amir Ijaz, 2022 – 2025. Sajad Shahsavari, 2020 - 2024. Masoumeh Karami, 2019 - 2024. Sherif Mohamed 2018 - 2022. Jawad Yasin, 2017 - 2022. Syed Kakakhel, 2016 - 2023. Golnaz Sahebi, 2015 - 2022. Farhoud Hosseinpour, 2014 - 2022. Anam Tahir, 2017 – 2022.

7. Teaching experience

Teacher-in-charge for 18 different courses at the university since 1999 in the fields of digital circuit and system design, multiprocessor architectures, reconfigurable computing, embedded systems, modelling and verification, as well as autonomous systems.

8. Experience in organizing scientific meetings

Program chair, general chair, or organizing chair at 6 international conferences or workshops (ReCoSoc 2015, PDP 2015, MES WS at ISCA 2014, HPCS 2013, CASEMANS WS at UBICOMP 2012, ACID WS of EU FP5 ACID-WG, 2004. Chair for 6 special sessions at international conferences (DFTC at SEAA 2015, MC3 at PDP 2014, DarMuS at PDP 2013, SANES at PECCS 2013 & 2012, SAAES at PECCS 2011). Technical program committee member at least for 12 different international conferences.

9. Other key scientific or academic merits

- Head of the Smart Systems cost centre, Univ. of Turku, Dept. of Computing, 2019 -.
- Head of the EIT Digital Master Programme in Embedded Systems (with EU funding), 2012 -
- Memberships in editorial boards: Int. J. of Embedded and Real-Time Communication Systems (IJERTCS), IGI Global, associate editor, 2009-2016. The Scientific World Journal, Hindawi, editorial board member. 2014-2016. Guest editor for 9 special issues in 6 different journals (Elsevier MICPRO, Springer Journal of Supercomputing, IGI GLOBAL IJERTCS, Springer DAES, ACM TECS, IGI Global IJARAS).
- Evaluation of project proposals (review expert, altogether 25 contracts since 2009) for: European Commission, Christian Doppler Research Association (Austria), Knowledge Foundation (Sweden), Research Promotion Foundation of Cyprus, EU COST Association, Royal Society (UK), Czech Science Foundation, Estonian Research Council, and Academy of Finland.
- Evaluation of PhD theses: Pre-examiner for 7 theses and a public opponent/examiner for 11 theses.
- Evaluation of competence: Associate Professorship (Taylor's University Lakeside Campus, Malaysia); Adjunct Professorship (Åbo Akademi University, Finland). HDR (Habilitation à Diriger les Recherches) thesis at University of Haute Alsace, France. 3 * Outstanding Researcher status application (U.S. Citizenship and Immigration Services (USCIS)).
- Publication Forum (Julkaisufoorumi) Panel membership, Panel 9 (Electrical and Automation Engineering, Information and Communication Technology), 2022-2025. <https://www.tsv.fi/julkaisufoorumi/haku.php?lang=en>.
- Member of the preparation group for the selection of tenure track professors for Mechanical Engineering at Univ. of Turku (3 professorships: thermal science, electric power transmission, and Industry 4.0), 2021-2022.
- Member of the preparation groups for tenure track promotion processes: "Asst. Prof. => Assoc. Prof". at Tampere University, 2021. "Assoc Prof. => Full Prof." at University of Turku (2 professorships), 2022.
- Member of the Node Strategy Committee of the EIT Digital Finland Node (2017-). Member of the EIT Digital Master School management group (2012-); Member of the steering board of the Arctic Drone Labs ecosystem (2017-2019); Member of the management committee of the Doctoral Programme in Mathematics and Computer Sciences (MATTI) at Univ. of Turku Graduate School (2017-2019). Member or lead of several different master programme MCs at Univ. of Turku since 2000.