

# CURRICULUM VITAE

**CIHAN H. DAGLI**

## CURRENT POSITIONS AND ADDRESS

Professor, Department of Engineering Management and Systems Engineering  
 Director, Smart Engineering Systems Laboratory  
 Founder and Director, Systems Engineering Graduate Program  
 Senior Investigator, DoD Systems Engineering Research Center-UARC  
 Affiliated Faculty, Department of Electrical and Computer Engineering

Missouri University of Science and Technology (Missouri S&T)  
 Engineering Management Building 600 W. 14th St.  
 Rolla, Missouri 65409-0370  
 Phone: (573) 647-9125 dagli@mst.edu

## EDUCATION

Ph.D 1979, Applied Operations Research in Large Scale Systems Design and Operation, The University of Birmingham, England

M.S. 1972, Industrial Engineering, Middle East Technical University, Ankara, Turkey

B.S. 1971, Industrial Engineering, Middle East Technical University, Ankara, Turkey

## RESEARCH INTERESTS

Systems Engineering and Systems Architecting, Cyber Physical Systems, Deep Learning, Machine Learning and Computational Intelligence

## ACADEMIC AND PROFESSIONAL POSITIONS

*Founder and Director, Systems Engineering Graduate Program, Department of Engineering Management and Systems Engineering, MS&T, Rolla, Missouri, 2000- Present*

*Senior Investigator, Department of Defense, Systems Engineering Research Center-UARC Hoboken, New Jersey, 2008-Present*

*Affiliated Faculty, Computer Engineering Program, Department of Electrical and Computer Engineering, Missouri S&T, Rolla, Missouri, 2006-Present*

*Professor and Director of Smart Engineering System Design Laboratory, Department of Engineering Management and Systems Engineering, Missouri S&T, Rolla, Missouri, 1995-Present*

*Interim Chair, Department of Engineering Management, University of Missouri-Rolla, Rolla, Missouri, 2003-2004*

*Graduate Advisor*, Department of Engineering Management, University of Missouri-Rolla, Rolla, Missouri, 1994-2003

*Associate Professor*, Department of Engineering Management, University of Missouri- Rolla, Rolla, Missouri, 1988-1995

*Visiting Associate Professor*, Department of Industrial Engineering, Wichita State University, Wichita, Kansas, 1985-1988

*Associate Professor*, Department of Industrial Engineering, Middle East Technical University, Ankara, Turkey (Assistant Chairman, 1982-1985) 1983-1985

*Assistant Professor*, Department of Industrial Engineering, Middle East Technical University, Ankara, Turkey, (Chairman, 1979-1982), 1979-1983

*British Council Research Fellow*, Department of Engineering Production, The University of Birmingham, Birmingham, England, 1975-1979

*Instructor*, Department of Industrial Engineering, Middle East Technical University, Ankara, Turkey, 1974-1976

*Teaching Assistant*, Department of Industrial Engineering, Middle East Technical University, Ankara, Turkey, 1972-1974

## **INDUSTRIAL EXPERIENCE**

*Consultant*, Systems Architecting and Engineering, The Boeing Company, 2003-2004

*Principal Consultant*, Identification of Blown and/or Open Fuse Condition, Bussmann Cooper Industries, 1997

*Principal Investigator*, Knowledge-based System Development for Safety Statement of Work, Battelle Research Triangle Park, 1995

*Principal Consultant*, Composite Stock Cutting, AT&T Advanced Decision Support Systems and Bell Laboratories, 1989

## **HONORS AND AWARDS**

International Foundation for Production Research, Fellow, 2019

Institute of Industrial Engineers (IISE) Fellow, May 2009

International Council on Systems Engineering (INCOSE) Fellow, June 2008

British Council Research Fellow, November 1975-July 1979

## CONTRACT RESEARCH PROPOSALS FUNDED AT MISSOURI S&T:

59. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology “Senior Design Project: 2018 MARSOC TE 3 Portable Translator”, PI Amount: \$2,500 Duration: November 2018-June 30, 2019

58. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology “Senior Design Project: 2018 MARSOC TE 2 Speech Translation”, PI Amount: \$2,500 Duration: November 2018-June 30, 2019

57. US Department of Education, “Interdisciplinary Fellowship Program in Engineering Management and Systems Engineering”, Co-PI (%15 share),  
Amount: \$597,000 with a matching of \$149,000  
Duration: October 1, 2018 to September 30, 2021

56. The Boeing Company, “Crowdsourcing Entity Resolution for Airplane Sensors” PI  
Amount: \$75,000  
Duration: November 2014 to December 31, 2016

55. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project “Computational Intelligence Approach to System of Systems Architecting and Analysis”, PI  
Amount: \$171,674 with Missouri S&T Share of \$129,140. Duration: 2- 18- 2014 to 1-31- 2015

54. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project “RT-43 Systems Engineering Capstone Registry” PI  
Amount: \$19,347  
Duration: 10-01-2012 to 1-31-2013

53. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project “RT-44 Enterprise and System of Systems Modeling Part 3” PI for the Project team of Pen State, Air force Institute of Technology and Naval Post Graduate School  
Amount: \$175,000 with \$ 103,300 Missouri S&T’s Share  
Duration: 9-28-2012 to 5-31-2013

52. The Boeing Company and DARPA, “Human Assisted Manufacturing Model Library” Co- PI  
Amount: \$310,543 with a Share of \$ 80,000  
Duration: 6-20-2011 to 5-10-2012

51. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project “An Advanced Computational Approach to System of Systems Analysis and Architecting using Agent-based Behavioral Modeling” PI for the Project team of Pen State, Air force Institute of Technology and Naval Surface Warfare Center  
Amount: \$245,435.86 with \$ 160,000 Missouri S&T’s Share  
Duration: 9-30-2011 to 9-29-2012

50. University of Naples, “ Fundamentals of Agile Systems Engineering: Missouri S&T’s Contribution to Università degli Studi di Napoli “Federic II’s” Master Degree Program in Systems Engineering Approach for Advanced Materials Application in Aeronautics: “SEAMIAero”, PI with %20 share  
Amount: \$96,557

Duration: March 28, 2011 to July 31, 2011

49. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project "Agile Systems Engineering: Experiential and Active Learning Approach" PI with %15 share.

Amount: \$119,988

Duration: 07/1/2011 to 7/31/2012

48. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project "Agile Systems Engineering: Experiential and Active Learning Approach" PI with 20% share.

Amount: \$198,556

Duration: 05/15/2010 to 6/30/2011

47. Department of Education, "Information and System Assurance for Critical Infrastructure"

Amount: \$131,265

Duration: 08/16/2010 to 8/15/2013

46. Department of Defense Systems Engineering Research Center- University Affiliated Research Center SERC-UARC at Stevens Institute of Technology Project "Evaluating Methods, Processes, and Tools (MPT)

Amount: \$22,568

Duration: 07/16/2009 to 10/31/2009

45. Department of Defense University Affiliated Research Center for Systems Engineering Research Joint Proposal with Steven's Institute of Technology, University of Southern California and other participating universities.

Amount: \$10,000,000

Duration: October 2008 – October 2013

44. Program: Missouri S&T Systems Engineering Graduate Program Director

Amount: \$ 13,000,000

Duration: 2000-2008

43. US Air Force SBIR Project "Intelligent Neural-network Based Near Real-time TSPI Solutions (INNRTS)

Amount: \$30,000

Duration: 2007-2008

42. The Boeing Company, Systems Engineering MS Degree Program for Italian Engineers: Under Industrial Return Project Italian 767 Tanker Transport, BOEING Industrial Participation Program

Amount: \$555,000

Duration: 2006 – 2009

41. Metro, St. Louis, Implementation of Lean Management Professional Services

Amount: \$74,950 research contract with a share of \$14,990

Duration: 2003

40. US Department of Transportation, FPR Repair and Health Monitoring of Railroad Steel Bridges  
Amount: \$250,000 research contract with a share of \$32,500  
Duration: 2000-2002
39. The Boeing Company, Boeing Systems Engineering MS Program, Principal Investigator  
Amount: \$96,728 research contract with a share of \$58,037  
Duration: 1999-2004
38. U.S. Army Engineering Center, Intelligent Multimedia Distance Learning System for Military Bridging Procedures and Methodology, Principal Investigator  
Amount: \$14,000 research contract Duration: 1997-1998
37. DARPA and Automation Engineering, Development of Fast Sealable Automated Inspection Systems for Multi-layer Printed Circuit Boards, Co-Investigator  
Amount: \$404,101 research contract with a share of \$80,200  
Duration: 1997-1998
36. Union Electric, Callaway Nuclear Plant, Tools for Smart Engineering System Design, Principal Investigator  
Amount: \$24,000 research contract  
Duration: 1996
35. U.S. Army Aviation and Troop Command, Intelligent Systems Design A Hands-on Experience, Principal Investigator  
Amount: \$44,530, research contract  
Duration: 1995
34. U.S. Army Research Office, Development of an Expert System Model for Safety Statements of Work, Principal Investigator  
Amount: \$8,765 research contract  
Duration: 1994-1995
33. The Kingsford Products Company and Manufacturing Research and Training Center, Bell Retort Intelligent Process Control System, Phase II, Principal Investigator  
Amount: \$12,665 research contract  
Duration: 1994
32. The Kingsford Products Company and Manufacturing Research and Training Center, Bell Retort Intelligent Process Control System, Principal Investigator  
Amount: \$31,180 research contract  
Duration: 1993
31. Bussmann Cooper Industries, Characterization of Sand Fill for Sand Filled Fuses, Principal Investigator

Amount: \$30,000 research contract  
Duration: 1993

30. University of Missouri Research Board, Genetic Neuro-Scheduler for Job Shop Scheduling, Principal Investigator  
Amount: \$21,800 research contract  
Duration: 1993
29. Deere and Company Technical Center, Potential of Artificial Neural Network Approach for Modeling Nonlinearities in Foundry Operations, Principal Investigator  
Amount: \$10,000 research contract  
Duration: 1992
28. AT&T, Continued Development of a Program in Manufacturing Engineering, Principal Investigator on behalf of Center for Technology Transfer  
Amount: \$130,000 research contract with a share of \$65,000  
Duration: 1991
27. National Science Foundation, CIM Summer Workshops for Undergraduate Engineering Faculty, Co-investigator  
Amount: \$90,000 research contract with a share of \$9,000  
Duration: 1991
26. Brewer Science, Inc. and Manufacturing Research and Training Center Assistance Related to Robotic Spin/Bake Hot Plate System, Co-investigator  
Amount: \$48,800 research contract with a share of \$2,440  
Duration: 1991
25. Bussman Cooper Industries and Manufacturing Research and Training Center, Intelligent Group Technology Code Generator, Principal Investigator  
Amount: \$4,880 research contract  
Duration: 1990
24. National Steel Corporation Granite City Division and Manufacturing Research and Training Center, Intelligent Assignment Advisory System, Co-investigator  
Amount: \$36,778 research contract with a share of 11,033  
Duration: 1990-1991
23. SME, Curriculum Development in Manufacturing Engineering, Co-investigator. Amount: \$35,575 research contract with a share of \$3,557  
Duration: 1990
22. Westinghouse ABB and Manufacturing Research and Training Center, Intelligent Blank Cutting and Scheduling: Heuristic Optimization Module, Co-investigator

Amount: \$70,187 research contract with a share of \$24,565  
Duration: 1990

21. National Science Foundation, INTEL, Manufacturing Research and Training Center Parallel Architectures for Composite Stock Cutting Pattern Classification, Principal Investigator

Amount: \$78,080 research contract with a share of \$23,424  
Duration: 1989

20. National Science Foundation, Experimental Teaching of CIM to Undergraduate Faculty, Co-investigator

Amount: \$107,577 research contract with a share of \$10,757  
Duration: 1989

19. National Steel Corporation Granite City Division and Manufacturing Research and Training Center, Intelligent Assignment Advisory System, Co-investigator

Amount: \$239,000 research contract with a share \$83,650  
Duration: 1989-1990

18. Westinghouse ABB, Intelligent Blank Cutting and Scheduling System: Feasibility Study, Co-investigator

Amount: \$20,000 research contract with a share of \$5,000  
Duration: 1989

17. Chia Tai Conti Sz Co., Ltd., Bangkok, Thailand. Production Scheduling System for Feed Mill Manufacturer, Principal Investigator

Amount: \$8,750 research contract  
Duration: 1988

16. Intelligent Systems Center, University of Missouri-Rolla, Intelligent Production Advisor: A Prototype Expert System for Manufacturing Resource Planning Integrated AI and OR Approach, Principal Investigator

Amount: \$20,300 research contract  
Duration: 1988

#### **OTHER RESEARCH CONTRACT PROPOSALS FUNDED**

15. Wichita State University, Wichita, Kansas, USA, A Feasibility Study of Integrating Expert System and Computer Graphics in Solving Two Dimensional Cutting Stock Problems, Principal Investigator

Amount: \$3,575 research contract  
Duration: 1987

14. Raytheon Corporation, Beach Aerospace Division, Research on the Development of Standards for Work Performance for Division of Strategic Planning, Co-investigator

Amount: \$16,872 research contract  
Duration: 1987

13. Environmental Problems Foundation of Turkey, Ankara, Turkey, Evaluation of Heating Alternatives for Ankara City Based on Multiple Attributes, Principal Investigator  
Amount: \$2,000 research contract  
Duration: 1987
12. Program: Pizza Hut, Inc., Customer Arrival Pattern Analysis For Pizza Hut Restaurants, Principal Investigator  
Amount: \$1,000  
Duration: 1986
11. Unye Cement Factory, Ankara, Turkey, Determining Manpower Requirements for Automation, Principal Investigator  
Amount: \$35,000 research contract  
Duration: 1985
10. Etibank, Inc., Ankara, Turkey, Service System Design for a Borax Research Center, Co-investigator  
Amount: \$34,000 research contract  
Duration: 1985
9. Hema, Inc., Ankara, Turkey, Organizational Design for a Truck Component Manufacturing Company, Co-investigator  
Amount: \$30,000 research contract  
Duration: 1984
8. Ankara Municipality, Ankara, Turkey, Feasibility of Integrated Meat Processing Plant, Principal Investigator  
Amount: \$34,000 research contract  
Duration: 1983
7. Turkish Cement Factories, Inc., Ankara, Turkey, Design of Job Evaluation System for Turkish Cement Factories, Principal Investigator  
Amount: \$32,000 research contract  
Duration: 1982
6. Turkish Ministry of Health, Ankara, Turkey, System Analysis of a Specialty Hospital, Co-investigator  
Amount: \$29,000 research contract  
Duration: 1982
5. Turkish Coal Board, Ankara, Turkey, A Master Plan for Optimal Development of Coal Reserves in Turkey, Co-investigator  
Amount: \$34,000 research contract  
Duration: 1980-1981



4. UNIDO, Ankara, Turkey, Design of a Production Planning and Control System for Central Machine Shop of State Farms, UNIDO Consultant for the Turkish Government  
Amount: \$2,000 contract  
Duration: 1980
3. Turkish Fertilizer Industry General Directorate, Ankara, Turkey, Design of Pay Systems for Kutahya Fertilizer Factory, Co-investigator  
Amount: \$30,000 research contract  
Duration: 1974-1975
2. Turkish Ministry of Transportation, Ankara, Turkey, Operating Cost Determination in Public Transportation Systems, Co-investigator  
Duration: \$28,000 research contract  
Amount: 1974-1975
1. Turkish Sugar Industries, Inc., Ankara, Turkey, Design of Management Information Systems for Turkish Sugar Industry, Co-investigator  
Amount: \$100,000 research contract  
Duration: 1972-1973

#### **JOURNAL EDITORSHIP**

1. **International Journal of General Systems**, Intelligent Systems Design Area Editor 2003-2016, and Editor Board 2016 present (Eight issues per Volume, Volume 46), **Taylor and Francis and Informa**
2. **International Journal of Smart Engineering System Design**, Editor-In-Chief (Four issues per Volume, Volume 5/4), **Taylor and Francis Group** (merged into International Journal of General Systems in 2003)

#### **CURRENT EDITORIAL RESPONSIBILITIES FOR JOURNALS**

Intelligent Systems Design Associate Editor, International Journal of General Systems, 2004 to present

Editorial Board Member, Systems Engineering Body of Knowledge SEBOK January 2013 to present

Editorial Board Member, International Journal of Neural Systems 2005 - 2010

Associate Editor, Journal of Intelligent Manufacturing, International, 1992 - 2010

#### **GUEST EDITORSHIPS FOR SPECIAL ISSUES**

The special issue on "Artificial Neural Networks in Engineering" for **Mathematical and Computer Modeling**, Volume 21, Nos. 1 and 2, 1995.

The special issue on "Artificial Neural Networks" for **Journal of Intelligent Material Systems and**

**Structures**, March 1994 .

The special issue on "Neural Networks" for **HEURISTICS, The Journal of Knowledge Engineering**, Volume 5, No. 3, Fall 1992.

The special issue on "Artificial Neural Networks in Engineering" for **HEURISTICS, The Journal of Knowledge Engineering**, Volume 5, No. 2, Summer 1992.

The special issue on "Neural Networks in Manufacturing (Part II)", for the **Journal of Intelligent Manufacturing**, Volume 3, Number 4, August 1992.

The special issue on "Neural Networks in Manufacturing", for the **Journal of Intelligent Manufacturing**, Vol. 2, No. 5, October 1991.

#### **BOOKS SERIES EDITORSHIP (Intelligent Engineering Systems with Chapman and Hall)**

*Intelligent Visual Inspection Using Neural Networks*, Ryan G. Rosandich, Chapman & Hall, London, 1997, **Intelligent Engineering Systems Series, Volume 1.**

#### **BOOK EDITORSHIP**

34. 25th International Conference on Production Research Manufacturing Innovation: Cyber Physical Manufacturing Volume 39/C, Cihan H Dagli and Gursel Suer Co-Editors , Elsevier, SciVerse ScienceDirect <https://www.sciencedirect.com/journal/procedia-manufacturing/vol/39/suppl/C>

33. Complex Adaptive Systems Volume 9, Procedia Computer Sciences Volume- XXX Cihan H Dagli Co-Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) (In Print)

32. Complex Adaptive Systems Volume 8, Procedia Computer Sciences Volume 140-2018, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2018. <https://www.sciencedirect.com/journal/procedia-computer-science/vol/140/suppl/C>

31. Complex Adaptive Systems Volume 7, Procedia Computer Sciences Volume 114-2017, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2017. <http://www.sciencedirect.com/science/journal/18770509/114>

30. Complex Adaptive Systems Volume 6, Procedia Computer Sciences Volume 95-2016, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2016. <http://www.sciencedirect.com/science/journal/18770509/95>

29. Complex Adaptive Systems Volume 5, Procedia Computer Sciences Volume 61-2015, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2015. <http://www.sciencedirect.com/science/journal/18770509/61>

28. Complex Adaptive Systems Volume 4, Procedia Computer Sciences Volume 20-2014, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2014. <http://www.sciencedirect.com/science/journal/18770509/36>

27. Complex Adaptive Systems Volume 3, Procedia Computer Sciences Volume 20-2013, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com) ) ISSN 1877-0509, November 2013. <http://www.sciencedirect.com/science/journal/18770509/20>

26. Complex Adaptive Systems Volume 2, Procedia Computer Sciences Volume 12-2012, Cihan H Dagli Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com)) ISSN 1877-0509, November 2012.  
<http://www.sciencedirect.com/science/journal/18770509/12>
25. New Challenges in Systems Engineering and Architecting, Procedia Computer Sciences Volume 8-2012, Cihan H Dagli Editor, Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com)) ISSN 1877-0509, March 2012 <http://www.sciencedirect.com/science/journal/18770509/8>
24. Complex Adaptive Systems Volume 1, Procedia Computer Sciences Volume 6-2011, Editor , Elsevier, SciVerse ScienceDirect ( [www.sciencedirect.com](http://www.sciencedirect.com)) ISSN 1877-0509, November 2011.
23. *Intelligent Systems Through Artificial Neural Networks; Computational Intelligence in Architecting Complex Engineering Systems, Volume 20*, Editor , ASME Press, New York, 2010.
22. *Intelligent Systems Through Artificial Neural Networks; Computational Intelligence in Architecting Complex Engineering Systems, Volume 19*, Co-edited with K. Mark Bryden, Steve Corns, Mitsuo Gen Kagan Tumer, Gursel Suer , ASME Press, New York, 2009.
21. *Intelligent Systems Through Artificial Neural Networks; Computational Intelligence in Architecting Engineering Systems, Volume 18*, Co-edited with Dave Enke, K. Mark Bryden, Halil Ceylan ,Mitsuo Gen ASME Press, New York, 2008.
20. *Intelligent Systems Through Artificial Neural Networks; Smart Systems Engineering: Computational Intelligence in Architecting Complex Engineering Systems Volume 17* Co-edited with Anna L. Buczak, Dave Enke, Mark J. Embrechts, and Okan Ersoy, ASME Press, New York, 2007.
19. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Infrastructure Systems Engineering, Bio-Informatics and Computational Biology, and Evolutionary Computation Volume 16*, Co-edited with Anna L. Buczak, Dave Enke, Mark J. Embrechts, and Okan Ersoy, ASME Press, New York, 2006.
18. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 15*, Co-edited with Anna L. Buczak, Dave Enke, Mark J. Embrechts, and Okan Ersoy, ASME Press, New York, 2005.
17. *Intelligent Systems Through Artificial Neural Network; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 14*, Co-edited with Anna L. Buczak, Dave Enke, Mark J. Embrechts, and Okan Ersoy, ASME Press, New York, 2004.
16. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and Complex Systems Volume 13*, Co-edited with Anna L. Buczak, Joydeep Ghosh, Mark J. Embrechts, and Okan Ersoy, ASME Press, New York, 2003.
15. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 12*, Co-edited with Anna L. Buczak, Joydeep Ghosh, Mark J. Embrechts, Okan Ersoy and Stephen Kerckel ASME Press, New York, 2002.

14. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 11*, Co-edited with Anna L. Buczak, Joydeep Ghosh, Mark J. Embrechts, Okan Ersoy and Stephen Kercel ASME Press, New York, 2001.
13. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 10*, Co-edited with Anna L. Buczak, Joydeep Ghosh, Mark J. Embrechts, Okan Ersoy and Stephen Kercel ASME Press, New York, 2000.
12. *Intelligent Systems Through Artificial Neural Network; Smart Engineering Systems Design; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and. Complex Systems Volume 9*, Co-edited with Anna L. Buczak, Joydeep Ghosh, Mark J. Embrechts, Okan Ersoy ASME Press, New York, 1999.
11. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems; Neural Networks, Fuzzy Logic, Evolutionary Programming Data Mining and Rough Sets Volume 8*, Co-edited with Metin Akay, Anna L. Buczak, Okan Ersoy, Benito Fernandez ASME Press, New York, 1998.
10. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems; Neural Networks, Fuzzy Logic, Data Mining and Evolutionary Programming. Volume 7*, Co-edited with Metin Akay, Okan Ersoy, Benito Fernandez, Alice Smith ASME Press, New York, 1997.
9. *Intelligent Systems Through Artificial Neural Networks; Smart Engineering Systems; Neural Networks, Fuzzy Logic and Evolutionary Programming. Volume 6*, Co-edited with Metin Akay, Benito Fernandez, C. L. Philip Chen and Joydeep Ghosh, ASME Press, New York, 1996.
8. *Intelligent Systems Through Artificial Neural Networks, Fuzzy Logic and Evolutionary Programming. Volume 5*, Co-edited with Metin Akay, Benito Fernandez, C L. Philip Chen and Joydeep Ghosh, ASME Press, New York, 1995.
7. *Intelligent Systems in Design and Manufacturing*, Co-edited with Andrew Kusiak, ASME Press, New York, 1994.
6. *Artificial Neural Networks for Intelligent Manufacturing*, edited book, Chapman and Hall, London, 1994.
5. *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 4*, Co-edited with Joydeep Ghosh, Benito R. Fernandez, Soundar Kumara, ASME Press, New York, 1994.
4. *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 3*, Co-edited with Laura I. Burke and Benito R. Fernandez, Joydeep Ghosh, ASME Press, New York, 1993.
3. *Intelligent Engineering Systems Through Artificial Neural Networks, Volume 2*, Co-edited with Laura I. Burke and Yung C. Shin, ASME Press, New York, 1992.
2. *Intelligent Engineering Systems Through Artificial Neural Networks*, Co-edited with Soundar Kumara and Yung C. Shin, ASME Press, New York, 1991.
1. *Service System Planning and Control*, with Omer Saatcioglu, Middle East Technical University Press, 1985.

## CONFERENCE ORGANIZATION POSITIONS HELD

36. Conference Chairman, 25th International Conference on Production Research Manufacturing Innovation: Cyber Physical Manufacturing, August 9-14, 2019 | Chicago, Illinois (USA) sponsored by Missouri University of Science and Technology.

35. Conference Chairman, Complex Adaptive Systems, November 5-7, 2018, Chicago, IL sponsored by Missouri University of Science and Technology.

34. Conference Chairman, Complex Adaptive Systems, October 30- November 1, 2017, Chicago, IL sponsored by Missouri University of Science and Technology.

33. Conference Chairman, Complex Adaptive Systems, November 2-4, 2016, Los Angeles, CA. sponsored by Missouri University of Science and Technology.

32. Conference Chairman, Complex Adaptive Systems, November 2-4, 2015, San Jose, CA., sponsored by Missouri University of Science and Technology.

31. Conference Chairman, Complex Adaptive Systems, November 3-5, 2014, Philadelphia, PA., sponsored by Missouri University of Science and Technology.

30. Conference Chairman, Complex Adaptive Systems , November 13-15, 2013, Baltimore, MD., sponsored by Missouri University of Science and Technology.

29. Conference *Chairman*, Complex Adaptive Systems , November 14-16, 2012, Washington, DC, sponsored by Missouri University of Science and Technology.

28. Conference *Chairman*, Conference on Systems Engineering Research CSER 2012 , March 19-22, 2012, St. Louis, Missouri , sponsored by Missouri University of Science and Technology

27. Conference *Chairman*, Complex Adaptive Systems , October 31- November 2, 2011, Chicago, Illinois, sponsored by Missouri University of Science and Technology.

26. *Conference Chairman*, ANNIE 2000 Artificial Neural Networks in Engineering, November 1-3, 2010, St. Louis, MO, sponsored by Missouri University of Science and Technology..

25. *Conference Chairman*, ANNIE '09 Artificial Neural Networks in Engineering, November 2-4, 2009, St. Louis, MO, sponsored by Missouri University of Science and Technology..

24. *Systems Engineering Track Co-Chair*, IERC Industrial Engineering Research Conference, May 30-June 3, 2009 Miami, Florida.

23. *Conference Chairman*, ANNIE '08 Artificial Neural Networks in Engineering, November 9-12, 2008, St. Louis, MO, sponsored by Missouri University of Science and Technology.

22. *Systems Engineering Track Co-Chair*, IERC Industrial Engineering Research Conference, May 17-21, 2008 Vancouver, British Columbia, Canada.

21. *Organizing Committee Member*, 2st Annual IEEE Systems Conference, April 7-10, 2008 Montreal Quebec, Canada.

20. *Conference Chairman*, ANNIE '07 Artificial Neural Networks in Engineering, November 11-14, 2007, St. Louis, MO, sponsored by University of Missouri-Rolla.

19. *Systems Engineering Track Co-Chair*, IERC Industrial Engineering Research Conference, May 19-23, 2007 Nashville, Tennessee.
18. *Organizing Committee Member*, 1st Annual IEEE Systems Conference, April 9-12, 2007 Honolulu, Hawaii.
17. *Conference Chairman*, ANNIE '06 Artificial Neural Networks in Engineering, November 5-8, 2006, St. Louis, MO, sponsored by University of Missouri-Rolla.
16. *Conference Chairman*, ANNIE '05 Artificial Neural Networks in Engineering, November 6-9, 2005, St. Louis, MO, sponsored by University of Missouri-Rolla.
15. *Conference Chairman*, ANNIE '04 Artificial Neural Networks in Engineering, November 7-10, 2004, St. Louis, MO, sponsored by University of Missouri-Rolla.
14. *Conference Chairman*, ANNIE '03 Artificial Neural Networks in Engineering, November 2-5, 2003, St. Louis, MO, sponsored by University of Missouri-Rolla.
13. *General Chair*, ICPR Americas'02, International Conference on Production Research Americas '02, November 14-15, sponsored by Department of Engineering Management, University of Missouri-Rolla.
12. *Conference Chairman*, ANNIE '02 Artificial Neural Networks in Engineering, November 11-14, 2002, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
11. *Conference Chairman*, ANNIE '01 Artificial Neural Networks in Engineering, November 4-7, 2001, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
10. *Conference Chairman*, ANNIE '00 Artificial Neural Networks in Engineering, November 5-8, 2000, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
9. *Conference Chairman*, ANNIE '99 Artificial Neural Networks in Engineering, November 7-10, 1999, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
8. *Conference Chairman*, ANNIE '98 Artificial Neural Networks in Engineering, November 1-4, 1998, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
7. *Conference Chairman*, ANNIE '97 Artificial Neural Networks in Engineering, November 9-12, 1997, St. Louis, MO, sponsored by University of Missouri-Rolla, In Cooperation with IEEE Neural Network Council.
6. *Conference Chairman*, ANNIE '96 Artificial Neural Networks in Engineering, November 10-13, 1996, St. Louis, MO, sponsored by University of Missouri-Rolla, Office of Naval Research, ASME, Dynamic Systems and Control Division, McDonnell Douglas Corporation, Washington University, and Lockheed-Martin Corporation.
5. *Conference Chairman*, ANNIE '95 Artificial Neural Networks in Engineering, November 12-15, 1995, St. Louis, MO, sponsored by University of Missouri-Rolla, Office of Naval Research, ASME, Dynamic Systems and Control Division, McDonnell Douglas Corporation, Boeing Corporation, Washington

University, Lockheed Corporation and Motorola, Inc.

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77. K. Mitchell and C.H. Dagli, "Adaptive Neural Network Based Control of Robotic Manipulators", *SPIE Proceedings of Applications and Science of Computational Intelligence IV*, p 236-242, April 17-18 2001, Orlando, Florida.
76. K. Mitchell and C.H. Dagli, "Adaptive Neural Network for Mobile Robotic Control", *SPIE Proceedings of Applications and Science of Computational Intelligence IV*, p 243-251, April 17-18 2001, Orlando, Florida.
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52. J. James and C.H. Dagli, "Use of Genetic Algorithms for Encoding Effective Neural Networks Architectures: Neuro-Computer Implementation", *SPIE Proceedings of Applications and Science of Artificial Neural Networks*, p. 323-330, Orlando, Florida, April 17-21, 1995.
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33. P.D. Stigall R. Huggahalli, Cihan H Dagli. "Intelligent Communication System For Dynamic Scheduling", *Proceedings of Fourth Advanced Technology Conference*, United Sates Post Office, November 1990, p. 941-949, Washington DC.

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31. T. Bauer and C.H. Dagli, "Integrated neural network and machine vision approach for intelligent state identification," *IEEE International Conference on Systems Engineering*, 1991., 1991, pp. 206-209.

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*Proceedings of the Seventh International Conference on System Engineering*, p. 201, University of Nevada, Las Vegas, July 1990.

29. Y. Omurtag and C.H. Dagli, "Manufacturing Strategies for 1990's and Implications for University Programs", with Yildirim Omurtag, *Proceedings of 1990 ASEE Annual Conference*, June 1990, Toronto, Canada.

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26. J.E. Vidal and C.H. Dagli, "Intelligent Process Control in Glass Container Production", *The Fourth International Conference on Expert Systems in Production and Operations Management*, p. 33, May 1990, Hilton Head Island, South Carolina.

25. "Feasibility of Automating Printed Circuit Board Assembly Using Artificial Neural Networks", with Mahesh Vellanki, *Proceedings of Applications of Neural Networks Conference*, SPIE The International Society for Optical Engineering, Vol. 1294, p. 331, April 1990, Orlando, Florida.

24. P. Lakey and C.H. Dagli, "Mechanical Applications of Neural Networks Controlled by an Expert stem", *Proceedings of Fourth Annual Expert Systems and Intelligent Manufacturing Systems Conference*, p. 525, April 1990, Detroit, Michigan.

23. A. Hajakbari and C.H. Dagli, "An Intelligent Stock Cutting Pattern Generator", *Proceedings of Fourth Annual Expert Systems and Intelligent Manufacturing Systems Conference*, p. 115, April 1990, Detroit, Michigan.

22. C.H. Dagli and C. Rasquinha, "A Prototype Intelligent Process Controller for Small Manufacturing Companies", *Proceedings of Fourth Annual Expert Systems and Intelligent Manufacturing Systems Conference*, p. 407, April 1990, Detroit, Michigan.

21. A. Hajakbari and "A Parallel Architecture for Stock Cutting Problem", *Proceedings of PARBASE-90*, p. 534, IEEE and Florida International University, March 1990, Miami Beach, Florida.

20. M. Vellanki and C.H. Dagli, "Electronic Component Recognition in Automated PCB Assembly Using Neural Networks", *Proceedings of Workshop on Neural Networks Academic/Industrial/NASA/ Defense*, Space Power Institute of Auburn University, p. 247, February 1990, Auburn Alabama.

19. T. Poshyanonda and C.H. Dagli, "Heuristic Generation in Knowledge Based Scheduling Through Simulation", *Proceedings of Beijing International Conference on System Simulation and Scientific Computing*, October 1989, Beijing, China.

18. C.H. Dagli, and G.E. Hoffman, "Application of distributed knowledge bases in intelligent manufacturing," *IEEE International Conference on Systems Engineering*, 24-26 Aug 1989 Pages:239-242

17. R. Kluczny and C.H. Dagli, "Impact of Computer Workstations on Education", *Proceedings of American Society of Engineering Education 1989 Conference*, June 1989, Lincoln, Nebraska.

16. Cihan H Dagli and Scott Lammers "Possible Applications of Neural Networks in Intelligent Manufacturing", *Proceedings of 1989 International Joint Conference on Neural Networks*, p. II-605, June 1989, Washington, D.C.
15. C.H. Dagli, and G.E. Hoffman, "Application of distributed knowledge bases in intelligent manufacturing," IEEE International Conference on Systems Engineering, 24-26 Aug 1989 Pages:239-242.
14. G. Hoffman and C.H. Dagli, "Intelligent Lot-size Selector for MRP Systems", *Proceedings of Third International Conference on Expert Systems and the Leading Edge in Production and Operations Management*, p. 311-319, May 1989, South Carolina.
13. C.H. Dagli and N. Wasti, "An Intelligent Scheduling for Automatic Storage and Retrieval Systems", *Proceedings of Expert Systems '89; Solutions in Manufacturing*, p. 391-404, April 1989, Detroit, Michigan.
12. K. Shelton and C.H. Dagli, "An Integrated Production System for Composite Stock Cutting", *Proceedings of Expert Systems '89: Solutions in Manufacturing*, p. 565-581, April 1989, Detroit, Michigan.
11. "Knowledge-based Production Management Systems: New Trends in Production Planning and Control", with Tatchapol Poshyanonda, *ASEM Proceedings of 9th Annual Meeting*, p. 219-227, October 1988, Knoxville, Tennessee.
10. Z. Huai-Fa and C.H. Dagli, "Considerations in Teaching Knowledge-based Systems and Supervising Course Projects", *Proceedings of ASEE 1988 Annual Conference*, p. 464-468, June 1988, Portland, Oregon.
9. Dagli, C.H. and M. Cihangirli, "Prototype Expert System for Job Scheduling in Flexible Manufacturing," 1988 Spring IIE Conference Proceedings, 418-423.
8. B. Sirinaovakul and C.H. Dagli, "Effective Technology Transfer to Developing Countries: A Macro-Systematic Approach", *Proceedings of American Society for Engineering Management '87 Conference*, p.73-78, October 1987, St. Louis, Missouri.
7. "Cutting Stock Problem: Combined Use of Heuristics and Optimization Methods", *Proceedings of International Conference on Production Research '87*, p. 843-849, August 1987, Cincinnati, Ohio.
6. "Engineering Management Curricula for Tomorrow", with B. Omurtag, I. Nisanci and O. Benli, *Proceedings of First International Conference on Engineering Management*, p. 316-319, September 1986, Arlington, Virginia.
5. G. Suer and C.H. Dagli, "Scheduling for Flexible Layout", *Proceedings of the Seventeenth Annual Meeting of the Midwest DSI*, p. 20-22, April 1986, Lincoln, Nebraska.
4. C.H. Dagli and F. Meral, "Review of MRP Lot-Sizing Procedures in Single and Multi-level Context", *Fourteenth AIEDS Proceedings of Western Regional Conference*, p. 223-229, March 1986, Phoenix, Arizona.
3. C.H. Dagli, "Industrial Engineering Curricula for Developing Countries", *Proceedings of 21st Annual Meeting of ASEE Midwest Section*, p. VII.1- VII.11, March 1986, Stillwater, Oklahoma.



2. C.H. Dagli, "Integrated Operation of Thermal and Hydro-electric Electricity Generating Units: Approaches Used in France, U.K. and Brazil", *OECD, Organization for Economic Cooperation and Development*, 1981, Paris.

1. I. Nisanci and C.H. Dagli, "A Case Study on Production Planning and Control for Central Machine Shop of State Farms", United Nations Industrial Development Organization, Report *DP/TUR/77/024*, 1980.

### **CIHAN H.DAGLI'S THESIS and DISSERTATION**

4. "A Methodology for Solving the Long Term Operational Problems of the Lower Fırat Basin in Turkey", Ph.D. Dissertation, University of Birmingham, Birmingham, England. 1976-79.

3. "A Methodology for Solving the Operational Problems of Water Resources Development of the Lower Fırat Basin in Turkey", Ph.D. Qualifying Thesis, University of Birmingham, Birmingham, England. 1976-1977.

2. "A Methodology for Feasibility Studies", Instructorship Thesis, Department of Industrial Engineering, M.E.T.U., Ankara, Turkey. 1972-73.

1. "Application of Non-Linear Programming to Water Resources Development of Berdan Basin", M.S. Thesis, Department of Industrial Engineering, M.E.T.U., Ankara, Turkey. 1971-72.

### **REPRESENTATIVE PRESENTATIONS**

#### **2019**

115. UM Research Summit Talk, " Deep Learning in Health Care; Neural Networks and Deep Learning" UMKC, September 25, 2019 Kansas City

114. Plenary Talk, "Meta-Architectures for Cyber Manufacturing", 9<sup>th</sup> IFAC Conference on Manufacturing Modeling, Management, and Control, Berlin School of Economics and Law August 28-30, 2019 Berlin, Germany.

113. Chair, Interactive Round Table, Connected Manufacturing Forum 2019, July 28-29, 2019 Austin, Texas

112. Talk "A Tool for Architecting Socio-Technical Problems: SoS Explorer", System of Systems Engineering Collaborators Information Exchange (SoSECIE), Office of The Deputy Assistant Secretary Of Defense Systems Engineering, June 2019.

#### **2018**

111. Coffey, Garrett and Dagli, Cihan "A Method to Use the SoS Explorer Application with Fuzzy-Genetic Algorithms to Support Military Veterans Within Higher Education", Conference on Systems Engineering Research (CSER 2018), May 8-9,, 2018, Charlottesville, Virginia.

110. Speaker, "Cyber-Physical Systems and System of Systems Architecting Tool", 21<sup>st</sup> Annual Systems and Mission Engineering Conference, October 22-25, 2018, Tampa, FL.

109. Invited Keynote Speaker, “Developing Meta Systems Architectures for Leading Innovation with Complex Societal and Technical Challenges” 2018 INCOSE Beijing Summit, Tsinghua University, Beijing, September 26-27, 2018.
108. Keynote Speaker “Architecting Cyber Manufacturing Systems”, ICPR-QIEM 2018: 2018 International Conference on Production Research - Regional Conference Africa, Europe and the Middle East and 5th International Conference on Quality and Innovation in Engineering and Management, Cluj-Napoca, Romania, July 25-27, 2018, July 25-26, 2018.
107. Invited Keynote Speaker “Architecting Cyber Manufacturing Systems”, International Joint Conference of Industrial engineering and Operations Management, IJCIEOM18, Organized by Portuguese Military Academy, July 18-20, 2018, Lisbon, Portugal.
106. Invited Speaker “Architecting Cyber Manufacturing Systems”, Connected Manufacturing Forum, June 19-20 St. Louis Missouri.
105. “Emerging Methods for Advanced Manufacturing Systems” Invited Panel Member, 28<sup>th</sup> International Conference on Flexible Automation and Intelligent Manufacturing, Columbus, OH. June 10-14, 2018
104. Invited Speaker “Architecting Complex Adaptive Systems” Tsinghua University Industrial Engineering Department, Beijing, China May 31, 2018.
103. Invited Speaker “Architecting Complex Adaptive Systems”, The Hsue-Shen Tsien International Distinguished Scientists Lecture Series, The State Key Laboratory for Management and Control of Complex Systems, Institute of Automation, Chinese Academy of Sciences, May 30, 2018
- 102 Invited Speaker “Architecting Complex Adaptive Systems”, National University of Defense Technology at Changsha, May 28, 2018
- 2017** 101. “Architecting Cyber Physical Systems”, Complex Adaptive Systems Conference 2017 Chicago October 30, 2017
100. “Architecting Cyber Physical Systems”, INCOSE New Mexico Chapter November 9, 2017
99. “Architecting Cyber-Manufacturing Systems” Plenary Talk at 24th International Conference of Production Research, July 30-August 3, 2017 Poznan, Poland
98. “Architecting Cyber Physical Systems” CEDRIC laboratory of CNAM Paris, March 28-31, 2017.
- 97 “Architecting Cyber Physical Systems”, Complex Systems Webinar Series Complex Systems Working Group (CxSWG), March 2, 2017.

- 2016** 96. "Engineering Cyber Physical Systems: Smart Systems Architecting, Data Analytics and Machine Learning", INCOSE IW 2016 SoS Round Table, January 29 February 3, 2016
95. "Computational Intelligence Based Complex Adaptive System-Of-System Architecture Evolution Strategy" Conference on Systems Engineering Research (CSER 2016), March 21-24, 2016, Huntsville, Alabama.
94. Panel Member: "Systems Architecture and Complexity: What are the Risks and What are the Opportunities?" 5<sup>th</sup> International Engineering Systems Symposium, Council of Systems Engineering Universities CSEUN, George Washington University, June 27-29, 2016 Washington DC.
93. "Architecting Cyber Physical Systems", INCOSE Chicagoland Chapter October 20, 2016
- 2015** 92. "Complex Adaptive System Design: Opportunities and Challenges", ORIE 2015 Operations Research and Industrial Engineering September 9- 11, 2015, Ankara, Turkey.
91. "My vision for CPS Technology in the Next 10 Years" Trans-Atlantic Modelling and Simulation for Cyber-Physical Systems 2nd US workshop, Oct. 12-14 2015, Atlanta, GA.
90. "Flexible and Intelligent Learning Architectures for SoS (FILA-SoS): An Integrated Model," INCOSE International Workshop SoS Research Round Table, January 24-27, 2015 Torrance, CA
- 2014** 89. "Flexible Intelligent Learning Architectures System of System FILA –SoS", The Technical Cooperation Program (Australia, Canada, New Zealand, United Kingdom, United States (TTCP) (<http://www.acq.osd.mil/ttcp/>), May 14-15, 2014.
88. "Embracing Complexity in System of Systems Analysis and Architecting" January 6, 2014, Laboratoire CEDRIC du CNAM, Paris
- 2013** 87. "Embracing Complexity and Harnessing Big Data for Evolving Complex Systems" Asia Pacific Council on Systems Engineering APCOSE 2013, September 8-11, 2013, Keio University, Yokohama, Japan.
- 2012** 86. Panel Member, Review of US-EU Efforts in Research and Academia, The Trans-Atlantic Research and Education Agenda in System of Systems (T-AREA-SoS) Workshop, 5 – 7 November 2012, Lockheed Martin Global Vision Centre, Arlington, VA, USA
- 2011** 85. "Systems Engineering Research: Taking Systems Engineering to the Next Level" September 28, 2011, INCOSE Los Angeles Chapter, Huntington Beach, California.
84. "Systems Engineering Research: Taking Systems Engineering to the Next Level" August 18, 2011, The Boeing Company, Colorado Springs, Colorado.
83. "System Architecting and Model Based Engineering" **Invited Workshop Plenary Talk**, Fourth Annual Lockheed Martin Architects Workshop, August 16-18, 2011, Lockheed Martin Deer Creek Facility, Denver, CO.

82. "Systems Engineering Research: Taking Systems Engineering to the Next Level" **Invited Speaker** June 3, 2011, INCOSE Midwest Gateway Chapter, St. Louis.
- 2010** 81. "1<sup>st</sup> workshop on U.S. Undergraduate Programs in Systems Engineering", Panel Member April 7-8, 2010, U.S. Air Force Academy, Colorado Springs, Colorado.
80. "Complex Adaptive Production Systems: How resilient are they?" **Invited Conference Plenary Talk**, ICPR International Conference on Production Research Americas 2010, 21-23 July, 2010, Bogota, Columbia.
79. "Systems Engineering Research and Education", Plenary Talk, 4th Annual INCOSE Great Lakes Regional Conference, October 1-3, 2010, Grand Rapids, Michigan.
- 2009** 78. "Can We Engineer the Emergent Behavior of A System-of Systems" **Panel Member and Presenter**, INCOSE 2009 July 18-23, 2009, Singapore.
77. "Has Asia Been Resilient to Natural Disaster Events and Terrorist Attacks? A Debate on the Issues" Panel **Member and Presenter**, INCOSE 2009 July 18-23, 2009, Singapore.
76. "Evolving System Architecture Alternatives Using Graph Theory and Evolutionary Computation" Paper Presentation co-authored with Atmika Singh in Systems Engineering Track at Institute of Industrial Engineers (IIE) 2009 Conference, Miami, May 30 – June 4, 2009.
75. "Systems of systems Architecting: Can we design for desired systems behavior?" **Invited Talk**, The Systems Engineering Department, Naval Postgraduate School and The Wayne E. Meyer Institute of Systems Engineering, May 21, 2009, Monterey, California.
74. "System Architecture Development Framework Using Computational Tools." Paper Presentation co-authored with Renzhong Wang in Systems Engineering Track at Institute of Industrial Engineers (IIE) 2009 Conference, Miami, May 30 – June 4, 2009.
- 2008** 73. "Methodologies for Understanding Behavior of Systems of Systems", **Invited Talk**, MITRE/MIT Enterprise Modeling Exchange (EME) 2008, September 25-26, 2008, The MITRE Corporation, McLean, Virginia.
72. "How to Engineer the Emergent Behavior of a System of Systems" **Panel Member and Presenter**, INCOSE 2008 June 15-19, 2008, Utrecht, Netherlands.
71. "A Self-Adaptive Swarm-Based Real-Time Routing in Flexible Flow Shops", **Invited Conference Plenary Talk**, ICPR International Conference on Production Research Americas 2008, 5-7 June, 2008, Sao Paulo, Brazil.
70. "A Basic Understanding of the Impact of Interoperability on System's Architectures", IERC Industrial Engineering Research Conference, May 17-21, 2008 Vancouver, British Columbia, Canada.

69. "System of Systems Architecture Generation: Integrating Art of Architecting and Evolutionary Computation " **Invited Talk**, Institute For People-Centred Computation, December 12-13, 2007 Engineers House, Clifton, Bristol, United Kingdom.
68. "An Enterprise Transformation to Service Oriented Architecture (SOA)" with Loan Hoang, IIE Annual Conference, Vancouver, British Columbia, May 17-21, 2008.
- 2007** 67. "System of Systems Architecting Can we design for emergent system behaviors?", The Future of Systems Architecting and Engineering Symposium, JACMET (Joint Alliance of Companies Managing Education for Technology) and University of Arizona Engineering Professional Development Department, November 9, 2007.
66. "Real-Time Routing in Flexible Flow Shops: A Self-Adaptive Swarm-Based Control Model", **Plenary Speaker**, International Conference on Production Research ICPR-19 July 29-August 2, 2007, Valparaiso, Chile.
65. "System of Systems Engineering: Architecture Impact" Government/Boeing Systems Engineering Leadership Meeting, May, 2007.
64. "Systems Engineering Vision" Tutorial, IERC Industrial Engineering Research Conference, May 19-23, 2007 Nashville, Tennessee.
63. "Methodologies for Understanding Behavior of System of Systems" Speaker, IERC Industrial Engineering Research Conference, May 19-23, 2007 Nashville, Tennessee.
61. "Methodologies for Understanding Behavior of System of Systems" **Speaker**, INCOSE Meeting - Midwest Gateway Chapter Meeting, January 24, 2007.
- 2006** 60. "Methodologies for Understanding Behavior of System of Systems" **Speaker**, INCOSE Seattle Metropolitan Chapter Meeting, August 15, 2006.
59. "Different Approaches to Realizing Net-Centric Solutions" **Panel Member and Presenter**, INCOSE 2006 July 9-13, 2006, Orlando, Florida.
- 2005** 58. "Architecting Manufacturing Systems for Network Centric Operations", **Invited Conference Plenary Talk**, 35<sup>th</sup> International conference on Computers and Industrial engineering, June 19-22, 2005, Istanbul, Turkey.
57. "System of Systems: Can Computational Intelligence Help in Creating the Desired Behavior for the Network-Centric Enterprises of Tomorrow?" **Invited Conference Plenary Talk** International Symposium on innovations in Intelligent Systems and Applications INISTA 2005, 15-18 June 2005, Istanbul, Turkey.
56. "Architecting and engineering System of Systems" Industrial Engineering research Conference IERC, May 15-18, 2005 Atlanta, Georgia.
- 2004** 55. "Value Based Smart Systems Engineering", LAI Lean Aerospace Initiative EdNet (Educational Network) Annual Meeting, University of Missouri-Rolla, November 10-12, 2004, Rolla, Missouri.
54. "Artificial Life: Evolution and Challenges", **Invited Conference Plenary Talk**, ICPR

International Conference on Production Research Americas 2004, 1-4 August, 2004, Santiago-Chile.

53. Systems Engineering MS Degree Program for Italian Engineers, **Invited Talk**, Department of Aeronautical Engineering, University of Naples, June 18, 2004, Naples, Italy.

52. Lean Systems Engineering, **Panel Member and Presenter**, "Integrating Lean Thinking and Systems Engineering, INCOSE 2004, June 20-24, 2004, Toulouse, France.

51. Is there a chance for a global template for a BS in Systems Engineering? **Panel Member Representing USA**, INCOSE- Academic Forum, June 21, 2004, INCOSE 2004, June 20-24, 2004, Toulouse, France.

50. EdNet (Educational Network) Lean Systems Engineering Group Meeting, **Panel Member** organized by Massachusetts Institute of Technology LAI Lean Aerospace Initiative, April 17, 2004 Loyola Marymount University, Los Angeles, CA.

49. "Artificial Life: How can it Impact Engineering Practices of the Future?" **Invited Conference Plenary Talk**, Sixth Conference on ACDM 2004 Adaptive Computing in Design and Manufacture April 20-22. 2004 Engineers House, Clifton, Bristol, United Kingdom.

48. "Artificial Life: How can it Impact Engineering Practices of the Future?" **Invited Conference Plenary Talk**, 33<sup>rd</sup> International Conference on Computers and Industrial Engineering, March 25-27 2004, Jeju, Korea.

**2003** 47. "Artificial life in Manufacturing", Luncheon Plenary, Group Technology/Cellular Manufacturing World Symposium, Ohio University, July 2003.

46. "Artificial Life: How can it impact production practices of the future?", Conference Plenary, 17<sup>th</sup> International Conference on Production Research, Blacksburg, Virginia 2003.

**2002** 45. "Artificial Life: Can it Impact Manufacturing Practices of the Future?", Luncheon Plenary, ICPR Americas'02, International Conference on Production Research Americas '02, November 14-15, sponsored by Department of Engineering Management, University of Missouri-Rolla.

44. "Systems Engineering Fundamentals" with Elliot Axelband and Scott Jackson International Council on Systems Engineering (INCOSE) 2002, Las Vegas, Nevada July 28 - August 1 2002.

**2001** 43. "Artificial Life: Can it Impact the Manufacturing Practices of the Future?" Key Note Address 3<sup>rd</sup> International Symposium on Intelligent Manufacturing Systems, August 30 -31 2001, Sakarya, Turkey.

42. "Advantages of Using Fuzzy Membership in Self-Organizing Maps and Support Vector Machines" Invited Lecture, Department of Software Engineering, Charles University in Prague, July 25, 2001.

**2000** 41. "The Boeing Graduate Systems Engineering Education Program" Academic Forum: Symbiosis Between the University and Industry INCOSE International Council on Systems Engineering 2000 Symposium 16-20 July 2000 Minneapolis, Minnesota.

40. "Evolving Subtasks In Predator-Evader Problem" Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University, May 24-27, 2000, Boston, Massachusetts.

39. "Artificial Life- New Approach to Computational Intelligence" Group Technology/ Cellular Manufacturing World Symposium Organized by University of Puerto Rico-Mayaguez, March 27-29, 2000 San Juan, Puerto Rico.
38. "The use of Computational Intelligence in Cellular Manufacturing" Member of the Panel on "Future Directions for Cellular Manufacturing" Group Technology/ Cellular Manufacturing World Symposium Organized by University of Puerto Rico-Mayaguez, March 27-29, 2000 San Juan, Puerto Rico.
- 1999** 37. "Biologically Inspired Connectionist Models for Image Feature Extraction in Machine Vision Systems " Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University, May 26-29, 1999, Boston, Massachusetts.
- 1998** 36. "Toward Optimal Fuzzy Associative Systems using Interactive Self-Organizing Maps and Multi-Layer feed Foreword Principles" Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University, May 27-30, 1998, Boston, Massachusetts.
- 1997** 35. **Speaker and Lecturer** on *Smart Engineering System Design: Neural Networks, Evolutionary Programming, Optimization and Data Mining* International IEEE Engineering in Medicine and Biology Society EMBS Summer School 1997, July 7-14, 1997, Colby College, Maine.
34. "Modeling the Bi-directional Interactions Within and Between the LGN and Area V1 Cells", Center for Adaptive Systems and the Department of Cognitive and Neural Systems, Boston University, May 29-31, 1997, Boston, Massachusetts.
33. "Industrial Engineering and Technology Management in a Changing World" **Panel Member**, 21<sup>st</sup> International Conference on Computers and Industrial Engineering, March 9-12, 1997 San Juan, Puerto Rico.
32. "Tutorial on Neural Networks" 21<sup>st</sup> International Conference on Computers and Industrial Engineering, March 9-12, 1997 San Juan, Puerto Rico.
31. "Evaluating the Performance of the Genetic Neuro Scheduler Using Constant as Well as Changing Crossover and Mutation Rates" with K. Schierholt, 21<sup>st</sup> International Conference on Computers and Industrial Engineering, March 9-12, 1997 San Juan, Puerto Rico.
30. "Dynamic Neuro-Fuzzy Control of the Nonlinear Process" with G. Sun, 21<sup>st</sup> International Conference on Computers and Industrial Engineering, March 9-12, 1997 San Juan, Puerto Rico.
29. "Automated Misplaced Component Inspection for Printed Circuit Boards" with D. Enke, 21<sup>st</sup> International Conference on Computers and Industrial Engineering, March 9-12, 1997 San Juan, Puerto Rico.
- 1996** 28. "Transfer and Diffusion of Artificial Neural Networks Technology" **Invited Speaker**, International Conference on Technology Management: University/Industry/Government Collaboration, UNESCO June 24-26, 1996, Istanbul, Turkey.
27. " Emerging Technologies for Engineers: Neural Networks, Fuzzy Logic, Evolutionary Programming and Information Highways, Live Satellite Broadcast, May 6, 1996, National Technological University Advanced Technology and Management Programs.
26. "Cyber Agent for the Distributed Cyberspace, **Invited Speaker**, Workshop on Biologically Inspired Autonomous Systems, Duke University, March 4-5, 1996, Durham North Carolina.

- 1995** 25. "Frontiers of Manufacturing Technology: Designing Smart Systems Components, **Invited Speaker**, Conference on Manufacturing Quality and Technology, Western Kentucky University, November 30, December 1, 1995, Bowling Green, Kentucky.
24. "Artificial Neural Network Applications in Manufacturing **Invited Speaker**, Sian Kaan International Conference, The First Joint Mexico-US International Workshop on Neural Networks and Neurocontrol, September 5-15, 1995, Playa del Carmen, Quintana Roo, Mexico.
23. "Genetic-Neuro Scheduling Workshop, The 13th International Conference on Production Research, Jerusalem, Israel, August 6-10, 1995.
22. "Intelligent Production Planning and Scheduling Workshop", **Invited speaker**, World Congress on Intelligent Manufacturing, San Juan, Puerto Rico, February 17, 1995.
21. "Neural Networks, Fuzzy Logic, Evolutionary Programming for Designing Smart Manufacturing Systems" **Invited speaker**, Motorola, Vega Baja, Puerto Rico, February 16, 1995.
20. "Intelligent Manufacturing", **Invited Speaker**, 37th Midwest Symposium on Circuits and Systems, Lafayette, Louisiana, August 3-5, 1994.
- 1994** 19. "Intelligent Manufacturing", **Invited Speaker**, Symposium on Intelligent Systems in Communications and Power, Mayaguez, Puerto Rico, February 21-23, 1994.
18. "Neuro-Manufacturing Applications: Genetic Neuro-Scheduler", **United Nations Tokten Consultant**, Middle East Technical University, Ankara, Turkey, January 5, 1994.
17. "Neuro-Manufacturing Applications: Machine-Part Family Formation", **United Nations Tokten Consultant**, Middle East Technical University, Ankara, Turkey, January 6, 1994.
- 1993** 16. "Intelligent Manufacturing Systems", **United Nations Tokten Consultant**, Middle East Technical University, Ankara, Turkey, December 22, 1993.
15. "Artificial Neural Networks: Basic Architectures for Manufacturing", **United Nations Tokten Consultant**, Middle East Technical University, Ankara, Turkey, December 24, 1993.
14. "Supervised Learning Paradigm Backpropagation: Basic Concepts", **United Nations Tokten Consultant**, Middle East Technical University, Ankara, Turkey, December 30, 1993.
13. "Supervised Learning Paradigm Backpropagation: Basic Concepts", **United Nations Tokten Consultant**, Ankara, Turkey, December 29, 1993.
12. "Artificial Neural Networks in Intelligent Manufacturing", **Plenary Speaker**, 12th International Conference on Production Research. Lappeenranta, Finland, 16-20 August 1993.
11. "Artificial Neural Networks in Engineering", **Invited Speaker**, Bradley University Seminar Series, Peoria, Illinois, February 11, 1993.
- 1991** 10. "Neural Networks in Intelligent Manufacturing, **Invited Speaker**, 5th Oklahoma Symposium on Artificial Intelligence, November 20-21, 1991, University of Oklahoma, Norman, Oklahoma.
9. "Neurocomputing For Intelligent Manufacturing - Some Examples", **Invited Speaker**,



Neurocomputing and Automatic Data Processing Prospects For Intelligent Manufacturing, Swearingen Engineering Center, University of South Carolina, February 1991.

- 1990** 8. "Neural Networks In Manufacturing", **Invited Speaker**, 4th Oklahoma Symposium on Artificial Intelligence, November 8-9, 1990, Oklahoma State University, Stillwater, Oklahoma.
- 7. "Neural Networks In Manufacturing", **Invited Speaker**, Virginia Polytechnic Institute, Manufacturing Systems Engineering Department, January 1990.
- 1989** 6. "New Developments in Cutting Stock Technology: Potential Neural Network Applications", **Invited Speaker**, AT&T, Bell Laboratories, Holmdel, New Jersey, July 1989.
- 5. "An Approach to Composite Stock Cutting", **Invited Speaker**, AT&T, Bell Laboratories, Holmdel, New Jersey, January 1989.
- 4. "Linear Programming Approaches to Stock Cutting Problem", **Invited Speaker**, AT&T, Bell Laboratories, Holmdel, New Jersey, January 1989.
- 1988** 3. "Feasibility of Integrating AI and Computer Graphics in Solving Cutting Stock Problems", EURO IX/TIMS XXVII Joint International Conference, Paris, France, July 1988.
- 1981** 2. "A Fuzzy Programming Approach to Departmental Planning", With M.M. Koksalan, CORS/TIMS Meeting, Toronto, Canada, May 1981.
- 1979** 1. "A Goal Interval Programming Model for Determining the Extent of Rationing for a Water Resources System", International Conference: Operations Research in Agriculture and Water Resources, Jerusalem, November 1979.

## DISSERTATIONS AND THESES SUPERVISED

### Ph.D. DISSERTATIONS

#### ***Systems Engineering***

35. "Neural Architecture Search Using Evolutionary Algorithms "Ram Deepak Gottapu, December 2019, (Published)

34. "A Domain Independent Method to Assess System of System Meta- Architectures Using Domain Specific Fuzzy Information ", Louis II Pape, December 2015 (Published)

33. "Computational Intelligence Based Complex Adaptive System-of-System Architecture Evolution Strategy ", Siddhartha Agarwal, May 2015 (Published)

32. "Search Based System Architecture Development Using A Holistic Modeling Approach" Renzhong Wang, August 2012 (Published).

31. "Architecture Value Mapping: Using a Linguistic Information Representation Scheme and Fuzzy Cognitive Maps as a Reasoning Mechanism for Multi-Criteria Conceptual Design Evaluation" Atmika Singh, December 2011 (Published)

30. "Assessing System Architectures: The Canonical Decomposition Fuzzy Comparative Methodology" Jason Dauby, November, 2010 (Published)

29. "Modeling Network Traffic on A Global Network-Centric System with Artificial Neural Networks", Douglas Keith Swift, December 2007(Published and patent application filed by The Boeing Company).
28. "Architecting System of Systems: Artificial Life Analysis of Financial Market Behavior", Nil Hande Kilicay-Ergin, June 2007 (Published).

### ***Computer Science***

27. "Moving Object Detection and Tracking for Event-Based Video Analysis" Filiz Bunyak, May 2005 (Published).

### ***Engineering Management***

- 26."Integrated Computational Intelligence and Japanese Candlestick Method for Short-Term Financial Forecasting". Takenori Kamo, December 2011 (Published).
25. 'Domain Adaptive Control Architecture for Advanced Manufacturing Systems", Lakshman Meyyappan December 2006 (Published).
24. "Financial Prediction and Trading Via Reinforcement Learning and Soft Computing", Hailin Li, December 2005 (Published).
23. "Evolving Neural Networks in Classification", Sunghwan Sohn, December 2003 (Published).
22. "SIMNET: A Neural Network Architecture for Pattern Recognition and Data Mining", His-Chieh Lee, May 2003 (Published).
21. "Evolvability in the Phylogeny of the Ontogenesis of Artificial Networks of Spiking Neurons", Amber Fischer, May 2003 (Published).
20. "Data Mining Through Neuro-Fuzzy –Genetic Architecture" Korakot Hemsathapat, December 2001 (Published).
19. "Global Stock Index Forecasting Using Multiple Generalized Regression Neural Networks with a Gating Network" Parinya Disornetiwat, May 2001 (Published).
18. " A Hybrid Intelligent Model for Rapid Assessment of Bridging Procedures", Nola Rebecca Johnson, December 1999 (Published).
17. "An Object-Based Evolutionary Algorithm for Nesting Problems", Kanchitpol Ratanapan, December 1997 (Published).
16. "Biologically Inspired Neural Network Connectionist Models for Use in Artificial Vision Systems", David Lee Enke, May 1997, (Published).
15. "A Hierarchical Fingerprint Identification Based on an Unsupervised Neural Network Model", Ahmet Murat Ozbayoglu, Advisor, May 1996, (Published).
14. "A Computer Face Recognition Using Neural Networks: A Biometric Access Control System Based on the Human Face," Usamah M.S. Altaf, Advisor, May 1996, (Published).

13. "Neuro-Fuzzy Control of the Nonlinear Processes" Arit Thammano, Advisor, May 1995, (published).
12. "An Approach to Three-Dimensional Stock Cutting Using Genetic Algorithms", Randy House, Advisor, December 1994, (Published).
11. "Artificial Vision: Three Dimensional Object Recognition Using Neural Networks", Ryan Rosandich, May 1994, (Published).
10. "Genetic Neuro-Nester", Pipatpong Poshyanonda, Advisor, December 1994, (Published).
9. "Genetic Neuro-Scheduler", Sinchai Sittisathanchai, Advisor, May 1994, (Published).
8. "CAD-Based Graph Features for Three-Dimensional Neuro-Recognition in a Manufacturing Environment", Kuang-Ming Tseng, Advisor, May 1993, (Published).
7. "Priority Based Simulation Model of an Ethernet Using An Artificial Neural Network", Michael Shoukat, Advisor, May 1992, (Published).
6. "Computer Aided Conceptual Design (CACD): A Hybrid Model for Needs-To-Functions-To-Structures Association By Utilizing The Fuzzy Associative Memory And Fuzzy Information Content", Ali-Bahrami, Advisor, May 1992, (Published).
5. "Stereoscopic Neuro-Vision for Three-Dimensional Object Recognition in a Manufacturing Environment", Mark Lynch, Advisor, February 1992, (Published).
4. "Automated Computer Aided Stock Cutting: Irregular Two-Dimensional Pattern Generation Using Simulated Annealing Algorithm", Ali Hajakbari, Advisor, December 1991, (Published).
3. "Characterizing Backpropagation Neural Network Architecture Response to Domain Entropy: Implementation With a Fuzzy Logic Based Expert System", Alice Smith, Advisor, April 1991, (Published).
2. "Distributed Knowledge-based Approach for Scheduling in Intelligent Manufacturing", Gerald Hoffmann, Advisor, August 1990, (Published).
1. "An Integration of Artificial Intelligence and Operations Research In Production Planning, Scheduling and Control", Tatchapol Poshyanonda, Co-Advisor, May 1989, (Published).

## **M. S. THESES**

### ***Systems Engineering***

53. "A Co-evolutionary System-Of-Systems Meta-Architecture Analysis", George Muller December 2015
52. "Synergy between Biology and Systems Resilience", Ashik Chadra, May 2010.
51. "On the effects of small-scale fading and mobility in mobile wireless ad-hoc networks," Bandana Paudel, August 2009.

50. "Security Architecture Methodology for Large Net-Centric Systems", Njideka Adaku Umeh, August 2007 (Published).
49. "Executable System Architecting Using Systems Modeling Language in Conjunction with Colored Petri Nets- A Demonstration using the GEOSS Network Centric System", Renzhong Wang, August 2007 (Published).
48. "Modular Architecting for Effects Based Operations", Emel Meteoglu, July 2007 (Published).
47. "Design of Experiments as a Means of Lean Value Delivery to the Flight test Enterprise", Aaron A. Tucker, May 2007 (Published).
46. "Collaborative Multiagent Architecture Simulation Using Real Robots for Path Planning In Unknown Environments" Karthik Gopalakrishnan, December 2006 (Published).
45. " Modeling and Simulation of net Centric System of systems Using Systems Modeling Language and Color Petri Nets- A Demonstration Using the Global Earth Observation System of Systems", U. B. Madwaraj Rao, May 2005 (Published).
44. "Vibration Engine Neural Network Object Monitoring" Scott Thomas Maine, May 2004 (Published).
43. "A Study of Antenna-to-Antenna Coupling Prediction with Fuzzy Inference System", Taymor Rashidi, May 2004 (Published).
42. "Enabling Manufacturing Excellence With Formalized Systems Architecting and Knowledge Based Systems", Darwin Wilford Petersen, May 2003 (Published).

### ***Engineering Management***

41. "Bridge Damage Detection Using an Intelligent Engineering System", Dionysios N. Danilatos, August 2007 (Published).
40. "Online Data Mining Using Evolving Neural Networks", Nadeem Ahmed, May 2004 (Published).
39. "Web Personalization Architecture Using Neuro-Fuzzy Clustering Algorithms", Kartik Menon, May 2004 (Published).
38. "Follow The Leader Motion Strategy in Double-Octahedral Parallel Trusses", Ira Dunn, December 2003 (Published).
37. "Collective Behavior in Robots Using Evolutionary Neural Networks", Vikram Aedula, May 2003 (Published).
36. "An Optimization Approach to the Irregular-Shape Full-Rotation Nesting Problem by Evolving Subgroups with a Genetic Algorithm", Amber Diane Fischer, May 1999 (Published).
35. "Time Series Prediction Using Adaptive Hierarchical Neural Networks", Karsten Schierholt, December 1996 (Published).
34. "Dynamic Neural Network and Dynamic Neuro-Fuzzy Control Model for Control Applications", Gang Sun December 1996 (Published).
33. "The Use of Neural Networks In A Smart Battery Charger", Timothy Wayne Harvey, Advisor, May

1995 (Published).

32. "Expert System for Test and Evaluation Across the Acquisition Life Cycle", Janice Mitchell Isbell, Advisor, May 1995 (Published).

31. "A New Architecture for Dynamic Neural Networks On Control Applications", Wei-jeer Han, December, 1994 (Published).

30. "Automating A System Safety Program Using Information Superhighway Technologies" Sue Ann Ference, Advisor, December 1994 (Published).

29. "Self Organizing Maps In Autonomous Parts Assembly", Sudhakar Pillarisetti, Advisor, December 1994 (Published).

28. "PCB Inspection Using Differential Competitive Learning and Fuzzy Associative Memories", Madhav Moganti, Advisor, May 1994 (Published).

27. "An Expert Network Process Control Application", Douglas M. Rogers, Co-Advisor, May 1994 (Published).

26. "A Neuro-Vision Model for Object Recognition Using Light-Stripe Images", Lou-Hsin Hao, Advisor, May 1994 (Published).

25. "A Fuzzy Method for Preliminary Design Random Access Memory Failure Rate Prediction", Keith Robert Weyerberg, Advisor, December 1992 (Published).

24. "Autonomous Parts Assembly Through Neuro-Vision", Eric Roddiger, Advisor, December 1992 (Published).

23. "Characterizing Backpropagation Neural Network Architecture Response to Network Parameter Variation", Elaine R. Raterman, Co-advisor, December 1992 (Published).

22. "A Study of the Army's Preventive Maintenance System", Co-Advisor, Martin E. Ewald, December 1992 (Published).

21. "Development of a Transmission Line Route Selection Method for SHO-ME Power Electric Cooperative Utilizing Multi-objective Decision Analyses", Ron S. Marlin, Advisor, December 1992 (Published).

20. "ART 1, Neural Network Approach to Large Scale Group Technology Problems", Cheng-Fo Sen, Advisor, December 1992 (Published).

19. "Feature Recognition in Ultrasonic Images Through Artificial Neural Networks", Timothy A. Bauer, Advisor, May 1992 (Published).

18. "Moving Object Recognition and Tracking by a Robot Using Artificial Neural Networks", Abhijit Neogy, Co-Advisor, May 1992 (Published).

17. "Automated Precision Assembly Through Neuro-Vision", Mahesh K. Vellanki, Advisor, May 1992 (Published).

16. "A Neural Network Approach To Group Technology", Ram Huggahalli, Advisor, May 1991

(Published).

15. "Intelligent Process Control in Glass Container Production", Juan E. Vidal, Advisor, December 1990 (Published).

14. "A Prototype Intelligent Process Controller For The Small Manufacturer", Clarence Rasquinha, Advisor, May 1990 (Published).

13. "Neural Networks in Generic Mechanical Process Design", Peter Lakey, Advisor, May 1990 (Published).

12. "An Integrated Production System for Composite Laminate Structures", Kenneth A. Shelton, May 1989 (Published).

11. "An Intelligent Scheduling System for Automatic Storage and Retrieval", Nazli S. Wasti, July 1989 (Published).

### ***Industrial Engineering***

10. "A Heuristic Approach to Solve the Two Dimensional and Rectangular Cutting Stock Problem", Cemil Z. Sayek, 1985 (Published).

9. "Scheduling for Flexible Layout", A.Gursel Suer, 1985 (Published).

8. "Multi-level MRP Lot-Sizing Heuristics", F. Sedef Meral, 1985 (Published).

7. "Material Requirements Planning Implementation for a Foundry", Selim Talu, 1985 (Published).

6. "A Computer Software for Solving Cutting Stock Problems", Yalcin Tatoglu, 1983 (Published).

5. "Multi-Objective Programming Model for Lignite Distribution", Ihsan Ozdemir, 1983 (Published)..

4. "Short-Term Scheduling and Control System for a Job-Shop Production", Kemal Y. Yunusoglu, 1983 (Published).

3. "A Methodology for Production Planning in a Refinery", Haluk Kosal, 1981 (Published).

2. "Fuzzy Linear Programming in Multi-objective Planning Problems", M. Murat Koksalan, 1980 (Published).

1. "Allocation of Inspection Stations", Huseyin Akkoyunlu, 1980 (Published).

### **UNIVERSITY ACTIVITIES**

#### *University of Missouri*

University-Wide Tenure (Member 2012)

University Faculty Committee on Tenure (Alternate 2008-2010)

Continuous Improvement Committee (1994-1999)

#### *Missouri University of Science and Technology*

Member, Tenure and Promotion Committee, Department

Member, Doctoral Faculty, Campus, 1988 to present.

Academic Council Grievance Oversight Committee (Member 2010-2011)

Engineering Management and Systems Engineering P&T Committee

Campus P&T Committee Chair 2009-2010

University Senate P&T Committee Department Representative

Campus P&T Committee Department Representative (2007-2010)

Engineering Management and Systems Engineering P&T Committee Chair (2004-2010)

Academic Council Grievance Hearing Panel (Chancellor Representative 2009-2010)

School of Engineering Director for Systems Engineering MS Degree Program (2000- 2008)

School of Engineering Curricula, Admissions and Academic Standards Committee (1996, 1999).

Commencement Committee (1996)

Doctoral Faculty (1988 - 2010)

School of Engineering Research and Graduate Affairs (1994-2003)

Director of Academic Affairs, Engineering Management Department (1997)

Engineering Management ABET Committee (2000) Chair

Engineering Management Graduate Committee (1989-2003, 2004 - Present)

Engineering Management Seminars Committee (1988 – 2003) (Chair)

Engineering Management Transfer/Undergraduate Committee (1996) (Chair)

Engineering Management ABET Committee (1996)

Engineering Management GTA and Scholarship Committee (1996)

Engineering Management Computer Lab. Committee (1996)

Engineering Management Co-op Advisor (1996)

Departmental Computer Integrated Manufacturing Laboratory Committee (1989-1993)

Departmental University Day Committee (1989 - 1991)

Departmental Computer Laboratory Committee (1989 - 1991)

Departmental Commencement Committee (1989 - 1991)

Departmental Parent's Day Committee (1989 - 1991)

*Wichita State University*

Graduate Faculty (1985-1988)

*Middle East Technical University*

Member, Graduate and Doctoral Committee (1979-1985)

## **REPRESENTATIVE REFEREE RESPONSIBILITIES**

IEEE Transactions on Systems, Man, and Cybernetics

IEEE Transactions on Neural Networks

Intelligent and Fuzzy Systems

International Journal of Manufacturing System Design

Journal of Design and Manufacturing

Intelligent Automation and Soft Computing

Journal of Engineering for Industry

The International Journal of Flexible Automation and Integrated Manufacturing

International Journal of Production Research

SME Transactions on Robotic Research

Computers and Industrial Engineering

Intelligent Manufacturing

International Journal of Production Planning and Control

International Journal of Advanced Manufacturing Technology

International Journal of Production Economics

International Journal of Industrial Engineering - Applications and Practice

Computers and Mathematics with Applications

Mathematical and Computer Modeling

Journal of Intelligent Material Systems and Structures

Journal of Materials Processing and Manufacturing Science

Heuristics, The Journal of Knowledge Engineering

Expert Systems with Applications



Robotics and Computer Integrated Manufacturing

Journal of Operational Research Society

Operations Research

IEEE Transactions on Engineering Management

European Journal of Operational Research

Engineering Management Journal

Journal of Soil Contamination

## **PROFESSIONAL AFFILIATIONS**

INCOSE International Council on System Engineering, Fellow

IEEE The Institute of Electrical and Electronics Engineers, Life Member

IISE The Institute of Industrial Engineer and Systems Engineers, Fellow

## **INTERNATIONAL COUNCIL ON SYSTEMS ENGINEERING -INCOSE PROFESSIONAL ACTIVITIES**

INCOSE Fellows Chair 2010-2012

Special Awards Judge for International Council on Systems Engineering –INCOSE for Intel  
International Science and Engineering Fair May 2010

Special Awards Judge for International Council on Systems Engineering –INCOSE for Intel  
International Science and Engineering Fair May 2009

INCOSE-Fellows Meetings at Winter Workshop and  
International Symposium, Member 2008-2010

International Symposium 2010 Organizing Committee Member

International Symposium 2010 Academic Forum Chair

Corporate Advisory Board Member for Missouri University of Science and Technology

INCOSE Systems Engineering University Leadership Roundtable, Missouri S&T Representative Chair  
2009-2010

## **COUNCIL OF ENGINEERING SYSTEMS UNIVERSITIES- CESUN ACTIVITIES**

Council of Engineering Systems Universities CESUN <http://www.cesun.org/> Missouri S&T  
Representative

Doctorate Student Network (SEANET) as Systems Engineering Faculty Missouri S&T  
Representative

**SYSTEMS ENGINEERING RESEARCH CENTER- UNIVERSITY AFFILIATED RESEARCH CENTER  
SERC-UARC ACTIVITIES**

Senior Investigator, Department of Defense, Systems Engineering Research Center-UARC ,  
(<http://www.sercuarc.org/> , Hoboken, New Jersey, 2009 - present

**MISCELLANEOUS PROFESSIONAL ACTIVITIES**

INNS, SIGINN-Midwest, Chairman, 1991-1996; Associate Chairman, 1990-1991

International Foundation for Production Research, Board Member

Chairman, IIE Wichita Chapter, #56 (1987-1988)

Chapter Development Chairman, IIE Wichita Chapter (1986-1987)