CURRICULUM VITAE

26.10.2015

Kantola, Raimo Antero,
Professor of Networking Technology
Department of Communications and Networking
Aalto University

Gender:	Male
Date of birth	March 16, 1955
Place of birth	Haukipudas, Finland
Citizenship:	Finland
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1. Education and degrees awarded

Doctor of Science (Tech.)	Helsinki University of Technology, TKK, Computer Science, 1995
Master of Science in Engineering	Lenin Electrical Engineering Institute, Leningrad, (currently: St. Petersburg Electrotechnical University), Applied Mathematics, 1981.
High School Graduation	Iin yhteiskoulu, 1974.

2. Current Position

- Professor of Networking Technology (tenured), Aalto University, Dept. of Communications and Networking since 2010,
- Professor of Networking Technology (tenured), TKK, 2006 – 2010.
- Professor of Communications Technology (5 year term), TKK, 2001-2006.
- Acting professor of Telecommunications Technology, TKK, 1996-2001.

3. Previous work experience

- Head of Research, Nokia Telecommunications, Switching Systems, 1995 – 1996.
- Member of the CoreTeam, TINA Consortium, NJ, **USA** 1994 – 1995.
- Manager of Product Marketing and Development, Nokia Telecommunications Ltd, **UK**, 1991 – 1994
- Department Manager, Telenokia Oy, Switching Systems, 1987 – 1991
- R&D Team leader and SW designer, Telenokia Oy, Switching Systems, 1980 – 1987

4. Research funding, leadership and supervision

Funding and leadership

- General Chair and organizer of NSS – ICA3PP – IEEE CIT International conference, Helsinki, 2017.
- General Chair and organizer of IEEE TrustCom-BigDataSE-ISPA Conference, 8/2015, Finland.
- Initiator and Director of International Education at ELEC/Aalto, since 1998.
- Numerous projects with competitive funding from TEKES, Finnish Research and Innovation Agency, EU, CELTIC/CELTIC Plus 1997 – 2018.
- Current: TAKE-5 – 5G test network project funded by TEKES (2015-2018), 5G@II, WIVE.

Supervision

- Doctoral thesis at TKK and Aalto University (9 works): Jorma Hirvensalo, 2003, Mika Ilvesmäki, 2005, Zheng Yan 2007, Jose Costa Requena, 2007, Matti Koivisto, 2009, Nicklas Beijar, 2010, Gonzalo Camarillo 2011 (distinction) , Jouni Mäenpää 2013 (distinction), Marcin Matuszewski 2013. Currently supervising two Aalto/ELEC Doctoral School funded PhD students on Customer Edge Switching and several external PhD students.
- Supervised 15 Licentiate of Technology theses and about 300 Master of Science theses since 1996.

5. Awards

- IEEE TrustCom-BigDataSE-ISPA, NSS-ICA3PP-CIT, Distinguished Leadership Award (General Chair), 2015, 2017.
- MEVICO Celtic Project 2009-2013. The project won the Celtic Award in Silver, 3/2013. My group contributed by a demonstrator of a cooperative firewall (Customer Edge Switch) that was well received at a Celtic Event in March 2013.

6. Scientific and societal impact of research

- Number of publications: Peer reviewed journal papers (12), Book Chapters (5), Peer reviewed articles in Conference Proceedings (56).
- Google Scholar H-index is 14.
- Results studied in Doctoral thesis (Replicated Computations in a Distributed Switching Environment. Acta Polytechnica Scandinavica, ISBN 951-666-430-X. ISSN 1237-2404.) included 2 patents that were embedded into the real-time operating system of the DX 200 switching system in 1991 onwards. This saved 30% of effort in creating a new signaling or call control program in all network element types. The code is still serving about 2 Billion customers in mobile network elements by NSN (Nokia) all over the world.
- Customer Edge Switching research at www.re2ee.org.

Relevant Publications on Trust, Security, SDN:

1. Z. Yan, R. Kantola, Y. Shen, "A Generic Solution for Unwanted Traffic Control through Trust Management", New Review of Hypermedia and Multimedia, 2013.
2. Y. Shen, Z. Yan, R. Kantola, Analysis on the Acceptance of Global Trust Management for Unwanted Traffic Control based on Game Theory, Computers &Security.
3. L. Chen, Z. Yan, W. Zhang, R.Kantola, TruSMS: A trustworthy SMS spam control system based on trust management, Future Generation Computer Systems, 7/2014.
4. Z. Yan, X. Li, R. Kantola, Controlling Cloud Data Access Based on Reputation, Mobile Networks and Applications, 3/2015
5. R. Kantola, J. Llorente Santos, N. Beijar, Policy based communications for 5G mobile with customer edge switching, Wiley Security and Communication Networks, 5/2015.
6. J.Costa Requena, R.Kantola, J. Llorente Santos, V. Ferrer Guasch, M. Kimmerlin, A. Mikola, J.Manner, LTE Architecture Integration with SDN, in Software Defined Mobile Networks, Wiley Series in Communications Networking & Distributed Systems, 2015
7. J. Llorente Santos, R. Kantola, N. Beijar, P. Leppäaho, Implementing NAT Traversal with Private Realm Gateway, IEEE ICC 2013.
8. P. Leppäaho, N. Beijar, R. Kantola, J. Llorente Santos, Traversal of Customer Edge with NAT-Unfriendly Protocols, IEEE ICC 2013.
9. Y. Shen, Z. Yan, R. Kantola, "Game Theoretical Analysis of the Acceptance of Global Trust Management for Unwanted Traffic Control", in Proc. of IEEE HPCC 2013, Zhangjiajie, China, Nov. 2013.
10. J. Costa Requena, R. Kantola, J. Llorente Santos, S. Tarkoma, Sofware Defined 5G Mobile Backhaul, 5GU, 2014 Levi, Finland.
11. J. Llorente Santos, R. Kantola, Transition to IPv6 with Realm Gateway 64, ICC 2015.
12. M. Liyanage, I. Ahmed, … R.Kantola, … Security for Future Software Defined Mobile Networks, 9th International Conference on Next Generation Mobile Applications, Services and Technologies (NGMAST,2015), Cambridge, UK.