Curriculum vitae

Personal details. Knuutila, Timo Juhani, 1963, Finnish. Date of CV: September 28, 2020.

Degrees. Doctor of Philosophy, University of Turku, Finland (UTU), Computer science, December 22, 1994, Turun yliopisto, FI-20014, Finland, `www.utu.fi`; Licentiate in Philosophy, UTU, Computer science, April 11, 1991; Master of Science, UTU, Computer science, October 1, 1987; Title of Docent, Computer science, UTU, June 15, 2005.

Current employment. Professor in computer science starting from 16.1.2017. Department of Future Technologies, University of Turku, Finland. Stage of academic research career: IV.

Previous work experience. Research director 1. 1. 2014–15. 1. 2017, University of Turku (UTU); Senior researcher, 1. 8. 2011–31.12. 2013, UTU; Professor 1. 8. 2000–31.7. 2011, UTU; Assistant professor 1. 8.–31.12. 1990 and 1. 8. 1992–31.7.2000, UTU; Lecturer 1. 1.–31. 7. 1988, 1. 1.–31. 7. 1989 and 1. 1.–31. 7. 1990, UTU; Research assistant 1. 8.–31.12. 1988 and 1. 8.–31.12. 1989, Finnish national program of postgraduate studies; Research assistant 1. 8.–31.12. 1987, Academy of Finland; Assistant 1. 4.–31. 7. 1987 and 1. 1. 1991– 31. 7. 1992, UTU; Systems programmer, 15.5.–15. 9. 1986 and 16. 9. 1986–31. 3. 1987, Alnor OY, Turku; Systems programmer, 15. 5.–13. 9. 1985 and 15.12. 1985–18. 1. 1986, Suomen Teollisuuden Vartiointi OY, Helsinki.

Research funding and grants. Principal investigator (or subproject PI in consortium projects) in the following externally funded scientific projects (Tekes = the Finnish Funding Agency for Technology and Innovation): Production planning of electronics industry, 2006 – 2008, Tekes, 60ke; Nonlinear temporal and spatial forecasting: modeling and uncertainty analysis, 2006 – 2008, Tekes, 820ke; Nonlinear temporal and spatial forecasting: modeling and uncertainty analysis, Phase 2, 2008 – 2009, Tekes, 805ke; SaaSify your business - Finnish perspective, 2009 – 2011, Tekes, 218ke; NoStrokes (Automated detection of atrial fibrillation via an miniature accelerometer), Academy of Finland, 2015–2019, 512 ke. Responsible leader in the following research projects: Flavour design, Tekes, 2007–2008, 181ke; Effects of northern berries on reduction of risks related to overweight and type 2 diabetes, Tekes, 2007–2009, 380ke. Currently participating in the preparation and implementation of various research projects in the Data Analytics research group (PI prof. Jukka Heikkonen).

Research supervision and leadership experience. I have supervised so far 9 doctoral dissertations (computer science) and ca. 50 master's theses (computer science, software engineering). Currently I am appointed as the supervisor of 2 doctoral students. I also provide support to young post-doctoral researchers both in data analytics and in our multidisciplinary biomedical research team. During 2014–2016 I led the university special unit Technology Research Center (TRC) (ICT, about 60 personnel), where I was in charge of leading all computer science -related research activities (in addition to the managerial charge of the whole unit). After the merge of TRC and the former Department of Information Technology into current Department of Future Technologies, I joined the Data Analytics research team led by professor Jukka Heikkonen, where I have done my best to share the administrative burden.

Teaching merits. I have served in various teaching positions in the University of Turku, Finland, 1987–2011 and 2017 onwards, and typically lectured at least one course each semester. A coarse calculation yields hence ca. 60 lectured courses. The main areas of my courses have been (1) programming languages and software engineering (Declarative programming, Logic programming, Object-oriented programming, Software engineering for global enterprises, Production planning and optimization, Programming language concepts) and (2) artificial intelligence (Artificial intelligence, Data

mining, Machine learning, Deep learning). Since the middle of the 1990's majority of my teaching has been given in English. After restarting teaching activities 2017, I am in charge of the following courses: Introduction to Artificial Intelligence (AI), Fundamental AI Methods, and Deep Learning. In addition to the planning of the contents and implementation of individual courses, I have also led the planning work of curricula in software engineering and computer science. Nowadays, I have participated in the university-wide effort of transforming courses to better support remote education.

Funding received for the development of teaching: Institutional Co-operation for the Development of Information Technology Education in Vietnam, Ministry of Foreign Affairs, 2009, 47ke; Nordic-Russian Co-operation in Education, Nordic Council of Ministers, 2010, 18ke; Open source courseware project (8 Finnish universities), 2006, Ministry of Education, 63ke; Various adult education projects funded by the Centre for Economic Development, Transport and the Environment of South-West Finland: Productization, Web and Games Programming, Game Developer 2012–2013, joint budget *c.a.* 200ke; Smart Classroom, Tekes, 2013–2014, 47ke; Higher Education Institutions Institutional Cooperation Instrument (HEI ICI), Development of IT Education in Vietnam, Ministry of Foreign Affairs, Finland, 2013–2015, 93 ke.

Other key academic merits. Evaluation of grant applications for the Romanian Science Academy (2011–); Evaluation of Asla-Fulbright grant applications in the ICT area (2009–); Member of the development group for information technology education in Vietnam (2009, 2013); Responsible leader of a Nordic-Russian co-operation team in software engineering education (2010); Evaluation of Finnish Cultural Foundation grant applications in the area of technical sciences (2008 – 2010).

Refereeing manuscripts for several international journals and conferences, including Acta Cybernetica, Computers & Operations Research, Flexible Services and Manufacturing, IEEE Transactions on Pattern Analysis and Machine Intelligence, Int. J. of Advanced Manufacturing Technology, Int. J. of Computer Integrated Manufacturing, Int. J. of Production Research, Int. J. of Software Engineering & Knowledge Engineering, Journal of Machine Learning Research, OR Spectrum, Pattern Recognition Journal, Production Planning & Control, RAIRO — Theoretical Informatics and Applications, Soft Computing, and Theoretical Computer Science.

Memberships and positions of trust in scientific societies: National entrance examination board of computer science (2000–2005); Member of expert team assessing 3 programmes in Information Technology in Estonian higher education (2008); Chairman of the preparation group for filling a professor post in information systems (UTU, 2009); National co-operation group of higher technical sciences education (2007–2010); Vice dean of the Faculty of Natural Sciences (UTU, 1.2.2007 – 31.1.2010). Rectors' and deans' meetings, recruitment group and entrance examination committees of Finnish technical universities (2007–2010); Open Source Courseware virtual education organization (OSCu, 2005–2011, chairman 2009–11); Board of the The Finnish Society for Computer Science (TKTS, 2010–2013); National contact point network for Horizon 2020 program's ICT area (2014–); and Turku Future Technologies platform (2015–).

In Turku, September 28, 2020 Timo Knuutila