

Curriculum Vitae

Gary R. Waissi

Email: gary.waissi@asu.edu

Homepage: www.public.asu.edu/~gwaissi

EDUCATION

Ph.D., Civil Engineering (focus Operations Research), University of Michigan, Ann Arbor, Michigan, U.S.A., 1985.

Tekniikan lisensiaatti (TL, Licentiate of Engineering, Civil Engineering, Transportation), Helsinki University of Technology (Teknillinen korkeakoulu), (Aalto University), Espoo, Finland, 1989.

Diplom-Ingenieur, Civil Engineering, University of Technology Darmstadt (Technische Universität Darmstadt), Darmstadt, Germany, 1975.

Ph.D. THESIS

Acyclic Network Generation and Maximal Flow Algorithms for Single Commodity Flow, University of Michigan, Ann Arbor, Michigan, 1985, Ph.D. dissertation. (Co-Chairs: D.E. Cleveland, Civil Engineering, K.G. Murty, Industrial and Operations Engineering), University Microfilms International, 1986.

LICENTIATE OF ENGINEERING THESIS

Modeling, Data Standardization and Optimization in Transportation and Network Performance, Helsinki University of Technology (Aalto University), Espoo, Finland, Licentiate of Engineering thesis. (Advisors: S. Lyly, and J. Hyyppä), 1989.

EXPERIENCE

2014 – Professor, The Polytechnic School, Ira A. Fulton Schools of Engineering, Arizona State University

2008 – 2014 Professor, College of Technology and Innovation, Arizona State University

2008 – 2009 Associate Vice President for Global Academic Programming, Office of the Vice President for Global Engagement (OVPG), Arizona State University

2006 – 2008 Dean, School of Global Management and Leadership, Arizona State University

2006 – 2008 Professor of Management, School of Global Management and Leadership (SGML), Professor of Mathematics and Computation, NCIAS, Arizona State University (joint appt.)

2000 – 2006 Professor of Operations Research, School of Management, U of Michigan-Dearborn

2000 – 2005 Dean, School of Management, University of Michigan-Dearborn

1998 – 2000 Acting Dean of the School of Management, University of Michigan-Dearborn

1995-1998 Chair, Department of Management Studies, School of Management, University of Michigan-Dearborn

1992-2000 Associate Professor of Management Science, School of Management, University of Michigan-Dearborn

1986-1992 Assistant Professor of Management Science, School of Management, University of Michigan-Dearborn

1986/1992-97 Adjunct Professor, Civil and Environmental Engineering, University of Michigan, Ann Arbor

1982-1986 Graduate Student Research Assistant, University of Michigan Transportation Research Institute (UMTRI), Ann Arbor; and Department of Industrial and Operations Engineering (1985), University of Michigan, Ann Arbor.

1979-1982 Project Manager (Project Engineer 1979), Philipp Holzmann AG, Frankfurt am Main, Germany/Horicon Ltd., Nigeria; Projects in Nigeria, Africa.

1977-1979 Research- and Teaching Assistant, Department of Civil Engineering, Transportation and Traffic Engineering, Helsinki University of Technology/Aalto University, Espoo, Finland. (Teknillinen korkeakoulu (tkk), Rakennusosasto, Liikennelaboratorio).

APPOINTMENTS/AWARDS

- 2011 Honorary Consul of Finland to Arizona and New Mexico, Ministry of Foreign Affairs of Finland, Exequatur April 14, 2011, U.S. Department of State, Washington DC.
- 2006 Knight of the Order of the Lion of Finland, First Class, President of the Republic of Finland, Tarja Halonen, December 6, 2006.
- 2006 Professor Emeritus of Operations Research, University of Michigan, Regents of the University of Michigan, July 21, 2006.
- 2002 – 2008 Trustee, Board of Trustees, Finlandia University, Hancock, Michigan.
- 1998 – 2007 Honorary Consul of Finland to Michigan, Ministry of Foreign Affairs of Finland; Exequatur October 9, 1998, by the U.S. Department of State, Washington, DC.
- 1999 – 2005 President, Beta Gamma Sigma Chapter, University of Michigan-Dearborn.

PUBLICATIONS/JOURNAL ARTICLES (available at www.public.asu.edu/~gwaissi)

1. A Simple Model for Expected Exchange Rate $E(s)$ of Currency - It is about the present not the future!, (in review, author).
2. Volumetric Expansion Above the Piston Head and Impact on Power Output - A Comparison of the Formula One Engine and the Waissi Engine, (in review, co-author with Robert Waissi).
3. Cloud-based Home Energy Management (HEM) and Modeling of Consumer Decisions, *International Journal of Smart Home (IJSH)*, (co-author with P. Padmanabhan*), Vol. 10, No. 8, 2016.
<http://dx.doi.org/10.14257/ijsh.2016.10.8.21>
4. Automation of Strategy Using IDEF0 – A Proof of Concept, *Operations Research Perspectives (ORP)*, Elsevier, June 1, 2015, (co-author with M. Demir*, J. Humble, B. Lev).
<http://dx.doi.org/10.1016/j.orp.2015.05.001>
5. Competitiveness of Small- and Medium Enterprises of the Arizona Aerospace and Defense Supply Chain, *Journal of Logistics Management*, Scientific Academic Publishing, (Volume 2, Number 1, May 2013, <http://journal.sapub.org/logistics>), (co-author with J. Humble and M. Demir*).
doi:10.5923/j.logistics.20130201.03
6. Sustainable Supply Chain Management: SMEs in Arizona Aerospace & Defense Industry, *Proceedings of the 43rd Annual Meeting of the Decision Sciences Institute*, San Francisco, CA, November 2012 (co-author with Jane Humble and Huiwen Chang*, refereed).
<https://asu.pure.elsevier.com/en/publications/sustainable-supply-chain-management-smes-in-arizona-aerospace-amp-2>
7. On Healthcare Reform – A Systems Engineering Approach, *Proceedings of the 41st Annual Meeting of the Decision Sciences Institute*, San Diego, CA, November 2010 (author, refereed).
<http://www.proceedings.com/10694.html>
8. Developing and Launching an Online MBA, *Journal of Informatics Education Research*, Summer 2004, Volume 6, Number 2, pp.27-35, 2004, (co-author with L. Freeman, T. Landon, and I. Daykin). Also available at <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1864&context=amcis2003>
9. Transformation of the Unifying Density to the Normal Distribution, *Applied Mathematics Letters*, Pergamon Press, Elsevier Science Ltd, Vol. 11, No. 2, pp. 45-48, 1998, (author, refereed).
[http://dx.doi.org/10.1016/S0893-9659\(98\)00009-3](http://dx.doi.org/10.1016/S0893-9659(98)00009-3)
10. A Sigmoid Approximation of the Standard Normal Integral, *Applied Mathematics and Computation*, Elsevier Science Publishing, Vol. 77, pp. 91-95, 1996, (co-author with Donald F. Rossin, refereed).
doi:10.1016/0096-3003(95)00190-5
11. Internal Combustion (IC) Engine with Minimum Number of Moving Parts, *SAE Special Publications - Futuristic Concepts in Engines and Components*, SAE, Warrendale, PA 1108, pp. 61-64, 1995; (author, refereed). Also Technical Paper # 950090, 1995-02-01. <http://papers.sae.org/950090/>
12. An Improved Unifying Density Function, *Applied Mathematics Letters*, Pergamon Press, Vol. 7, Nr. 5, pp. 71-73, 1994. (author, refereed). [http://dx.doi.org/10.1016/0893-9659\(94\)90076-0](http://dx.doi.org/10.1016/0893-9659(94)90076-0)
13. Detroit Goes 'Global', *OR/MS Today*, Operations Research Society of America (ORSA), August 1994. (co-author with Kenneth Chelst).
14. A Unifying Probability Density Function, *Applied Mathematics Letters*, Pergamon Press, Vol. 6, Nr. 5, pp. 25-26, 1993. (author, refereed). DOI:10.1016/0893-9659(93)90093-3
15. A New Polynomial Algorithm for Maximum Value Flow with an Efficient Parallel Implementation, *Naval Research Logistics*, John Wiley, Vol. 40, pp. 393-414, 1993. (author, refereed).

16. A New Karzanov-Type $O(n^3)$ Max-Flow Algorithm, *Mathematical and Computer Modelling*, Pergamon Press, Vol 16, Number 2, pp. 65-72, 1992. (author, refereed). [http://dx.doi.org/10.1016/0895-7177\(92\)90007-8](http://dx.doi.org/10.1016/0895-7177(92)90007-8)
17. Worst Case Behavior of the Dinic Algorithm, *Applied Mathematics Letters*, Pergamon Press, Vol 4, Number 5, pp. 57-60, 1991. (author, refereed). [http://dx.doi.org/10.1016/0893-9659\(91\)90145-L](http://dx.doi.org/10.1016/0893-9659(91)90145-L)
18. A New $O(n^2)$ Shortest Path Algorithm, *Applied Mathematics and Computation*, Elsevier Science Publishing, Vol 37, pp. 111-120, 1990. (author, refereed). [doi:10.1016/0096-3003\(90\)90039-6](https://doi.org/10.1016/0096-3003(90)90039-6)
19. Assessment of Operational Feasibility, Anticipated Quality and Cost Performance of a New Exterior Coating System in Automotive Manufacturing, *Journal SAE 1989 Transactions*, Vol 98, pp. 231-240; (co-author with P. Porras, refereed). Also published as a Technical Paper # 890356, 1989-02-01. <http://papers.sae.org/890356/>
20. Sight Distance Relationships in Horizontal Curves, *Journal Transportation Research Record*, TRR 1122, Geometric Design and Operational Effects, 1987, pp. 96-107. (co-author, with D.E. Cleveland, refereed).
21. Worldwide Accident Data Standardization, *UMTRI Research Review*, The University of Michigan Transportation Research Institute, Vol. 17, No. 6, 1987, pp. 1-27. (co-author with James O'Day).
22. Stopping Sight Distance Parameters, *Journal Transportation Research Record*, TRR 1026, Evaluation Methods and Design and Operational Effects of Geometrics, 1985, pp. 13-23. (co-author, with D. Cleveland, L. Kostyniuk, P. Olsson and P. Fancher, refereed).
23. Planung und Bau einer Hafenanlage in Nigeria, (Design and Construction of a Port Facility in Nigeria), *Journal Tiefbau-Ingenieurbau-Strassenbau*, Sept. 1982, Bertelsmann Fachzeitschriften, West-Germany. (co-author, with J. Legal and B. Blank, refereed, in German); ISSN 0340-5099.
24. Neues Verfahren für PKW-Motorisierungs-Prognosen, (A New Method for Forecasting of Passenger Car Population), *Journal Strassen-Verkehrstechnik*, Vol. 5, Sept./Oct. 1979, Kirschbaum Verlag, West-Germany. (author, refereed, in German).

PATENTS

1. U.S. Pat. No. 8,875,673 B2, Crankdisk Bearing Support for the Waissi Internal Combustion Engine; United States Patent and Trademark Office, co-inventor with Robert Waissi, issued November 4, 2014.
2. U.S. Pat. No. 8,543,240 B1, *Alternative Crankdisk Bearing Support for the Waissi Internal Combustion Engine*; United States Patent and Trademark Office, co-inventor with Robert Waissi, issued September 17, 2013.
3. U.S. Pat. No. 8,109,244 B1, *Crankdisk Bearing Alternatives for the Waissi Type Opposed Piston Internal Combustion Engine*; United States Patent and Trademark Office, issued February 7, 2012.
4. U.S. Pat. No. 5,402,755, *Internal Combustion (IC) Engine*, United States Department of Commerce, Patent and Trademark Office, issued April 4, 1995.

RESEARCH PROJECTS

1. Waissi, G. (PI), Humble, J. (Co-PI), Demir, M., Interactive Visualization of the Aerospace and Defense Supplier Database, #70NANB10H192 funded by the Arizona Manufacturing Extension Partnership (Az MEP)/ NIST; July 1, 2011 – June 30, 2012. <http://129.219.40.44/adsr/Default.aspx>
2. Waissi, G. (PI), Humble, J. (Co-PI), Demir, M., Next Generation Manufacturing Study – Arizona Aerospace Supply Chain; #70NANB10H192, funded by the Arizona Manufacturing Extension Partnership (Az MEP); July 1, 2010 – June 30, 2011. <http://adrc.asu.edu/node/104> and <http://129.219.40.44/adsr/Default.aspx>
3. Shunk, D. (PI), Humble, J. (Co-PI), Waissi, G. (Co-PI), Aerospace & Defense Research Collaboratory, Virtual Mentor for Defense Acquisitions, VM-1.0, funded by the Science Foundation Arizona (SFAz); November 2010 – September 30, 2011. <http://adrc.asu.edu/node/21> and <http://129.219.40.44/adsr/Default.aspx>

Research Proposals (not funded)

1. Waissi, G. R. (PI), Cooke, N.J. (Co-PI), Lindquist, T.E., (Co-PI), Cho, S., Qiu, Y., Filley, R., Industry Partners: Byrne, P., Schatz, H., Grayson, R., A Smart Large Scale Service System to Enable and Support End-to-End Collaboration in a Supply Chain, limited submission internal ASU for NSF Program PFI:BIC, not selected, October 14, 2015

2. Waissi, G. R. (PI), Humble, J.E. (Co-PI), Intelligent Strategy Model for Small- and Medium Manufacturing Enterprises, limited submission internal ASU for NSF Program 14-610 PFI:BIC, not selected, October 14, 2014.
3. Waissi, G. (PI), Humbe, J. (Co-PI), Demir, M., IDEF0 Model for Strategy of Small- and Medium Manufacturing Enterprises, proposal submitted to the National Science Foundation (NSF), SES – Decision, Risk and Management Science program, January 2014.

BOOKS

1. *Applied Statistical Modeling*, 2nd Edition, an electronic textbook, Arizona State University, January 4, 2008, (updated February 16, 2009) <http://www.public.asu.edu/~gwaissi/>.
2. *Applied Statistical Modeling*, 1st Edition, an electronic textbook, University of Michigan-Dearborn, School of Management, June 6, 2002.
3. Delfi-menetelmä, (The Delphi Method), Teknillinen korkeakoulu, Tietekniikka, (University of Technology Helsinki, Department of Civil Engineering), Espoo, Finland, Vol. 6, 1979, 43 pp. (author, in Finnish); ISBN = 951751610X, 9789517516105
4. Arvoanalyysi, (Value Analysis), Teknillinen korkeakoulu, Tietekniikka, (University of Technology Helsinki, Department of Civil Engineering), Espoo, Finland, Vol. 5, 1979, 49 pp. (author, in Finnish); ISBN = 9517516096, 9789517516099.

BOOKS in preparation

5. *Introduction to Statistics and Probability*, an e-book, to appear in 2016-2017.
6. *Introduction to Modeling of Systems* (linear programming, integer programming, network modeling, heuristic modeling, multi-attribute modeling), an e-book, to appear in 2016-2017.

Non-refereed Papers and Publications

1. The Career of Automotive Power Train Genius Erkki A. Koivunen, *Nordic Reach*, No. 16, Vol. 19, February 2006 (Editor-in-chief: Ulf Mårtensson), pp 46-47. (published)
2. Foreword for the book *Between Earth and Sky – The Work & Way of Working of Eero Saarinen*, by Brian Carter and Balthazar Korab, Editor Brian Carter, The University of Michigan, Alfred Taubman College of Architecture + Urban Planning, ISBN 1-891197-26-6, 2003 (published).

BOOK REVIEWS (published as noted)

1. Industrial Statistics, Industrial Press, text book and proposal review, May 2013 (unpublished).
2. A Leader's Guide to Effective Change Management, Routledge Publishing, text book and proposal review, December 2009 (unpublished).
3. Applied Management Science 2nd Ed, John Lawrence and Barry Pasternack, text book and proposal review for a 3rd edition, Wiley, February 2006 (unpublished).
4. Quantitative Methods for Portfolio Analysis - MTV Model Approach, Takeaki Kariya, 1993, Kluwer Academic Publishers, Dordrecht, The Netherlands, 308 pp., *Journal Interfaces*, Vol. 26, No.2, pp. 115-117, March-April 1996.
5. Operations Research - Deterministic Optimization Models, Katta G. Murty, 1995, Prentice Hall, New Jersey, 581 pp., *Journal Interfaces*, Vol. 25, No. 6, November-December 1995.
6. Network Flows - Theory, Algorithms, and Applications, R.K. Ahuja, T.L. Magnanti, J.B. Orlin, 1993, Prentice Hall, New Jersey, 846 pp., *Journal Interfaces*, Vol. 24, No. 4, July-August 1994.
7. Network Programming, Katta G. Murty, 1992, Prentice Hall, New Jersey, 623 pp., *Journal Interfaces*, Vol. 23, Number 2, pp. 132-133. March-April 1993.
8. Transport Planning for Third World Cities, Dimitriou, H.T. (Editor), 1990, Routledge, London, U.K., 432 pp., *Journal Interfaces*, Vol. 21, Number 4, pp. 163-165, July-August 1991.
9. Design and Planning of Engineering Systems, Meredith et al. Prentice Hall, text book and proposal review for Prentice Hall, March 1992 (unpublished).

RESEARCH REPORTS and SOFTWARE PROGRAMS (published as noted)

1. *Strategic Needs Assessment for e-Learning*, Final Report, the Central Bank of the Republic of Azerbaijan, Financial Monitoring Service (FMS), Azerbaijan Financial Sector Stability Program (FSSP), for the Bankworld Inc., Washington D.C., funded by the USAID, 2011. (unpublished).

2. *Strategic Assessment, the Kazakhstan Economic University (KazEU)*, Final Report, for the William Davidson Institute (WDI), University of Michigan), funded by the Eurasia Foundation of Central Asia (EFCA); June 30, 2010 (unpublished).
3. *Assessment of the School of Finance and Banking (SFB) for the Strategic Plan*, Final Report, Kigali, Rwanda, (for the William Davidson Institute (WDI), University of Michigan; funded by the Rwandan Ministry of Education; June 2006, (unpublished).
4. *International Business School – “Kelajak Ilmi”*, Status Report, pp. 31 + nine Appendices, the William Davidson Institute, at the University of Michigan, Ann Arbor, January 19, 2006. (unpublished).
5. *LP Network Problem Generator Programs*. Final Report and Software, DIMACS, Rutgers University, New Jersey, June 1991, pp. 1-36, (author, published). Programs placed in public domain by DIMACS, Rutgers University, New Jersey.
<http://www.mmnt.net/db/0/0/dimacs.rutgers.edu/pub/netflow/generators/network>
See also book: Network Flows and Matching, David S. Johnson, Catherine C. McGeoch (Eds.), *DIMACS Series in Discrete Mathematics and Theoretical Computer Science*, Vol. 12, American Mathematical Society, 1993, pp. 1-592. (pp. 26; pp. 34-40; pp.49, 50, 53, 55,56, 62; pp. 80, 83-86; pp. 111-112, 117; pp.579, 580.)
6. <mxnetgen.exe>, a max-flow solver program, a software implementation of the algorithm by Gary Waissi to solve maximum flow LP network problems. The algorithm is published in an article "A New Polynomial Algorithm for Maximum Value Flow with an Efficient Parallel Implementation", *Naval Research Logistics*, John Wiley, Vol. 40, pp. 393-414, 1993. (see list of journal articles).
<http://elib.zib.de/pub/Packages/mp-testdata/generators/index.html>
<http://www.mmnt.net/db/0/0/dimacs.rutgers.edu/pub/netflow/maxflow/solver-2>
<http://www.mmnt.net/db/0/0/dimacs.rutgers.edu/pub/netflow/generators/network/waissi/>
<http://www.mmnt.net/db/0/0/dimacs.rutgers.edu/pub/netflow/generators/network/waissi/tp55>
See: Network Flows and Matching, David S. Johnson, Catherine C. McGeoch (Eds.), *DIMACS Series in Discrete Mathematics and Theoretical Computer Science*, Vol. 12, American Mathematical Society, 1993, pp. 1-592.
7. *Worldwide Accident Data Standardization*, Final Report, The University of Michigan Transportation Research Institute (UMTRI), Volume I and Volume II, UMTRI-86-48-1 and UMTRI-86-48-2, Detroit, Michigan, October 1986, pp. 1-279, (co-author, with James O'Day, published).
8. *Transit Action Performance Model (TAPM)*, Final Report and Software, U.S. Department of Transportation (U.S. DOT), Urban Mass Transportation Administration (UMTA), Report UMTA-MI-11-0008-02, May 1986, pp. 1-54, (co-author, with D.E. Cleveland and W. Wang, published).
9. Effects of Intersection Safety Improvements on Highway Accidents: A Synthesis of Prior Research, Transportation Research Board (TRB), Washington, D.C., 1986, pp. 1-55, appendices, (co-author, with D.E. Cleveland, published).
10. Traffic Engineering for Public Transportation: A Manual for Practice, Final Report, Urban Mass Transportation Administration (UMTA), pp. 1-231, and six appendices, 1986, (co-author, with H.S. Levinson, D.E. Cleveland, L.P. Kostyniuk, published).

CONFERENCES (abstract or proceeding published as noted)

1. Automation of an IDEF0-based Strategy Model using Neural Networks, INFORMS Business Analytics 2017, co-author with Kumail Selani (upcoming); April 2-4, 2017.
2. Sustainable Supply Chain Management: 2013 Survey of Arizona's Aerospace & Defense Supply Chain (paper ID: 13R0450), PICMET, San Jose, CA. (co-author with Jane Humble).
3. Sustainable Supply Chain Management: SMEs in Arizona Aerospace & Defense Industry, *43rd Annual Meeting of the Decision Sciences Institute*, San Francisco, CA. (co-author with Jane Humble), November 2012.
4. Collaboration to Foster Innovation Across the Supply Chain, Innovation in a Sustainable Supply Chain – A Global Challenge, *Aerospace Innovation Forum, Aero Montreal*, Montreal, Canada, December 4-8, 2011. (invited speaker and panelist). <http://www.aeromontreal.ca/> ; <http://www.aeromontreal.ca/speaker-presentations/>
5. Mapping the Characteristics of Arizona's Aerospace and Defense Supply Chain, SC-22, *42nd Annual Meeting of the Decision Sciences Institute*, Boston, MA. (co-author with J. Humble, M. Demir, B. Bhandari, R. Modi), November 2011.

6. Development of an Interactive Online Virtual Mentor for the US DoD Acquisition System, SC-53, *42nd Annual Meeting of the Decision Sciences Institute*, Boston, MA. (co-author with D. Shunk, J. Humble), November 2011.
7. On Healthcare Reform – A Systems Engineering Approach, *41st Annual Meeting of the Decision Sciences Institute*, San Diego, California, (author, refereed, paper published in the proceedings), available via DSI and at www.public.asu.edu/~gwaissi , November 20-23, 2010.
8. The Challenge of Assessing Faculty Intellectual Contributions: Results from a Preliminary Exploration, co-author with Stephen Barnett, Arizona State University, Donald L. Sparks, The Citadel, *Academy of Business Education, Financial Education Association Annual Meeting*, Hilton Head, South Carolina, USA, September 18, 2008.
9. Developing and Launching an Online MBA: Key Decisions, Experiences, and Success Factors, co-author with Daykin, Ian; Freeman, Lee; Landon, Timothy; and Waissi Gary; AMCIS 2003 Proceedings, Paper 398, August 4-5, 2003, Tampa, FL.
<http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1864&context=amcis2003>
10. Teaching on-line (a panel discussion; moderator John Lawrence), *INFORMS 2002*, San Jose, November 2002.
11. Development of a web-based Course (tutorial), *IFORS 2002*, Edinburgh, July 8-12, 2002.
12. On Exchange rate Modeling, *CORS-SCRO '99*, 41st National Conference of the Canadian Operational Research Society (CORS), Windsor, Ontario, Canada, June 7-9, 1999, (abstract published).
13. Exchange Rate Modeling using Variables of Economic Interaction, *EURO 22/1, 16th European Conference on Operational Research*, Brussels, Belgium, July 12-15, 1998, (abstract published).
14. Pascal Programs for LP Test Network Generation, *INFORMS International Israel*, June 28-July 1, 1998, (abstract published).
15. On the Expected Exchange Rate E(s) - A Fuzzy Logic Approach, *INFORMS Fall 1997 Meeting*, Dallas, TX, October 25-29, 1997, (invited presentation, abstract published).
16. Transformation of the Unifying Density Function to the Normal Distribution, *INFORMS Spring 1997 Meeting*, San Diego, CA, May 4-7, 1997 (abstract published).
17. Internal Combustion (IC) Engine with Minimum Number of Moving Parts, *SAE International Congress and Exposition*, , Detroit, MI, February 27-March 2, 1995,; SAE Technical Paper # 950090; 1995-02-01. DOI: 10.4271/950090; (author, refereed proceeding); <http://papers.sae.org/950090/> .
18. An Improved Unifying Density Function, *ORSA/TIMS 1994 Joint National Meeting*, Detroit, MI, October 23-26, 1994, (abstract published).
19. A Unifying Probability Density Function, *ORSA/TIMS 1993 Joint National Meeting*, Phoenix, AZ, October 23-26, 1993, (abstract published).
20. The $O(n^3)$ Barrier in Solving the Max-Flow Problem, *1st Industrial Engineering Research Conference*, Chicago, IL, May 20-21, 1992, invited presentation, (abstract published).
21. Solving the Maximum Value Flow Problem in $< O(n^3)$, *ORSA/TIMS 1992 Joint National Meeting*, Orlando, FL, April 26-29, 1992, (abstract published).
22. A New Network Generator for Max-Flow Phase Algorithms, *ORSA/TIMS 1991 Joint National Meeting*, Anaheim, CA, November 3-6, 1991, (abstract published).
23. A New Karzanov-Type $O(n^3)$ Max-Flow Algorithm, *ORSA/TIMS 1991 Joint National Meeting*, Nashville, TN, May 12-15, 1991, (abstract published).
24. Four Network Problem Generator Programs, *ORSA/TIMS 1990 Joint National Meeting*, Philadelphia, PA, October 29-31, 1990, (abstract published).
25. A New Max-Flow Algorithm with an Efficient Parallel Implementation, *ORSA/TIMS 1990 Joint National Meeting*, Philadelphia, PA, October 29-31, 1990, (abstract published).
26. Assessment of Operational Feasibility, Anticipated Quality and Cost Performance of a New Exterior Coating System in Automotive Manufacturing, *SAE International Congress and Exposition*, Detroit, MI, February 27-March 3, 1989, Technical Paper # 890356, 1989-02-01 (co-author with Petri Porras, refereed proceeding). <http://papers.sae.org/890356/>
27. An Efficient Shortest Path Algorithm, *ORSA/TIMS 1988 Joint National Meeting*, Washington, D.C., April 25-27, 1988, (abstract published).
28. Solving the Transportation Problem using Bipartite Networks, *ORSA/TIMS 1987 Joint National Meeting*, St. Louis, MO, October 25-28, 1987, (with R. Cowan), (abstract published).
29. k-th Shortest Path and the Sensitivity of a CPM network, *ORSA/TIMS 1987 Joint National Meeting*, St. Louis, MO, October 25-28, 1987, invited presentation, (abstract published).

30. Computational Complexity of the Outnetwork and NBF algorithms and Some Computational Results, *ORSA/TIMS 1987 Joint National Meeting*, New Orleans, Louisiana, May 4-6, 1987, (abstract published).
31. Sight Distance Relationships Involving Horizontal Curves, National Research Council/ Transportation Research Board, *NRC/TRB 1987 66th Annual Meeting*, Washington, D.C., January 12-15, 1987, (abstract published, refereed).
32. A New Algorithm for the Maximum Value Flow Problem, *ORSA/TIMS 1986 Joint National Meeting*, Miami Beach, FL, October 27-29, 1986, (abstract published).

ACKNOWLEDGED RESEARCH CONTRIBUTIONS TO PROJECTS and BOOKS

1. Network Flows and Matching, First DIMACS Implementation Challenge, Edited by David S. Johnson and Catherine C. McGeoch, *DIMACS Series in Discrete Mathematics and Theoretical Computer Science*, American Mathematical Society (AMS), Volume 12, 1993, pp. 1-592, (Use of Waissi's original computer programs; several original programs translated to C and to run under UNIX by J. Setubal, University of Washington, and by C. McGeoch, Amherst College).
2. The First DIMACS International Algorithm Implementation Challenge: The Core Experiments, C. McGeoch, July 3, 1991.
3. The First DIMACS International Algorithm Implementation Challenge: The Benchmark Experiments, C. McGeoch, January 7, 1992.
4. Network Programming, K.G. Murty, Prentice Hall, Englewood Cliffs, NJ, pp. 1-623, 1992, (see Chapter 2, pp. 93-167).
5. Parameters Affecting Stopping Sight Distance, NCHRP Report 270, Transportation Research Board (TRB), Washington, D.C., June 1984, pp. 1-169.

SERVICE TO JOURNALS

1. Associate Editor, journal *Interfaces*, section Book Reviews, INFORMS, 1994-1995.
2. Associate Editor, journal *IIE Transactions*, Institute of Industrial Engineers, 1991-1993.
3. Reviewer for the journals *Naval Research Logistics* and *IIE Transactions*.

NATIONAL AND INTERNATIONAL CONFERENCE COMMITTEES

1. Invited speaker and panelist, Collaboration to Foster Innovation Across the Supply Chain, Innovation in a Sustainable Supply Chain – A Global Challenge, *Aerospace Innovation Forum, Aero Montreal*, Montreal, Canada, December 4-8, 2011. <http://www.aeromontreal.ca/>
2. Invited panelist, Greater Phoenix Chamber of Commerce, 2008 Workforce Development Conference, *Education Resource Panel – Public and Private*, Phoenix Arizona, May 21, 2008.
3. Chair, ST-12, Academics, Industry and a Nonprofit: Optimizing a Food Reclamation Center for the Food Insecure, Decision Sciences Annual Meeting (DSI), Phoenix, Arizona, November 2007.
4. Chair, ST-14, Decision Making and Models, Decision Sciences Annual Meeting (DSI), Phoenix, Arizona, November 2007.
5. Chair, ST-15, Statistical Applications in Economics and Finance, Decision Sciences Annual Meeting (DSI), Phoenix, Arizona, November 2007.
6. Cluster Chair, Management Information Systems (#18), *IFORS 2005 Hawaii*, July 11-15, 2005.
7. Program Committee Member, *EURO/INFORMS Joint International Meeting*, Istanbul, July 06-10, 2003.
8. Program Co-Chair, *INFORMS/ORSIS Joint International Meeting*, Tel Aviv, Israel, June 28-July 1, 1998.
9. Publications Chairman, Local Organizing Committee of *the ORSA/TIMS Detroit 1994 Joint National Meeting*, Detroit, MI, 1993-1994.
10. Chair, TC 5, *IFORS 2002 Edinburgh*, Scotland, July 2002
11. Chair, SE26, *INFORMS Spring 1997 Meeting*, San Diego, CA, May 1997
12. Chair, WA22, *ORSA/TIMS 1994 Joint National Meeting*, Detroit, MI, October 1994
13. Chair, TD37, *ORSA/TIMS 1993 Joint National Meeting*, Phoenix, AZ, October 1993
14. Chair, MA37, *ORSA/TIMS 1992 Joint National Meeting*, Orlando, FL, April 1992
15. Chair, WA20, *ORSA/TIMS 1991 Joint National Meeting*, Anaheim, CA, November 1991
16. Chair, MD45, *ORSA/TIMS 1991 Joint National Meeting*, Nashville, TN, May 1991
17. Chair, TB 11, *ORSA/TIMS 1990 Joint National Meeting*, Philadelphia, PA, October 1990
18. Chair, WB34, *ORSA/TIMS 1990 Joint National Meeting*, Philadelphia, PA, October 1990

PROJECT MANAGEMENT IN BUSINESS (1979-1982)

1. Project manager, Philipp Holzmann AG/Horicon LTD, Onne Federal Lighter Terminal Port, Nigeria, West-Africa, (Phase II construction cost US\$250 million, in 1982 dollars, about US\$600 million in 2010 dollars). The port was displayed on the cover of the "*African Technical Review*" in July 1983.
2. Project manager, Philipp Holzmann AG/Horicon LTD, The Imo River Bridge and a section of highway between Port Harcourt and Calabar (Phase I, US\$60 million, in 1982 dollars, about US\$150 million in 2010 dollars).
3. Project manager, Philipp Holzmann AG/Horicon LTD, The access road to the Onne Ocean Terminal, Port Harcourt, Nigeria.
4. Project manager, Philipp Holzmann AG/Horicon LTD, Four oil drilling locations for Shell Oil Nigeria Ltd., Rivers State, Nigeria.

CONSULTING

Ira A. Fulton Schools of Engineering, Arizona State University

1. General Dynamics, Modern Systems Engineering Training Program Topics: *Linear-, integer programming, heuristic modeling*; Instructor; September 2, 2010.
2. General Dynamics, Systems Architecture; Topic: *Multi-attribute Modeling*, Instructor, August 19, 2010.
3. Phoenix Workforce Development, Lean Six Sigma Black Belt Training; topic *Regression Modeling*, Instructor, June 9, 2010.
4. General Dynamics, Modern Systems Engineering Training Program Topics: *Linear optimization, project scheduling, heuristic modeling*; Instructor; February-March 2010.
5. General Dynamics, Modern Systems Engineering Training Program; Topics: *Linear optimization, project scheduling, heuristic modeling*; Instructor, August-September 2009.
6. General Dynamics, Modern Systems Engineering Training Program; Topics: *probability and statistical modeling, linear optimization, project scheduling, heuristic modeling*; Instructor; February-March 2009.

The William Davidson Institute (WDI) at the University of Michigan, Ann Arbor

7. *Strategic Assessment of the Kazakhstan Economic University (KazEU)*, project team leader, funded by the Eurasia Foundation of Central Asia (EFCA), June 2010.
8. *Assessment of the School of Finance and Banking (SFB) for the Strategic Plan*, Kigali, Rwanda, and *Final Report*, funded by the Rwandan Ministry of Education, April 16 – May 10, 2006.
9. *Strategic- and Change Management*, an executive education seminar for Central Asian university faculty and regional business executives, Academy for Teaching Excellence in Higher Education (Teach-Ex, Carana Corporation), Bishkek, Kyrgyzstan, funded by the Eurasia Foundation of Central Asia (EFCA), December 9-10, 2005.
10. *Strategic Management and Strategic Use of Information Systems*, Management Development Program for Central Asian regional business executives, International Business School (IBS) – Kelajak Ilmi, Grand Orzu Hotel, Tashkent, Uzbekistan, funded in-part by the USAID and the Eurasia Foundation, of Central Asia (EFCA), November 19-25, 2005.
11. *Management Information Systems* (an intensive course) at the International Business School (IBS), Tashkent, Uzbekistan, October 1 – December 20, 2005.
12. *Strategic Management* (an intensive course) at the International Business School (IBS), Tashkent, Uzbekistan, October 1 – December 20, 2005.
13. The International Business School (IBS), Assessment and review of the by-laws, strategic plan, organizational structure, committee structure, job functions, course and degree curricula, faculty portfolio, as well as IT and on-line learning capability, Tashkent, Uzbekistan; with *Final Report and Recommendations*; funded by the USAID, September – December 2005.
14. Faculty training seminar, on-line teaching and learning, the International Business School (IBS), Tashkent, Uzbekistan, November 2005.

Other international and domestic consulting projects

15. *Strategic Needs Assessment for e-Learning*, the Central Bank of the Republic of Azerbaijan, Financial Monitoring Service (FMS), Azerbaijan Financial Sector Stability Program (FSSP), for Bankworld Inc., Washington D.C., funded by the USAID, 2011.
16. *Strategic Planning and Contemporary Strategic Management*, four seminars for the graduate students as part of a strategic management course, University of World Economy and Diplomacy (UWED), Tashkent, Uzbekistan, October-November 2005.

17. Assessment of degree program curricula for the Department of Construction Economics, Tampere University of Technology, Finland, March-April, 2005.
18. Evaluation of IT and on-line teaching and learning capability of the L'viv Banking Institute, National Bank of Ukraine, L'viv, Ukraine, for BankWorld, Inc. Washington D.C. (funded by the USAID), February-March 2005.
19. On-line teaching and learning session for executives and staff of Bankworld, Inc. BankWorld, Inc. Washington D.C., March 2005.
20. Statistical evaluation and modeling of defaulted Discover, VISA/MasterCard and Private Label credit card accounts, Asset Acceptance Corporation (AAC), Troy, Michigan, 1998.

UNIVERSITY SERVICE

Arizona State University

1. Member, Sabbatical Review Committee, Ira A Fulton Engineering, 2016 -
2. Member, University Promotion and Tenure Committee, 2014 – 2016
3. Member, Departmental Personnel Committee, College of Technology and Innovation, 2009 – 2013
4. Member, College of Technology and Innovation, Academic Standards Committee, 2012 – 2013
5. Member, College of Technology and Innovation Executive Council, 2011 – 2013
6. Member, College of Technology and Innovation Personnel Committee, 2010 – 2013
7. Member, College of Technology and Innovation Committee on Conflict Review 2010 – 2013
8. Member, University Honorary Degrees Committee, 2008 – 2009
9. Member, University Committee on Extended (online) Education 2007-2008
10. Member, University Vice-Provost search committee, 2006

University of Michigan-Dearborn

1. Chair, Commencement Speaker- and Honorary Degree Committee, 2001-2004
2. Member, University Student Housing Committee (ad-hoc), 2000-2001
3. Member, Promotion and Tenure Committee, 1997-1998
4. Member, Campus User Computing Task Force, 1997
5. Member, Campus Network Director Search Committee, 1996
6. Member, Curriculum and Administrative Committee, 1995-1998
7. Member, School of Management Mission/Goals Committee (ad-hoc), 1995
8. Member, Departmental By-Law Committee (ad-hoc), 1995
9. Member, School of Management Building Committee (ad-hoc), 1994-1996
10. Member, Undergraduate IS Curriculum Review Committee (ad-hoc), 1994-1995
11. Chair, Search Committee for Information Systems, 1994-1995
12. Member, School of Management By-Law Review Committee (ad-hoc), 1994-1995
13. Member, Executive Committee of the School of Management, 1987-1990, 1991-1994
14. Chair, Search Committee for Operations Management, 1992-1993
15. Member, Undergraduate Curriculum Review Committee (ad-hoc), 1992-1993
16. Member, Strategic Planning Committee (ad-hoc), 1991-1992
17. Member, Engineering Management Program Planning Committee (ad-hoc), 1991
18. Member, Campus Grants Committee, 1988-1992
19. Member, Associate Dean's Search Committee, 1990-1991
20. Member, Dean' s Search Committee, 1989-1990
21. Member, Facilities Planning Committee, 1988-1990
22. Member, Scholarship Committee, 1987-1988
23. Chair, Search Committee for Decision Sciences, 1987-1988

EXTERNAL PROFESSIONAL SERVICE

1. Member of the International Advisory Board (IAB) of the European Pro-cluster Association (EPROCA), September 2010 –
2. Evaluator of *Fulbright Scholar Program* applications; service on the *Fulbright* interview panel; for the Embassy of the United States, Public Affairs Section, Tashkent, Uzbekistan, December 2005.
3. Member of the Money \$mart Advisory Council, organized by the Federal Reserve Bank of Chicago – Detroit Branch, 2003-2005.

4. Member of the Money \$mart Advisory Council, Ambassador Writing Contest Committee, organized by the Federal Reserve Bank of Chicago – Detroit Branch, 2004-2005.
5. External reviewer of tenure- and faculty position applications for the Tampere University of Technology, Finland, March-April, 2005.
6. Co-organizer and speaker, *World Class Crane Maintenance Management Seminar*, jointly by the CranePartner International, Inc., and the University of Michigan-Dearborn, School of Management, Orlando, FL, October 13-15, 2002, Seattle, WA, October 13-15, 2001, Las Vegas, NV, October 13-15, 2000, Dearborn, MI, May 13-15, 1997, Dearborn, MI, August 21-22, 1997, Dearborn, MI, September 26-28, 1996, Dearborn, MI, January 18-20, 1996.
7. External reviewer of tenure- and faculty position applications for the Tampere University of Technology, Finland, January-February, 1997.
8. An invited opponent (oral examiner) of the dissertation defense of Tapio Majahalme, Tampere University of Technology, Tampere, Finland, December 18, 1995.
9. Invited speaker, *Southeastern Michigan Chapter of ORSA/TIMS*, Detroit, MI, December 1991.

PROFESSIONAL SOCIETIES, HONOR SOCIETIES and CIVIC MEMBERSHIPS

1. Society of Automotive Engineering (SAE), member, 1986 –
2. Consular Corps of Arizona, Phoenix, Arizona, member, 2011 –
3. Phoenix Committee on Foreign Relations (PCFR), member, Arizona, 2007 –
4. Scandinavian Club of Arizona, member, Arizona, 2008 –
5. Finns and Friends of Phoenix, member, Arizona, 2008 –
6. Decision Sciences Institute (DSI), former member, 2010
7. Institute for Operations Research and Management Science (INFORMS), former member, 1985-2000
8. Consular Corps of Arizona, associate member, Phoenix, Arizona, 2007 – 2011
9. Greater Phoenix Economic Council (GPEC), International Leadership Committee, Member, 2008 – 2010
10. Detroit Consular Corps, member, 1998-2006
11. Detroit Consular Corps, Chair, Program Committee, 2001-2004
12. Finnish Center Association (FCA), member, 1997 – 2006
13. Finnish Historical Association (FHA), member, 1999-2006
14. Beta Gamma Sigma, member, 1998 – 2008
15. Canadian Operational Research Society (CORS), former member
16. Transportation Research Board (TRB), former member
17. Institute of Transportation Engineers (ITE), former member.

CIVIC ACTIVITIES, COMMUNITY RELATIONS, Media

1. Invited speaker and to introduce the keynote speaker Ambassador Barbara Barrett, Scandinavian Club, Sun City, Arizona, March 5, 2016.
2. Speaker and co-organizer, Finland's 98th Independence Day celebration; Topic: "150th Jubilee Celebration of the Composer Jean Sibelius", Finns & Friends of Phoenix, Guest of Honor and Keynote Address: Consul General of Finland, Los Angeles, Juha P. Markkanen, Musical Instrument Museum (MIM), Phoenix, Arizona, December 5, 2015.
3. Speaker and co-organizer, 76th Anniversary Remembrance of the Beginning of the Winter War 1939; Topic: Winter War 1939-1940, Rio Salado Sportsman's Club, Mesa, Arizona, November 21, 2015.
4. Organized and hosted Finland's Parliamentary Election Station in Phoenix, Arizona, April, 2015.
5. Invited speaker at Finland's 97th Independence Day celebration; Topic: "*Sibelius 150th*", Finns & Friends of Phoenix, Phoenix, Arizona, December 7, 2014.
6. Speaker and co-organizer, 75th Anniversary Remembrance of the Beginning of the Winter War 1939; Topic: *Winter War 1939-1940*, Apache Junction, Arizona, November 22, 2014.
7. Invited speaker, Sons of Norway; Topic: Finland past and present, Flagstaff, September 2014.
8. Invited speaker at Finland's 96th Independence Day celebration; Topic: "Finland's Road to Independence", Finns & Friends of Phoenix, Phoenix, Arizona, December 7, 2013.
9. Speaker and co-organizer, 74th Anniversary Remembrance of the Beginning of the Winter War 1939; Topic: Winter War 1939-1940, Rio Salado Sportsman's Club, Mesa, Arizona, November 30, 2013.
10. Invited speaker at Finland's 95th Independence Day celebration, Topic: "Finland's Road to Independence", Finnish Center Association (FCA), Farmington Hills, Michigan, December 8, 2012.

11. Interview “*Promoting Finland in the Sunny Southwest*”, Suomen Silta 1/12, by Kirsi-Marja Hayrinen-Beschloss, January 2012, pp. 12-13, and pp. 26-27.
12. Invited Speaker, “*Finland and the European Union*”, Finnish American Club of Tucson, October 23, 2011.
13. Interview “*Group aims to connect manufacturers to work opportunities*”, Phoenix Business Journal, by Patrick O’Grady, May 20, 2011. (p.13)
14. Interview “*Miehemme saguaro-kaktuksien keskellä, Arizonan kunniakonsuli Gary Waissi antautuu Suomen asialle*”, Helsingin Sanomat, by Kirsi-Marja Hayrinen-Beschloss, May 3, 2011,
15. Invited speaker; Topic: “*Finland’s Education System*”, Scandinavian Club, Sun City, Arizona, March 2011.
16. Invited speaker at Finland’s 93rd Independence Day celebration 2010; Topic: *The period 1808 – 1917: Toward Finland’s Independence*, Phoenix Arizona, December 4, 2010.
17. Invited speaker; Topic: “*The War of Finland: the War between Sweden and Russia 1808 -1809*”, Scandinavian Club, Sun City, Arizona, January 2010.
18. Invited speaker; Topic: “*The European Union*”, Scandinavian Club of Phoenix, Arizona, December 2008.
19. Cover page interview “*ASU Explores Russian Partnership*” Phoenix Business Journal, by Mike Sunnucks, September 5, 2008 (p. 1 and 74).
20. Interview “*Trade talk – English still language of business*”, Phoenix Business Journal, by Mike Sunnucks, September 5, 2008 (p. 57).
21. Named as one of “*Seven in 2007 – Who to Watch 07*” by Arizona Business Magazine, December-January 2007, pp. 38-48.
22. Invited speaker, Topic: “*Finland and the European Union*”, Scandinavian Club, Sun City, Arizona, November 2007.
23. Assisted in organizing presidential elections for Finland, election ballot station FCA, Detroit/Farmington Hills, Michigan, January 6-7, 2006 and January 20-21, 2006.
24. Interview by the Swedish TV (Sveriges Television AB, Goteborg), Angelica Skanberg (angelica.skanberg@svt.se), for a program about Western Sweden’s automotive industry’s relationships to Michigan’s automotive industry; GM/Saab, Ford/Volvo, future of automobile and automotive industry. Others interviewed included Michigan’s Governor Jennifer Granholm, GM’s CEO Richard Wagoner, Sweden’s Honorary Consul General to Michigan Lennart Johansson, automotive analyst Dr. David Cole, August 25, 2005; (program aired in Sweden in October 2005).
25. Invited speaker at social events and Independence Day celebrations of Friends of Finland of Mid-Michigan, the Finnish Center Association (FCA), the Finnish Historical Association (FHA) 1990 - 2005.

FELLOWSHIPS/AWARDS/NOMINATIONS

- | | |
|-----------|---|
| 2014 | Top 100 Entry in the Create the Future 2013 Design Contest, entry “Simplest Opposed Piston Combustion Engine”, February 1, 2014, Tech Briefs Media Group, SAE International, (as part of the SAE 2013 Conference and EXPO in Detroit) |
| 2008 | Honored by the news team of the <i>Phoenix Business Journal</i> , the 3 rd annual <i>Power Book</i> magazine, as one of the 2008 community “ <i>Power Players</i> ”, October 16, 2008; Power Book publication appeared October 17 th , 2008. phoenix@bizjournals.com |
| 1987 | Nominated for Distinguished Teaching Award 1987 |
| 1983-1985 | Six University of Michigan Fellowships 1983-1985 |
| 1985 | ENO Foundation Fellowship, 1985 |
| 1985 | Jesse C. Vincent Stipend, 1985. |

LANGUAGES: English, Finnish, German, Swedish, Russian (beginning). Publications and reports in English, German and Finnish.