

CURRICULUM VITAE

Mr. Risto Tapio HONKANEN

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SHORT BIOGRAPHY



I received my BSc, MSc, and PhLic from the University of Joensuu in 1997, 1997, and 2000 from the University of Kuopio, Finland, respectively. In 2006 I defended my doctoral dissertation and received my PhD. The title of my dissertation was "*Towards Optical Communication in Parallel Computing*". The dissertation presented a number of all-optical routing nodes, a number of all-optical intercommunication network structures for optical packet routing, and routing analysis of h -relation distributed on the networks. My major subject was Computer Science and minors were Physics (laudatur) and Mathematics (cum laude). I graduated from the University of Eastern Finland in 2025 with a Master of Administrative Sciences, majoring in Public Law. The title of my thesis is "*Liability for damages in the context of maintenance and alteration work in a housing company*". Additionally I have received certificates in university pedagogy and business accounting.

I worked as lecturer and researcher in Computer Science at the University of Joensuu during the years from 1996 to 2000. At the beginning of 2000 I received my post as assistant in Computer Science at the University of Kuopio. Soon after I received a post of senior assistant at the same university. At the beginning of August 2009 I received a post of university teacher in Information Processing Sciences at the unit of Kajaani of University of Oulu. At the beginning of August 2012 I started as university lecturer at the University consortium Chydenius in Kokkola. The unit of Information technology is a part of the University of Jyväskylä.

My teaching experience at the university level is more than 2800 hours. I have supervised more than 60 thesis of graduate students. At the moment my teaching interests are parallel computing, network and IoT security, and exact programming techniques. My publication list consists of more than 30 articles in scientific journals, conference publications, and report series. I am a master student of public law at the University of Eastern Finland. As a funny curiosity, I might mention that my Erdős number is 4 and my Einstein number is 6.

**PRESENT
POSITION**

University lecturer
University of Jyväskylä
University Consortium Chydenius
PL 567 (Talonpojankatu 2 B)
FIN-67701 Kokkola
Finland

LANGUAGES

- Finnish (native)
- English (good)
- Swedish (passable)
- French (passable)
- Russian (the ropes)

EDUCATION

Doctor of Philosophy

University of Kuopio, Finland
Faculty of Business and Information Technology
Department of Computer Science
Graduated December 20, 2006

- Computer Science (major)
- Physics (minor, laudatur)
- Mathematics (minor, cum laude)

Master of Administrative Sciences

University of Eastern Finland
Faculty of Social Sciences and Business Studies
UEF Law School
Institute of Management Sciences
Graduated March 10, 2025

- Public law (major)
- Tort law

Licentiate of Philosophy

University of Joensuu, Finland
Faculty of Science
Department of Computer Science
Graduated May 23, 2000

Master of Science

University of Joensuu, Finland
Faculty of Science
Department of Computer Science
Graduated November 17, 1997

Bachelor of Science

University of Joensuu, Finland
Faculty of Science

Department of Computer Science
Graduated March 2, 1997

Certificate in University Pedagogy

University of Kuopio, Finland
Faculty of Social Sciences
Studies in Open University
September, 2006

Subject studies in Business Economics, Accounting

University of Eastern Finland, Finland
Faculty of Social Sciences and Business Studies
Studies in Open University
January, 2022

Certificate in Archipelago Navigation

Navigation Union of Finland
January 2004

FRC First aid course EA1

16 hours
Certificate valid through October 11, 2025

High school examination

Lyseon lukion iltalinja, Joensuu, Finland
Graduated May 31, 1984

**MILITARY
SERVICE**

Passed 1984-1985, Finnish defence forces
Trainee in Reserve Officers School, February 1 - April 30, 1985

- Captain, 2006
- Senior lieutenant, 1997
- Lieutenant, 1990
- Second lieutenant, 1985

**ACADEMIC
EMPLOYMENT**

University of Jyväskylä
(August 1, 2012 - onwards)
Kokkola University Consortium
Unit of Information Technology
P.O.Box 567, 67701 Kokkola, Finland

- University lecturer in Information Technology

University of Oulu
(August 1, 2009 - May 31, 2012)
Department of Computer Science
Unit of Kajaani
P.O.Box 51, 87101 Kajaani, Finland

- Researcher in Computer Science
- University teacher in Computer Science

University of Kuopio
 (January 1, 2000 - July 31, 2009)
 Department of Computer Science
 P.O.Box 1627, 70211 Kuopio, Finland

- Senior assistant in Computer Science
- Assistant in Computer Science

University of Joensuu
 (January 1, 1996 - December 31, 1999)
 Department of Computer Science
 P.O.Box 111, 80101 Joensuu, Finland

- Researcher in Computer Science
- Lecturer (full time) in Computer Science
- Lecturer (part time) in Computer Science

TEACHING EXPERIENCE

Course name	Lectures [h]	Laboratory exercices [h]
Artificial Intelligence	72	44
Software Engineering		64
Computer Systems	144	246
Introduction to Computer Science	14	72
Design and Analysis of Algorithms		24
Programming Techniques	136	120
Optical Communication	176	128
Theory of Computation	64	64
Algorithms		18
Basics of C++ Programming		27
Programming in C		24
Introduction to Programming		24
Logics		16
Software Architectures		18
Programming Assignment III		21
Programming Environments, Unix		18
Exact Software Development	268	112
Research Methods in Computer Science	14	

Course name	Lectures [h]	Laboratory exercices [h]
Algorithms 2	28	10
Parallel Programming in CUDA Environment	74	24
Network Security	40	240
Parallel Paradigms and Programming Methods	342	6
LaTeX Typesetting System	48	
Designing Information Secure IoT Systems	72	
Total [hours]	1498	1320

SUPERVISIONS OF M.Sc. THESIS

- 62 Kähkönen J., 2025: *SQL-injektiot ja niiden ehkäisykeinoja web-sovelluskehityksessä.* (in finnish: SQL injections and their prevention in web application development.) University of Jyväskylä, Finland.
- 61 Ahola R., 2024: *Tietomallien linkitysmenetelmät ja rooli linkitysprosesseissa.* (in finnish: Data model linking methods and the role of data models in linking processes.) University of Jyväskylä, Finland.
- 60 Jokela T., 2024: *HTTPS-protokollan ohittaminen palvelimen ja selaimen välisessä tiedonsiirtoyhteydessä.* (in finnish: Bypassing the HTTPS protocol in the connection between the server and the browser). University of Jyväskylä, Finland.
- 59 Heikkilä M., 2024: *Tekoälyn eettiset haasteet koulutuksessa.* (in finnish: Ethical challenges of AI in education). University of Jyväskylä, Finland.
- 58 Suppala S., 2024: *Mittaristo avoimen lähdekoodin kotiautomaatiojärjestelmien vertailuun.* (in finnish; Metrics for open-source home automation system evaluation). University of Jyväskylä, Finland.
- 57 Rantakömi M., 2024: *Tallennusmedian suorituskyvyn vaikutus Wordpress-julkaisujärjestelmän toimintaan.* (in finnish; Impact of storage media performance on Wordpress Content Management System operation. University of Jyväskylä, Finland.
- 56 Rauma E., 2024: *Behavior, Change, and Self-Leadership with Wearable Activity Trackers: A Case Study of Ultra Endurance Athletes.* University of Jyväskylä, Finland.
- 55 Tommila V., 2024: *Työntekijän sähköinen järjestelmä asiakaskäyntien kuittaukseen.* (in finnish; The employee's electronic system for acknowledgment of customer visits). University of Jyväskylä, Finland.
- 54 Ihalainen V., 2024: *CoAP-protokollan tietoturva.* (in finnish; Information security of CoAP protocol). University of Jyväskylä, Finland.
- 53 Nikula M., 2023: *Luokkahuoneen ulkopuolella tapahtuvan opiskelun vaikutus oppimismotivaatioon opiskelu-uupumuksen ja opiskeluinnon näkökulmasta.* (in finnish; The effect of studying outside the classroom on learning motivation from the point of view of study exhaustion and study enthusiasm). University of Jyväskylä, Finland.

- 52 Moilanen M., 2023: *Matriisikertolaskun kustannusmalli hajautetun ja jaetun muistin rinnakkaistietokoneille.* (in finnish; Cost model for matrix multiplication in distributed and shared memory parallel computers). University of Jyväskylä, Finland.
- 51 Hakonen S., 2023: *MQTT-protokollan tietoturvallisuuden testaaminen.* (in finnish; Testing the security of the MQTT protocol). University of Jyväskylä, Finland.
- 50 Määttä H., 2023: *Julkisen sektorin asianhallintaprosessin digitalisointi.* (in finnish; Digitising the case management process of public sector). University of Jyväskylä, Finland.
- 49 Holopainen V., 2022: *Koneoppimisen hyödyntäminen vesijohtoverkostojen vuotojen hallinnassa – Systemaattinen kirjallisuuskartoitus.* (in finnish; Utilization of machine learning in the management of leaks in water supply networks – A systematic mapping study). University of Jyväskylä, Finland.
- 48 Juntunen J. 2022: *Konesaliympäristön monitorointi IoT-teknologian avulla.* (in finnish; IoT based server room monitoring). University of Jyväskylä, Finland.
- 47 Huusko E., 2022: *IoT-tietoturvaoppimisympäristön kehittäminen.* (in finnish; Development of IoT security learning environment). University of Jyväskylä, Finland.
- 46 Reinikainen J., 2022: *FAMDAD ja poikkeamien tunnistaminen IoT-verkkoliikenteestä.* (in finnish; FAMDAD and IoT network traffic anomaly detection). University of Jyväskylä, Finland.
- 45 Madetoja A., 2021: *Tapaustutkimus perusopetusoppilaiden todentamismenetelmistä.* (in finnish; Case study on authentication methods in primary schools). University of Jyväskylä, Finland.
- 44 Siljander K., 2020: *Älytelevisioiden tietovuodot.* (in finnish; Data leakage of Smart TV's). University of Jyväskylä, Finland.
- 43 Ekman H., 2020: *IoT ikäihmisten lääkkeidenhoidon tukena.* (in finnish; IoT supporting adherence to medication). University of Jyväskylä, Finland.
- 42 Otso M., 2020: *Standardisoitujen testitapausten hallinta - Atlassian Jira.* (in finnish; Standardized Test Case Management in Atlassian's Jira). University of Jyväskylä, Finland.
- 41 Hirvi P., 2020: *Web services -yhteyksikäytäntö sähköisten kuittitietojen välityksessä.* (in finnish; Web services protocol for the transmission of electronic receipt information). University of Jyväskylä, Finland.
- 40 Lietzén J., 2020: *Liikunnallisten oppimis- ja viihdepelien hyödyt ja haasteet ja digipelaajan motivointi.* (in finnish; Benefits and challenges of digital games and exergames and motivation of digiplayers). University of Jyväskylä, Finland.
- 39 Vähälummukka A., 2020: *Sulautettujen laitteiden laitteisto- ja ohjelmistoturvallisuus.* (in finnish; Hardware and Software Security in Embedded devices). University of Jyväskylä, Finland.
- 38 Haasiomäki M.-P., 2019: *Äänien luokittelu neuroverkoilla* (in finnish; Sound classification using neural networks). University of Jyväskylä, Finland.
- 36 Xue S., 2019: *Designing and implementing Web API for RAI software.* University of Jyväskylä, Finland.
- 36 Marttila M., 2019: *Syömishäiriöpotilaiden arviointijakson tukeminen informaatioteknologian avulla* (in finnish; Information technology based support for estimation phase of patients having eating disorder). University of Jyväskylä, Finland.

- 35 Leppänen R. F., 2019: *Anomalioiden havaitseminen langattomissa sensoriverkoissa syväoppimisen avulla* (in finnish; Anomaly detection in wireless sensor networks with deep learning). University of Jyväskylä, Finland.
- 34 Leivo-Rintakorpi T. 2018: *Sujuvat tieto- ja viestintätekniikan taidot edesauttavat oppimista verkko-oppimisympäristössä.* (in finnish; Fluent information and communication technology skills contribute to learning in the e-learning environment). University of Jyväskylä, Finland.
- 33 Inkilä E., 2018: *Verkko-oppimisympäristön pedagogisen käytön kehittäminen tieto- ja tietoliikennetekniikan perustutkinnossa* (in finnish; Pedagogical development of eLearning environment for the information and communication technology in the vocational education). University of Jyväskylä, Finland.
- 32 Penttinen J., 2018: *Lisätty todellisuus virtuaalisessa työympäristössä* (in finnish; Augmented reality in a virtual work environment). University of Jyväskylä, Finland.
- 31 Haapakoski A., 2018: *Katsaus puettaviin IoT-laitteisiin, yleisiin protokolliin ja tietoturvatilanteeseen* (in Finnish; An overview of wearable IoT devices, common protocols, and security). University of Jyväskylä, Finland.
- 30 Väänttilä J., 2018: *Opetusmateriaalien tekijänoikeudet digitaalisissa oppimislustoissa* (in Finnish; Copyrights of teaching materials in digital learning platforms). University of Jyväskylä, Finland.
- 29 Pirnes T., 2018: *Opetusvideoiden käyttäminen ammatillisessa koulutuksessa* (in Finnish; Teaching videos in vocational education). University of Jyväskylä, Finland.
- 28 Koskinen M., 2018: *Sulautuvan opetuksen kokeilu Oulun seudun ammattiopiston tieto- ja tietoliikennealalla* (in Finnish; Blended learning experiment in the information and telecommunication at the Oulu vocational college). University of Jyväskylä, Finland.
- 27 Seilonen L., 2017: *Digitaalisten osaamismerkkien käyttöönotto korkeakoulussa* (in Finnish; Introduction of Digital Open Badges in higher education context). University of Jyväskylä, Finland.
- 26 Kattilakoski T., 2017: *Sovellus ohjelmoiden motivaation ja motivaatio-ongelmien kartoittamiseen ja korjaamiseen* (in Finnish; Web application for surveying motivation problems and remedying them among software developers). University of Jyväskylä, Finland.
- 25 Kinnunen L. and Niemi P., 2017: *Loppukäyttäjien asennoituminen vaatimusmäärittelytyöhön* (in Finnish; Development of Requirement Specification in Software Technology). University of Jyväskylä, Finland.
- 24 Aho L., 2016: *Valtion virastojen pilvipalvelujen ohjeistuksen ja koulutuksen kehittäminen* (in Finnish; Development of guidance and education dealing with cloud services of governmental agencies). University of Jyväskylä, Finland.
- 23 Salo M., 2016: *Kahden digitaalisen oppimisympäristön käytettävyytystutkimus* (in Finnish; A study on the usability of two electronic learning environments). University of Jyväskylä, Finland.
- 22 Kangas S. and Pinola S., 2016: *Verkko-opetuksen kehittäminen - Case Oulun ammattikorkeakoulun Oulaisten kampus* (in Finnish; The development of e-learning - Case Oulainen campus of Oulu University of Applied Sciences). University of Jyväskylä, Finland.

- 21 Luttinen J., 2015: *Linux-päätelpalvelut osana oppilaitoksen IT-infrastruktuuria* (in Finnish; Linux Terminal Services as a Part of School's IT Infrastructure). University of Jyväskylä, Finland.
- 20 Riikonen M., 2015: *Aktiivitaalun käyttäjäystävällisyydestä* (in Finnish; On User-Friendliness of Interactive White Boards). University of Jyväskylä, Finland.
- 19 Salmi J., 2015: *Energiatohokkuuden arviointi konesalissa* (in Finnish; Energy Efficiency Assessment in Data Center). University of Jyväskylä, Finland.
- 18 Toikkanen P., 2014: *Häviötön tiedon pakkaaminen* (in Finnish; Lossless data compression). University of Jyväskylä, Finland.
- 17 Pitkänen T., 2014 *Vanhusten käyttöön tarkoitettun IT-palvelun suunnittelukonsepti* (in Finnish; IT service concept for elderly people). University of Jyväskylä, Finland.
- 16 Hautala S., 2014: *Oppimistyylin vaikutus etäopetuskäytänteiden valintaan* (in Finnish; Influence of learning style on the choice of distance learning practices). University of Jyväskylä, Finland.
- 15 Huusko S., 2014 *Pienten lasten digitaalisten oppimispelien käytettävyyden arviointia* (in Finnish; Usability evaluation of young children digital learning games). University of Jyväskylä, Finland.
- 14 Mehtälä M., 2013: *HTML5 tablet uutissovelluksen suunnittelu ja toteutus* (in Finnish; Design and implementation of HTML5 tablet news application). University of Jyväskylä, Finland.
- 13 Laurila T., 2013: *Tekstintunnistus mobiililaitteilla* (in Finnish; Text Recognition on Mobile Devices). University of Jyväskylä, Finland.
- 12 Järvelä T., 2013: *Heurististen upotusalgoritmien vertailua optisissa laajaverkoissa* (in Finnish; Comparison of Wavelength Assignment Algorithms for Optical Wide Area Networks). University of Jyväskylä, Finland.
- 11 Isohanni J., 2013: *GPU-laskennan optimointi* (in Finnish; Optimization of GPU Computation). University of Jyväskylä, Finland.
- 10 Pietikäinen V., 2009: *Digitaalisen paikkatietoaineiston hyödyntäminen tieverkon lyhimmän polun laskennassa* (in Finnish; Utilization of Digital Geographic Information in Calculation of Shortest Paths). University of Kuopio, Finland.
- 9 Rezinkin A., 2009 *Geographic Routing in Wireless Sensor Networks*. University of Kuopio, Finland.
- 8 Kumpulainen J., 2008: *Piratismi pinnan alla* (in Finnish; Piratism under the surface). University of Kuopio, Finland.
- 7 Bloigu P., 2008: *Samanaikaisuuden hallinnan välineet uudelleenkäytettävänä aspekteina ASPECTC++ kielellä* (in Finnish; Reusable concurrency control constructs as aspects with ASPECTC++). University of Kuopio, Finland.
- 6 Polkhovskiy Y., 2008: *Routing in Optical Wide-Area Networks*, University of Kuopio, Finland
- 5 Johansson M., 2008: *Sormenjälkien analysointi* (in Finnish; Analysis of Fingerprints). University of Kuopio, Finland.
- 4 Oikari P., 2007 *Hilalaskenta* (in Finnish; Grid Computing). University of Kuopio, Finland.
- 3 Antikainen J., 2006 *Matriisioperaatioiden rinnakaistaminen* (in Finnish; Parallelization of Matrix Operations). University of Kuopio, Finland.
- 2 Liimatainen J.-P., 2005: *Linux-klustereiden tehokkuusvertailua* (in Finnish; Efficiency Comparison of Linux Clusters). University of Kuopio, Finland.

- 1 Haikarainen T., 2004: *Virhetilanteiden hallinta optisissa laajaverkoissa* (in Finnish; Error Control of Optical Wide-Area Networks). University of Kuopio, Finland.

RESEARCH AND TEACHING INTERESTS

- 10 Parallel architectures
- 9 Parallel computing
- 8 Optical communication
- 7 Classification problems
- 6 Routing problems
- 5 Network security
- 4 Learning technology
- 3 Internet of things
- 2 IoT security
- 1 Steganography

OTHER ACTIVITIES

- 10 Departmental CBU (Cross Border University) coordinator, Department of Computer Science, University of Kuopio, Finland, March 1, 2008 - July 31, 2009
- 9 Departmental IMPIT coordinator, Department of Computer Science, University of Kuopio, Finland, January 1, 2000 - July 31, 2009
- 8 Foreign student adviser, Departmental Erasmus coordinator, Department of Computer Science, University of Kuopio, Finland, January 1, 2000 - July 31, 2009
- 7 Member of the Council of Faculty of Information Technology and Economic Sciences, University of Kuopio, Finland, August 1, 2004 - June 30, 2007
- 6 Summer school local organizer, 12th International Summer School in Novel Computing, Kuopio, Finland, August 7 - 12, 2005
- 5 Vice member of the Council of Faculty of Information Technology and Economic Sciences, University of Kuopio, Finland, January 1, 2002 - July 31, 2004
- 4 Secretary of practical arrangements, 8th Symposium on Programming Languages and Software Tools, SPLST'03 Kuopio, Finland, June 17 - 18, 2003
- 3 Summer school local organizer, 9th International Summer School in Novel Computing, Kuopio, Finland, August 12 - 15, 2002
- 2 Vice member of the Council of Faculty of Natural Sciences and Environmental Sciences, University of Kuopio, Finland, July 1, 2001 - December 31, 2001
- 1 SOCRATES/ERASMUS student, Universite de Caen, Basse-Normandie, France, July 1, 1998 - December 31, 1998

WORKSHOP AND CONFERENCE TALKS GIVEN

- 12 Honkanen R.T.: Development of Network Security Education. 30th Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE). Prague, Czech Republic, September 2021.
- 11 Honkanen R.T.: *Calculation of All-Pairs Shortest-Paths in Time $O(n^2)$ Using an $n \times n$ Processor Mesh*. Kilpisjärvi Information Systems Research Seminar 2010, KISS'01. Kilpisjärvi March 2010.
- 10 Honkanen R.T.: *Lambda-Systolic Routing in a Wavelength-Division Multiplexed All-Optical Butterfly*. The Tenth International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT). Hiroshima, Japan, December 2009.
- 9 Honkanen R.T.: *Work-Optimal Routing in Wavelength-Division Multiplexed Dense Optical Tori*. The Eleventh IEEE International Conference on Computational Science and Engineering, IEEE CSE-08. Sao Paulo, Brazil, July 2008.
- 8 Honkanen R.T.: *Scheduled Routing in an Optical Hypercube*. The Seventh International Symposium on Parallel and Distributed Computing, IEEE ISPDC 2008. Krakow, Poland, July 2008.
- 7 Honkanen R.T.: *Systolic Routing in Optical Ring with Logarithmic Shortcuts*. The 2007 International Conference on High Performance Computing and Communications, HPCC-07. Houston, Texas, U.S.A., September 2007.
- 6 Honkanen R.T.: *Nearly-All-Optical Routing in Sparse Optical Tori*. The Fifth International Symposium on Parallel Computing in Electrical Engineering, PA-RELEC 2006. Bialystok, Poland, September 2006.
- 5 Honkanen R.T.: *Systolic Routing in an Optical Fat Tree*. The Third International Symposium on Parallel and Distributed Processing and Applications, ISPA 2005. Nanjing, China, November 2005. (Talk and session chair)
- 4 Honkanen R.T.: *Systolic Routing in an Optical Butterfly*. The Eighth International Conference on Parallel Computing Technologies, PaCT-2005. Krasnoyarsk, Russia, September 2005.
- 3 Honkanen R.T.: *Sparse Torus as Large-Scale Routing Switch*. Finnish Data Processing Week, FDPW 2003. Petrozavodsk, Russia, June 2003.
- 2 Honkanen R.T.: *Systolic Routing in Sparse Optical Torus*. The Eighth Symposium on Programming Languages and Software Tools, SPLST'03. Kuopio, Finland, June 2003.
- 1 Honkanen R.T.: *Hot-Potato Routing Algorithms for Sparse Optical Torus*. International Conference on Parallel Processing, ICPP'01. Valencia, Spain, September 2001.

PUBLICATIONS BOOK CHAPTERS

ARTICLES IN SCIENTIFIC JOURNALS

- 2 Honkanen R. T., Leppänen V., 2012: *Routing in Coloured Sparse Optical Tori by using Balanced WDM and Network Sparseness*. International Journal of Distributed Systems and Technologies, 3(4), pp. 52-62, October-December 2012.
- 1 Mielikäinen J., Honkanen R., Huang B., Toivanen P., Lee C., 2010: *Constant Coefficients Linear Prediction for Lossless Compression of Ultraspectral Sounder Data Using a Graphics Processing Unit*. Journal of Applied Remote Sensing 4(1).

ARTICLE IN CONFERENCE PROCEEDINGS

- 24 Laine S., Kivikoski M., Myllymäki M., Honkanen R., Hakala I., 2022: Self-directed learning readiness: A case of ICT students at Lapland University of Applied Sciences. *31st Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE)*. Coimbra, Portugal, june/july 2022.
- 23 Myllymäki M., Honkanen R., Hakala I., 2022: Introductory MOOC as Part of Student Admission: Course Evaluation and Development Need. *31st Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE)*. Coimbra, Portugal, june/july 2022.
- 22 Honkanen R., Myllymäki M., Hakala I., 2021: Development of Network Security Education. *30th Annual Conference of the European Association for Education in Electrical and Information Engineering (EAEEIE)*. Prague, Czech Republic, September 2021.
- 21 Leppänen V., Honkanen R. T., 2014: *Two-Phase Routing in Three-Dimensional Blocked Optical Torus Tori*. International Conference on Computer Systems and Technologies, CompSysTech'14. Ruse, Bulgaria, June 2014.
- 20 Nurkkala V.-M., Koskela K., Kalermo J., Nevanperä S., Honkanen R., Jälehto T. 2012: *A Method to Evaluate Temporal Appearance of Simulator Sickness during Driving Simulation Experiments*. Driving Simulation Conference 2012, DSC'12. Paris, France, September 2012.
- 19 Leppänen V., Honkanen R. T., 2012: *Work-Optimal Two-Phase Routing in a Sparse Optical Torus Tori*. International Conference on Computer Systems and Technologies, CompSysTech'12. Ruse, Bulgaria, June 2012.
- 18 Pouke M., Honkanen R. T., 2011: *Comparison of Nearest Neighbour and Neural Network Based Classification of Patient's Activity*. 3rd international workshop for "Situation recognition and medical data analysis in Pervasive Health environments", PervaSense 2011. Dublin, Ireland, May 2011.
- 17 Honkanen R. T., Leppänen V., 2011: *Balanced WDM and TDM Routing in Coloured Sparse Optical Tori*. The sixth International Symposium on Parallel Computing in Electrical Engineering, PARELEC 2011. Luton, Bedfordshire, England, April 2011.
- 16 Leppänen V., Honkanen R. T., 2010: *Work-Optimal Routing in Wavelength-Division Multiplexed Three-Dimensional Dense Optical Tori*. International Conference on Computer Systems and Technologies CompSysTech'10. Sofia, Bulgaria, June 2010.
- 15 Honkanen R.T., Leppänen V. 2010: *Lambda-Systolic Routing in a Dense Optical Torus*. The 2010 International Conference on Parallel and Distributed Processing Techniques and Applications. Las Vegas, U.S.A., July 2010. (Acceptance ratio: 27%)
- 14 Honkanen R.T., 2009: *Lambda-Systolic Routing in a Wavelength-Division Multiplexed All-Optical Butterfly*. The Tenth International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT). Hiroshima, Japan, December 2009. (Acceptance ratio: 43%)
- 13 Mielikäinen J., Honkanen R., Toivanen P., Huang B., 2009: *GPU for Parallel Hyper- and Ultraspectral Image Compression*. Satellite Data Compression, Communication, and Processing V. Proceedings of SPIE Volume 7455. San Diego, CA, U.S.A, August 2009.

- 12 Asikainen M., Haataja K., Honkanen R., Toivanen P., 2009: *Designing and Simulating a Sensor Network of a Virtual Intelligent Home Using TOSSIM Simulator*. Proceedings of the Fifth International Conference on Wireless and Mobile Communications, IEEE ICWMC 2009. Cannes, France, August 2009.
- 11 Marttila-Kontio M., Honkanen R.T., 2009: *Not-so-free data flow in visual data flow programming languages*. Proceedings of the Second International Conference on Computer Science and Information Technology, IEEE ICCSIT 2009. Beijing, China, August 2009. (Acceptance ratio: 34%)
- 10 Honkanen R.T., 2008: *Scheduled Routing in an Optical Hypercube*. Proceedings of the Seventh International Symposium on Parallel and Distributed Computing, IEEE ISPDC 2008. Krakow, Poland, July 2008.
- 9 Liimatainen J.-P., Honkanen R.T., 2008: *Work-Optimal Routing in Wavelength-Division Multiplexed Dense Optical Tori*. Proceedings of the Eleventh IEEE International Conference on Computational Science and Engineering, IEEE CSE-08. Sao Paulo, Brazil, July 2008. (Acceptance ratio: 19%)
- 8 Honkanen R.T., Liimatainen J.-P., 2007: *Systolic Routing in Optical Ring with Logarithmic Shortcuts*. Proceedings of the 2007 International Conference on High Performance Computing and Communications, HPCC-07. Springer, LNCS 4782. Houston, Texas, U.S.A., September 2007.
- 7 Honkanen R.T., Penttonen M., Leppänen V., 2007: *Address-Free All-to-All Routing in Sparse Torus*. Proceedings of the Ninth International Conference on Parallel Computing Technologies, PaCT-2007. Springer, LNCS 4671. Pereslavl-Zalessky, Russia, September 2007.
- 6 Honkanen R.T., 2006: *Nearly-All-Optical Routing in Sparse Optical Tori*. Proceedings of the Fifth International Symposium on Parallel Computing in Electrical Engineering, PARELEC 2006. IEEE Computer Society. Bialystok, Poland, September 2006.
- 5 Honkanen R.T., 2005: *Systolic Routing in an Optical Fat Tree*. Proceedings of the Third International Symposium on Parallel and Distributed Processing and Applications, ISPA 2005. Springer, LNCS 3758. Nanjing, China, November 2005. (Acceptance ratio: 14%)
- 4 Honkanen R.T., 2005: *Systolic Routing in an Optical Butterfly*. Proceedings of the Eighth International Conference on Parallel Computing Technologies, PaCT-2005. Springer, LNCS 3606. Krasnoyarsk, Russia, September 2005. (Acceptance ratio: 48%)
- 3 Honkanen R.T., Leppänen V., Penttonen M., 2003: *Sparse Torus as Large-Scale Routing Switch*. Proceedings of Finnish Data Processing Week, FDPW 2003. Pedrozavodsk, Russia, June 2003.
- 2 Honkanen R.T., 2003: *Systolic Routing in Sparse Optical Torus*. Proceedings of the Eighth Symposium on Programming Languages and Software Tools, SPLST'03. Kuopio, Finland, June 2003.
- 1 Honkanen R.T., Leppänen V., Penttonen M. 2001: *Hot-Potato Routing Algorithms for Sparse Optical Torus*. 2001 International Conference on Parallel Processing, ICPP'01. IEEE Computer Society. Valencia, Spain, September 2001.

POSTERS

- 2 Nurkkala V.-M., Koskela K., Kalermo J., Honkanen R., Järvillehto T., 2011: *Low-Cost Driving Simulator Environment for Driver Behaviour Research*. International Conference on Driver Behaviour and Training, ICDBT 2011. Paris, France, Nov 2011.
- 1 Honkanen R. T., Koskela K., Nurkkala V.-M., Kalermo J., Järvillehto T., 2011: *Data Management in a low-cost Simulation Research Project*. International Conference on Driver Behaviour and Training, ICDBT 2011. Paris, France, Nov 2011.

THESES

- 6 Honkanen R.T., 2025. *Vahingonkorvausvastuusta asunto-osakeyhtiön kunnossapito- ja muutostöiden yhteydessä*. Master's thesis in Administrative Sciences (in Finnish; Liability for Damages in Connection with Maintenance and Alteration Work in Housing Companies), 83 pages. Faculty of Social Sciences and Business Studies. UEF Law School. University of Eastern Finland, Finland.
- 5 Honkanen R.T., 2023. *Rekisterinpitäjän vahingonkorvausvastuusta tietomurto-tilanteessa*. Bachelor's thesis in Administrative Sciences (in Finnish; Registrar's Liability for Damages in the Event of a Data Breach), 25 pages. Faculty of Social Sciences and Business Studies. UEF Law School. University of Eastern Finland, Finland.
- 4 Honkanen R.T., 2006: *Towards Optical Communication in Parallel Computers*. Ph.D. thesis in Computer Sciences, 80 pages. Faculty of Business and Information Technology. Department of Computer Science. University of Kuopio, Finland.
- 3 Honkanen R.T., 2000: *Towards Optical Communication in Parallel Computers*. Ph.Lic. thesis in Computer Sciences, 143 pages. Faculty of Science. Department of Computer Science. University of Joensuu, Finland.
- 2 Honkanen R.T., 1997: *Kustannusparametrien liittäminen viestinvälityskirjastoon*. Master's thesis in Computer Sciences, (in Finnish; Appending of Cost Parameters to a Message Passing Library), 85 pages. Faculty of Science. Department of Computer Science. University of Joensuu, Finland.
- 1 Honkanen R.T., 1997: *Rinnakkaislaskennan malleista*. Bachelor's thesis in Computer Sciences, (in Finnish; On Models of Parallel Computation), 30 pages. Faculty of Science. Department of Computer Science. University of Joensuu, Finland.

TECHNICAL REPORTS

- 5 Honkanen R.T., 2006: *Nearly-All-Optical Routing in Sparse Optical Tori*. Technical report A/2006/3, 13 pages. University of Kuopio, Finland.
- 4 Marttila-Kontio M., Honkanen R., 2004: *Toimintatutkimus tietojenkäsittelytieteen opetuksen kehittämisestä Kuopion yliopistossa*. Technical report B/2004/2, (in Finnish; Action Research on Development of Education of Computer Science at the University of Kuopio), 163 pages + appendices. University of Kuopio, Finland.

- 3 Honkanen R.T., 2003: *Systolic Routing in an Optical Butterfly*. Technical report A/2003/3, 10 pages. University of Kuopio, Finland.
- 2 Honkanen R.T., 2003: *Systolic Routing in an Optical Fat Tree*. Technical report A/2003/2, 10 pages. University of Kuopio, Finland.
- 1 Honkanen R.T., Leppänen V., Penttonen M., 2000: *Hot-Potato Routing Algorithms for Sparse Optical Torus*. Technical Report A/2000/1, 12 pages. University of Kuopio, Finland.

OTHER PUBLICATIONS

- 9 Honkanen R.T., 2024: *Utilitaristisen ja retributivistisen rangaistuksen oikeutuksesta*. Essay on the philosophy of law, (in Finnish; On the legitimacy of utilitarian and retributivist punishment). University of Eastern Finland.
- 8 Honkanen R.T., 2024: *Eurooppalaisen ja skandinaavisen oikeuden kehityksestä keskiajalla ja varhaisella modernilla ajalla*. Essay on the history of law, (in Finnish; The development of European and Scandinavian law in the medieval and early modern periods). University of Eastern Finland.
- 7 Honkanen R.T., 2018: *Laitteiden Internetin tietoturvasta*. Lecture notes, (in Finnish; On Security issues of Internet of Things). University of Jyväskylä, Finland.
- 6 Honkanen R.T., 2017: *Rinnakkaistietokoneista ja niiden ohjelmointimalleista*. Lecture Notes, (in Finnish; On Parallel Paradigms and Programming Methods). University of Jyväskylä, Finland.
- 5 Honkanen R.T., 2014: *Rinnakkaislaskenta CUDA-ohjelmointiympäristössä*. Lecture Notes, (in Finnish; Parallel programming in CUDA environment). University of Jyväskylä, Finland.
- 4 Honkanen R.T., 2011: *Matrix Based Calculation of All-Pairs Shortest Paths on the GPU*. Proceedings of Miniconference on Computer Science I Like. University of Eastern Finland, Finland.
- 3 Marttila-Kontio M., Honkanen R., 2005: *Toimintatutkimus opettajan pedagogisen kehittymisen menetelmänä*. Peda-forum 1/2005. (in Finnish; Action Research as a Support for Teacher's Self-Development). 3 pages.
- 2 Honkanen R.T., 2002: *Optinen kommunikaatio*. Lecture Notes, (in Finnish; Optical Communication). 63 pages. University of Kuopio, Finland.
- 1 Honkanen R.T., 2000: *Tietokonejärjestelmät*. Lecture Notes, (in Finnish; Computer Systems). 66 pages. University of Kuopio, Finland.