

CURRICULUM VITAE

(a short version; for more details, see <http://www.cs.tut.fi/~harju/>)

Jarmo Juhani Harju (Born 1954, Seinäjoki, Finland)

Professor of telecommunications, Tampere University of Technology (TUT), Dept. of Communications Engineering

Education

1979 M.Sc. (Dipl. Eng.) in Technical Physics, Helsinki University of Technology
1981 M.Sc. in Mathematics, University of Helsinki
1984 Ph.D. in Mathematics, University of Helsinki

Most Important Academic Positions

1983-85 Assistant, Helsinki University of Technology
1985-86 Research Engineer, Technical Research Centre of Finland
1986-89 Senior Research Engineer, Technical Research Centre of Finland
1989-91 Acting Professor in telecommunications, Lappeenranta University of Technology
1992-95 Professor in telecommunications, Lappeenranta University of Technology
1995- Professor in telecommunications, Tampere University of Technology

1996- Docent (Adjunct Professor), Lappeenranta Univ. of Technology (LUT)

Professional Activities

Examiner of 12 PhD thesis manuscripts: Daniel (Univ. of Helsinki, 2010); Korhonen (Univ. of Helsinki, 2008); Sihvonen (Univ. of Oulu, 2007); Sarolahti (Univ. of Helsinki, 2007); Lundberg (Helsinki Univ. of Technology, 2006); Hansmann (Univ. of Bonn, Germany, 2004); Ilvesmäki (Helsinki Univ. of Technology, 2004); Gurtov (Univ. of Helsinki, 2004); Sarker (Helsinki Univ. of Technology, 2004); Hämäläinen (Univ. of Jyväskylä, 2002); Loukola (Helsinki Univ. of Technology, 1999); Reilly (Helsinki Univ. of Technology, 1999).

Opponent in a doctoral dissertation:

- Ignacio Más, On Admission Control for IP Networks Based on Probing, 2008, KTH, Stockholm, Sweden
- Wolfgang Hansmann, Improving TCP Handover Behavior in Heterogeneous Wireless Environments, 2004, University of Bonn, Germany
- Antti Auer, State testing of embedded software, 1997, University of Oulu

Evaluations of professorship candidates:

- Professorship in war technology, National Defence University, January 2010 (1 candidate)
- Professorship in communication networks, TKK, April 2006 (8 candidates)
- Professorship in the technology for leadership systems, National Defence University, March 2005 (1 candidate)
- Professorship in telecommunications, LUT, March 2005 (2 candidates)
- Professorship in information technology, Åbo Akademi, Sept. 2003 (4 candidates)
- Professorship in computer science, University of Helsinki, Dec. 2001 (2 candidates)
- Professorship in communications software (with emphasis on data security), TKK, April 2001 (1 candidate)
- Professorship in data communications, LUT, Sept. 1997, (4 candidates)

Evaluator of 8 doctorate candidates during 1998-2009: Sayenko, Univ. of Jyväskylä, 2009; Naumov, Univ. of Oulu, 2008; Tarkoma, Helsinki Univ. of Technology, 2007; Heikkinen, Univ. of Helsinki, 2006; Gurtov, Helsinki Univ. of Technology, 2005; Manner, Univ. of Helsinki, 2005; Chakraborty, Helsinki Univ. of Technology, 2001; Pulli, Helsinki Univ. of Technology, 1998.

Supervisor of more than 300 MSc theses in TUT and LUT during 1991 - 2011.

Chairmanships of conferences:

- WWIC 2008, 6th International Conference on Wired/Wireless Internet Communications, May 28-30, 2008, Tampere, Finland.
- EUNICE 2004, 10th Open European Summer School, June 14 - 16, 2004, Tampere, Finland
- 1st - 3rd Lappeenranta Summer Schools on Telecommunications, August, 1992 - 94, LUT, Finland

Program Committee member in the following conferences (not an exhaustive list)

- 5th - 16th EUNICE Open European Summer Schools, 1999 - 2010
- IEEE Local Computer Networks Conferences (LCN) 2000 – 2003, 2007, 2009
- Symposium on performance evaluation of computer and telecommunication systems (SPECTS) 1999-2010
- 19th International Teletraffic Congress, Beijing, China, August 29 – September 2, 2005.
- IEEE INFOCOM 2006, Barcelona, Spain, April 23 - 29, 2006.
- IEEE ICC 2008, Beijing, China, May 19 – 23, 2008.
- IEEE Globecom 2009, 2010
- WWIC 2009, 2010

Member of the editorial board of the following journals

- International Journal of Communication Systems, John Wiley and Sons, 2007 ->
- International Journal of Network Management, John Wiley and Sons, 2008 ->

Reviewer in the following journals (not an exhaustive list)

- IEEE Communications Magazine, IEEE Communications Society
- Computer Networks Journal, Elsevier Science B.V
- Computer Communications, Elsevier Science B.V.
- Performance Evaluation, Elsevier Science B.V.,
- Wireless Communications and Mobile Computing Journal, John Wiley and Sons,
- Journal of Systems Architecture, Elsevier Science B.V.

Reviewer and/or session chair in numerous international conferences (not an exhaustive list):

- ITU Telecom'95, LCN'2000-2003, 2007, 2009, ICC 2001, 2005, 2008, Globecom 2003, 2009, 2010, QoFIS 2003 - 2004, IM 2005, ITC 2005, CoNEXT 2005, INFOCOM 2006.

Scientific positions of trust

- Chairman of the international EUNICE Network (<http://www.eunice-forum.org/>), 2003 - 2004,
- Representative of Finland in the COST Action 290 management committee, 2004 - 2008.
- Member of the Board of the Future Internet Graduate School, since 2009

Academic Activities Abroad

- Short term scientific visit at the University of Bonn (2 weeks) in year 2000
- Presented more than 40 papers in international conferences and seminars

Doctoral Students Supervised

- At TUT: Jani Peltotalo (2010), Roman Dunaytsev (2010), Petros Belimpasakis (2009), Miraj-E_Mostafa (2009), Mikael Linden (2009), Jari Korhonen (2006), Dmitri Moltchanov, (2006), Avadora Dumitrescu (2006), Andrey Krendzel (2005), Yevgeni Koucheryavy (2004), Henry Haverinen (2004), Kimmo Pulakka (2004), Jouni Mikkonen (1999)
- At LUT: Jari Porras (1998)

Active Doctoral Students under my Personal Supervision

B. Silverajan, S. Heikkinen, K. Huhtanen, R. Walsh, M. Serebrennikov, J. Suhonen

Publications

- 16 refereed journal articles e.g. in the International Journal of Communication Systems; Performance Evaluation; Computer Communications; International Journal of Digital Multimedia Broadcasting; Campus Wide Information Systems; IEICE Transactions on Communications; Journal of Internet Engineering.
- more than 120 papers in conference proceedings and books; co-editor of ten books and two journal special issues.

Non-Academic Activities / Expert tasks in society and business

- Consulting for private organizations (e.g. Sonera Oyj, INA Finland Oy)
- Member of the Board of Staselog Ltd., 2002-2007
- Member of the Board of the Research and training foundation of Sonera Oyj 1998 - 2001

SELECTED PUBLICATIONS

5 Most Cited Papers in the Rank Order of ISI Web of Science Citations

Moltchanov, D; Koucheryavy, Y; **Harju, J.** (2006): Cross-layer modeling of wireless channels for data-link and IP layer performance evaluation. COMPUTER COMMUNICATIONS, 29 (7): 827-841 APR 24 2006. **(8 citations in ISI, 12 in Scopus)**

Moltchanov, D; Koucheryavy, Y; **Harju, J.** (2005): Simple, accurate and computationally efficient wireless channel modeling algorithm. LECTURE NOTES IN COMPUTER SCIENCE, 3510: 234-245 2005. **(3 citations in ISI, 3 in Scopus)**

Peltotalo, J; Peltotalo, S; **Harju, J;** et al. (2007): Performance analysis of a file delivery system based on the FLUTE protocol. INTERNATIONAL JOURNAL OF COMMUNICATION SYSTEMS, 20 (6): 633-659 JUN 2007. **(2 citations in ISI, 5 in Scopus)**

Takahashi, T; Asatani, K; **Harju, J;** et al. (2005): Proactive handover scheme based on forwarding router discovery for mobile IP networks. IEICE TRANSACTIONS ON COMMUNICATIONS, E88B (7): 2718-2725 JUL 2005. **(2 citations in ISI, 3 in Scopus)**

Harju, J; Kivimäki, P. (2000): Co-operation and comparison of DiffServ and IntServ: Performance measurements. PROCEEDINGS - CONFERENCE ON LOCAL COMPUTER NETWORKS: 177-186 2000. **(2 citations in ISI, 6 in Scopus)**

10 Other Selected Papers

Moltchanov, D., Koucheryavy, Y., **Harju, J.** (2010): Performance response of wireless channels for quantitatively different loss and arrival statistics. Performance Evaluation vol. 67, Issue 1, 2010, pp. 1-27.

Peltotalo, J., **Harju, J.**, Väättäimöinen, L., Bouazizi, I., Curcio, I.D.D. (2010): RTSP-based mobile peer-to-peer streaming system. *International Journal of Digital Multimedia Broadcasting*, vol. 2010, Issue 470813, pp. 1 – 15.

Huhtanen, K., Vatiainen, H., Keski-Kasari, S. and **Harju, J.** Utilising eduroam™ architecture in building wireless community networks. *Campus Wide Information Systems* vol. 25, Issue 5, 2008, pp. 382-391.

Peltotalo, J., **Harju, J.**, Jantunen, A., Saukko, M., Väättäimöinen, L., Curcio, I., Bouazizi, I. and Hannuksela, M. Peer-to-peer streaming technology survey. *Proceedings of ICN 2008 The Seventh International Conference on Networking*, April 13-18, 2008 Cancun, Mexico, pp 342-350.

Dunaytsev, R., Koucheryavy, Y. **Harju, J.** (2006): TCP NewReno throughput in the presence of correlated losses; The slow-but-steady variant. *Proceedings of the 9th IEEE Global Internet Symposium (in conjunction with IEEE INFOCOM 2006)*, April 28-29, 2006, Barcelona, Spain pp. 115-120.

R. Lehtonen, **J. Harju** (2002): Controlled Multicast Framework. *Proceedings of the Local Computer Networks Conference (LCN 2002)*, Tampa, Florida, USA, November 6 - 9, 2002, pp. 565 - 571.

J. Harju, Y. Koucheryavy, J. Laine, S. Saaristo, K. Kilkki, J. Ruutu, H. Waris, J. Forsten, J. Oinonen (2000): Performance measurements and analysis of TCP flows in a Differentiated Services WAN. *Proceedings of the Local Computer Networks conference (LCN 2000)*, Tampa, Florida, USA, November 8 - 10, 2000, pp. pp. 296 - 303.

J. Harju, T. Hirvi, P. Kivimäki (1999): Measurements about the Quality of Controlled-Load Service. *Proceedings of the IEEE International Conference on Communications (ICC'99)*, Vancouver, British Columbia, Canada, June 6 - 10, 1999, pp. 739 - 743.

J. Porras, J. Ikonen, **J. Harju**: Analyzing the Effect of Distribution to the Simulation on a Network of Workstations. *Simulation*, Vol 72, No. 5 (May 1999), pp. 313 - 319.

K. Arvonen, K. Granö, **J. Harju**, J. Paakki: Experiences with the Integration of Protocol Software Tools. *Computer Communications* 19 (1996) pp. 141 - 151.

2 Most Recent Published or Forthcoming Papers:

Dunaytsev, R., Moltchanov, D.; Koucheryavy, Y., **Harju, J.** (2011): Modeling TCP SACK performance over wireless channels with completely reliable ARQ/FEC, *Journal of Communication Systems*, Wiley, 2011. DOI: 10.1002/dac.1230.

Silverajan, B., **Harju, J.** (2011): Implementation Frameworks for Mobile and Pervasive Networks. In: *Pervasive Computing and Networking*, Edited by Mohammad S. Obaidat, Mieso Denko, and Isaac Woungang, John Wiley & Sons, Ltd, 2011, pp. 301-318.