

VITA

(a short version)

Pekka Juhani Korhonen

Born November 26, 1944, Kuopio, Finland

Professor (Emeritus) of Statistics, Aalto University, School of Business, Dept. of Information and Service Economy, P.O. Box 21220, 00076 Aalto, Helsinki, FINLAND

Education: 1967: B.Sc. in Mathematics, 1968: M.Sc. in Mathematics, 1979: Ph.D. in Applied Mathematics (“A Stepwise Procedure for Multivariate Clustering”), all from the University of Helsinki.

Most Important Academic Positions

1968-81 At the Computing Centre of University of Helsinki

1968-76 Systems Analyst and Chief Systems Analyst

1976-77 Acting Head of Software Section

1977-78 Researcher

1978-81 Head of Software Section (Leave of absence)

1978-79 Acting Associate Professor in Business Information Systems, Vaasa University

1979-81 Acting Associate Professor in Management Science, HSE

1982-86 (Appointed) Associate Professor in Applied Mathematics, Tampere University

1982-86 Acting Professor in Management Science, HSE

1986-88 Associate Professor in Management Science, HSE

1988-12 Professor in Statistics, Aalto University, School of Business

1997-98 Project Leader of DAS-project (=Decision Analysis and Support), IIASA (=International Institute for Applied Systems Analysis).

2005-12 Part-time (50%) Leader of the Doctoral Program at ECON

1.12.12- Professor Emeritus

Professional Activities:

- Finnish Operations Research Society (FORS):
 - President 1982-1984
- Int. Society on Multiple Criteria Decision Making:
 - 92-96: President-Elect;
 - 96-00: President
- Int. Summer Schools on Multicriteria Decision Aid
 - 98-02: Member of the Board;
 - 03-09: President
- Memberships in Scientific Committees:
 - Member of EURO Gold Medal Jury, 1994;
 - Member of Jury for SSIT 94 Software Awards;
 - Member of Jury for MCDM-Awards, 1994-02
 - Member of Jury for MCDM-Awards, 2007-09
 - Chairman of Jury for MCDM-Awards, 2009-
- Memberships in Editorial Boards:

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- 1990-02 Member of Board of Consulting Editors (Theory and Decision),
- 1990-02 Associate Editor (Group Decision and Negotiation)
- 1998-02 Member of Editorial Board (Springer-Verlag/Serie: Lecture Notes in Economics and Mathematical Systems)
- 2003 -05 Associate Editor (Journal of Productivity Analysis)
- 2005 -09 Member of Editorial Board
- Graduate Schools
 - 1995-12 Member of the Board of the Graduate School on Systems Analysis, Decision Making, and Risk Management
 - 2003- 05 Member of the Board of the Graduate School on Statistical Information, Inference, and Data Analysis
 - 2006-09 Member of the Board of the Graduate School in Stochastics and Statistics FGSS
- Several Memberships in (International) Organizing/Program/Advisory Committees
- Evaluated scientific competence of several candidates for Professorships in Finland, Canada, Israel, Thailand, Turkey, and USA.
- Evaluated several candidates in Finland and abroad for various grants and awards.
- Organized Several Clusters/Streams/Several Sessions on various topics in International Conferences and Workshops
- Graduate Schools
 - 1995- Member of the Board of the Graduate School on Systems Analysis, Decision Making, and Risk Management
 - 2003- Member of the Board of the Graduate School on Statistical Information, Inference, and Data Analysis
- Referee for: *Computational Statistics Quarterly*, *Computers and Operations Research*, *European Journal of Operational Research*, *Group Decision and Negotiation*, *IEEE Transactions on Systems, Information Systems and Operational Research*, *International Journal of Production Economics*, *Journal of Computational Optimization and Applications*, *Journal of Heuristics*, *Journal of the Operational Research Society*, *Journal of Management Science and Operations Research*, *Journal of Multi-Criteria Decision Analysis*, *Journal of Optimization Theory and Applications*, *Journal of Statistical Computation and Simulation*, *Management Science*, *LAMSADE-serie*, *Systems Man and Cybernetics*, *Mathematical Modelling*, *Naval Research Logistics Quarterly*, *Omega*, *Ricerca Operativa*, *Siam Journal*, *Socio-Economic Planning Sciences: The International Journal of Public Sector Decision-Making*.
- Evaluated Project Proposals for: Foundation for Research Development (South-Africa), Natural Sciences and Engineering Research Council of Canada, National Science Foundation (U.S.A.), The Academy of Finland.

Academic Activities Abroad:

- Project Leader of the Decision Analysis and Support - Project, IIASA (International Institute for Applied Systems Analysis) (August 1, 1997- December 31, 1998)
- Visiting Professor in Management Science, University of Georgia, 1991-1992
- Participated in a joint research program between the Academy of Finland and the International Research Institute of Management Sciences (MNIIPU), Moscow, 1981-1990
- Provided more than 50 invited and contributed presentations in international conferences and seminars
- Delivered lectures at different universities and research institutes all over the world

Non-Academic Activities:

- Consulting for public organizations (e.g. Puolustustaloudellinen suunnittelukeskus, Alko Ltd., STAKES, Energy Market Authority) and firms (e.g. Yhtyneet Kuvalehdet, SKOPBANK, OKOBANK, SOK, Sanoma Yhtiöt)
- Chairman of the Board of NumPlan Ltd, 1986 - 2002
- Chairman of the Board of Pulse Drive Ltd, 2002 -

Honors

- 1984 IBM PRIZE (together with J. Laakso), Honorable Mention (3rd) for the paper "A Visual Interactive Method for Solving the Multiple Criteria Problem" showing the role of computers in Management Science and Operations Research, at the TIMS XXVI-meeting, Copenhagen, Denmark, June 17-21, 1984.
- 1987 The system VIG (a Multiple Criteria Decision Support System developed by Pekka Korhonen) was a nominated finalist (one out of five) for the national grand prize in information technology for the best software in 1987, Jyväskylä, Finland.
- 1994 George Cantor-Prize Award, International Society on Multiple Criteria Decision Making, Coimbra, Portugal, August 5th, 1994 (See MCDM WorldScan).
- 2001 Member of the Finnish Academy of Science and Letters
- 2002 Ph.D. dissertation supervisor of the year at the Helsinki School of Economic
- 2003 Honorary Chairman of the Finnish Operations Research Society
- 2006 The article by Korhonen & Laakso B.6 published in EJOR 1986 was selected as one among the 30 most influential papers out of ca. 8000 papers published in EJOR over its 30-year lifetime.
- 2006 Huugo Raninen Award
- 2006 MCDS-research achievements (with Jyrki Wallenius) were awarded at the Helsinki School of Economics
- 2011 The best paper award by Malo Pekka, Siitari Piry-Antti, Ahlgren Oskar, Wallenius Jyrki and Korhonen Pekka at the International Workshop on Semantic Aspects of Data Mining.
- 2011 Researcher of the year at Aalto University School of Economics

Doctoral Students Supervised (* Currently Professors)

Hannu Kivijärvi* (1987), Management Science; **Merja Halme*** (1992), Management Science; **Markku Kuula*** (1993), Management Science; **Johanna Bragge** (Pajunen) (1997), Management Science; **Guang-Yuan Yu** (1998), Quantitative Methods of Economics and Management Science; **Tarja Joro** (2000), Quantitative Methods of Economics and Management Science; **Pirja Heiskanen** (2001), Quantitative Methods of Economics and Management Science; **Timo Kuosmanen*** (2001), Quantitative Methods of Economics and Management Science; **Veli-Pekka Heikkinen** (2002), Quantitative Methods of Economics and Management Science; **Mikko Syrjänen** (2003), Quantitative Methods of Economics and Management Science (Winner of third EDAMBA Thesis Competition), **Raimo Voutilainen** (2006); Quantitative Methods of Economics and Management Science; **Pertti Pulkkinen** (2006); Quantitative Methods of Economics and Management Science; **Nasim Nasrabadi** (2010), Tarbiat Moallem University, Department of Mathematics, Tehran, Iran; **Akram Deknokhalaji** (2010), Tarbiat Moallem University, Department of Mathematics, Tehran, Iran; **Ankur Sinha** (2011), Quantitative Methods of Economics and Management Science

Publications:

- 85 refereed journal articles (appeared or forthcoming) in *The Journal of the Operational Research Society*, *Management Science*, *Computational Statistics & Data Analysis*,

Quarterly Publication of the International Research Institute of Management Sciences (MNIIPU), Environment and Planning B: Planning and Design, European Journal of Operational Research, Naval Research Logistics Quarterly, Fuzzy Sets and Systems, Interfaces, Operations Research, VNIISI Publications, Journal of Multi-Criteria Decision Analysis, Belgian Journal of Operations Research, Statistics and Computer Science, Mathematical Modeling, Annals of Operations Research

- 61 papers in conference proceedings and books; co-editor of one book and one journal special issue.
- 79 papers are listed in the *ISI Web of Science* database and 1378 (May. 30, 2013) citations to those papers are recorded.

SELECTED PUBLICATIONS

For the selection of my 20 most important publications, I have first picked my 10 most cited papers in Table below. The publications are ranked according to the citations in the *ISI Web of Science* – database.¹ Then I have listed 5 selected invited papers for special purposes, and final 5 papers are recent papers which I believe to be widely cited.

The content for the last three columns is picked from the *ISI Web of Science* and *ISI Journal Citation Reports*. The *ISI Web of Science* is also used by the authorities of the Helsinki School of Economics for collecting information about the citations at the HSE.

TABLE: List of "Top Ten" Papers (May. 30, 2013)

Journal	Paper #	Citations in ISI Web of Science	Impact Factors of Journals	Rank*
Eur J Oper 1986	B.6	136	1.815	6/77
Nav Res Log 1988	B.17	93	1.038	31/77
Manag Sci 1984	B.2	91	1.733	9/77
Fuzzy Set Syst 1986	B.8	87	1.759	11/245
Manag Sci 1999	B.51	86	1.733	9/77
Eur J Oper 2004	B.59	81	1.815	6/77
Manag Sci 1998	B.50	74	1.733	9/77
Eur J Oper 1992	B.32	73	1.815	6/77
Eur J Oper 2001	B.55	42	1.815	6/77
Manag Sci 2004	B.64	41	1.815	9/77
Total of Top Articles		668		
All 79 ISI-articles		1378		

*) The ordinal number is standing for the rank of the journal according to the impact factor in the category of *Operations Research and Management Science*. The category consists of 75 journals. The exception is the journal *Fuzzy Sets and Systems*. It is ranked in the category *Applied Mathematics* which totally consists of 245 journals.

¹ Totally, 79 of my 87 articles published in international refereed journals have been appeared in the journals listed in the *ISI Web of Science* – database. The articles are published under name *Helsinki School of Economics, Aalto University, School of Economics* or *Aalto University, School of Business*. That number is 7.0 % of all 1126 *ISI*-articles published under name *Helsinki School of Economics, Aalto University, School of Economics* or *Aalto University, School of Business*. The articles are cited 1378 times which is 13.1 % of the total (10498) citations of those 1126 articles. My h-index is 19. The h-index of BIZ is 43.

In the publication list, the letter "B" refers to the articles appeared in refereed journals and the letter "C" to the articles appeared in Books. The numbers refer to the numbers in my complete publication list available on the request.

Ten Most Cited Articles in the Rank Order of Citations

- B.6 **Korhonen, P. and Laakso, J.** (1986): "A Visual Interactive Method for Solving the Multiple Criteria Problem", European Journal of Operational Research, Vol. 24, N:o 2 (February 1986), pp. 277-287. (*The article was selected as one among the 30 most influential papers out of ca. 8000 papers published in EJOR over its 30-year lifetime.*)
- B.17 **Korhonen, P. and Wallenius, J.** (1988): "A Pareto Race", Naval Research Logistics, Vol. 35, N:o 6, pp. 615-623.
- B.2 **Korhonen, P., Wallenius, J. and Zionts, S.** (1984): "Solving the Discrete Multiple Criteria Problem Using Convex Cones", Management Science, Vol. 30, N:o 11 (November 1984), pp. 1336-1345, (Reviewed in Mathematical Reviews, Vol. 18, 86b:90122, February 1986, p. 896.)
- B.8 **Carlsson, C. and Korhonen, P.** (1986): "A Parametric Approach to Fuzzy Linear Programming", Fuzzy Sets and Systems 20, pp. 17-30.
- B.51 **Halme, M., Joro, T., Korhonen, P., Salo, S., and Wallenius, J.** (1999): "A Value Efficiency Approach to Incorporating Preference Information in Data Envelopment Analysis", Management Science, Vol. 45, N:o 1, pp. 103-115.
- B.59 **Korhonen, P. and Luptacik, M.** (2004): "Eco-Efficiency Analysis of Power Plants: An Extension of Data Envelopment Analysis", European Journal of Operational Research 154, pp. 437-446.
- B.50 **Joro, T., Korhonen, P. and Wallenius, J.** (1998): "Structural Comparison of Data Envelopment Analysis and Multiple Objective Linear Programming", Management Science, Vol. 44, N:o 7, pp. 962-970.
- B.59 **Korhonen, P. and Luptacik, M.** (2004): "Eco-Efficiency Analysis of Power Plants: An Extension of Data Envelopment Analysis", European Journal of Operational Research 154, pp. 437-446.
- B.32 **Korhonen, P., Moskowitz, H. and Wallenius, J.** (1992): "Multiple Criteria Decision Support - A Review", European Journal of Operational Research, Vol. 63, N:o 3, December 1992, pp. 361 - 375.
- B.55 **Korhonen, P., Tainio, R. and Wallenius, J.** (2001): "Value Efficiency Analysis of Academic Research", European Journal of Operational Research, Vol. 130, N:o 1, pp. 121-132.
- B.64 **Korhonen, P. and Syrjänen, M.** (2004): "Resource Allocation Based on Efficiency Analysis", Management Science, 50, No. 8, pp. 1134-1144.

Five Other Selected Articles

The following invited articles have been published in a volume/special issue in honor of one of the leading persons in our research area.

- C.41 **Korhonen, P.** (1997): "Reference Direction Approach to Multiple Objective Linear Programming: Historical Overview", in Karwan, M., Spronk, J., and Wallenius, J. (Eds.): Essays in Decision Making, (A Volume in Honour of Stanley Zionts), Springer, pp. 74-92.

- C.47 **Korhonen, P., and Yu G. Y.** (2000): "Quadratic Pareto Race", in Shi, Y. and Zeleny, M. (Eds.), New Frontiers of Decision Making for the Information Technology Era, World Scientific Publishing Co., pp. 123-142. (A Volume in Honour of Po-Lung Yu)
- C.51 **Korhonen, P.** (2001): "Searching the Efficient Frontier in Data Envelopment Analysis", in Bouyssou, D., Jacquet-Lagrange, E., Perny, P., Słowiński, R., Vanderpooten, D., and Vincke, Ph. (Eds.), Aiding Decisions with Multiple Criteria (Essays in Honour of Bernard Roy), Kluwer Academic Publishers, pp. 543-558.
- B.58 **Korhonen, P., Siljamäki, A., and Soismaa, M.** (2002): "Use of Value Efficiency Analysis in Practical Applications", The Journal of Productivity Analysis, Vol. 17, N:o 1/2, pp 49-64. (A Special Issue in Honour of William Cooper)

The following paper is an invited review article published in the Encyclopedia of Optimization:

- C.44 **Korhonen, P.** (2001): "Multiple Objective Programming Support", in Floudas, A. and Pardalos, P. (Eds.): Encyclopedia of Optimization, Kluwer Academic Publishers.

Five Recent Published Articles (which will probably be quite widely cited)

- B.74 **Thiele, L., Miettinen, K., Korhonen, P. and Molina, J.** (2009): "A Preference-based Evolutionary Algorithm for Multiobjective Optimization", Evolutionary Computation 13 (3), pp. 411-436.
- B.78 **Deb, K., Sinha, A., Korhonen, P. J., and Wallenius, J.** (2010): "An Interactive Evolutionary Multiobjective Optimization Method Based on Progressively Approximated Value Functions", IEEE Transactions on Evolutionary Computation 14 (5),2 pp. 723-739.
- B.77 **Dehnokhalaji, A., Korhonen, P. J., Köksalan, M., Nasrabadi, N., and Wallenius, J.** (2011): "Convex Cone-Based Partial Order for Multiple Criteria Alternatives", Decision Support Systems 51, pp. 256-261.
- B.80 **Malo, P., Sinha, A., Wallenius, J., and Korhonen, P.** (2011): "Concept-Based Document Classification Using Wikipedia and Value Function", Journal of the American Society for Information Science and Technology, 62, pp. 2496-2511.
- B.82 **Korhonen, P., Silvennoinen, K., Wallenius, J., and Öörni, A.** (2012): "Can a Linear Value Function Explain Choices? An Experimental Study", European Journal of Operational Research 219, pp. 360-367.
- B.83 **Halme, M. and Korhonen, P.** (2012): "Using Value Efficiency Analysis to Benchmark Non-homogeneous Units", (Forthcoming in the International Journal of Information Technology and Decision Making)