

WAYNE STATE UNIVERSITY

Professional Record

Ratna Babu Chinnam, Ph.D.

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Tel (O): 313-577-4846 (H): 248-652-3240 (C): 248-819-2874

E-mail: ratna.chinnam@wayne.edu

DEPARTMENT/COLLEGE: Industrial & Systems Engineering Department, College of Engineering

PRESENT RANK & DATE OF RANK: Professor, Fall 2012

WSU APPOINTMENT HISTORY:

Year Appointed/Rank: Fall 2000, Associate Professor

Year Awarded Tenure: 2006

Year Promoted to Full Professor: 2012

CITIZEN OF: United States of America

EDUCATION:

Baccalaureate: B.S. Mechanical Engineering, Manipal Institute of Technology, Mangalore University, India, 1988.

Graduate: M.S. Industrial Engineering, Texas Tech University, Lubbock, Texas, 1990.

Ph.D. Industrial Engineering, Texas Tech University, Lubbock, Texas, 1994.

FACULTY APPOINTMENTS AT OTHER INSTITUTIONS:

Fall 1994 to Winter 2000, Assistant Professor, Industrial & Manufacturing Engineering Department, North Dakota State University.

Summer 2000, Associate Professor, Industrial & Manufacturing Engineering Department, North Dakota State University.

Fall 2009 – 2013, Research Professor, John D. Dingell VA Medical Center, Detroit.

PROFESSIONAL SOCIETY MEMBERSHIP(S):

Member, Institute for Operations Research & Management Science

Member, North American Manufacturing Research Institute

Member, Alpha Phi Mu

HONORS/AWARDS:

PhD Advisor for Blue Cross Blue Shield of Michigan Foundation Student Award Program Grant Awardee, 2018-2019.

Samira Fazel Anvaryazdi has been awarded the Blue Cross Blue Shield of Michigan Foundation Student Award Program grant for the 2018-2019 academic year in the amount of \$3,000 in recognition of her dissertation research around “Managing Operational Efficiency & Health Outcomes at Outpatient Clinics through Effective Scheduling”.

Signature:



September 22, 2018

PhD Advisor for IBM Service Science Best Student Paper Awardee (Ranked 3rd among 55 Applicants with \$250 cash prize), 2017.

Seungyup Lee is one of the few finalists for the IBM Service Science Best Student Paper Award for the following article based on his dissertation research (presentation at INFORMS 2017):

Lee, S.Y., Chinnam, R.B., Dalkiran, E., Krupp, S., Nauss, M., “Proactive Inpatient Bed Reservations from ED to Reduce Patient Boarding.”

Best Application Paper - Honorable Mention, *IIE Transactions* Focused Issue on Scheduling and Logistics Best Paper Award Competition, 2017.

Movahednejad, M., Mashayekhy, L., Chinnam, R.B, and Phillips, A., “Hierarchical Time-Dependent Shortest Path Algorithms for Vehicle Routing under ITS,” *IIE Transactions*. Vol. 48, Issue 2, pp. 158-169, 2016.

Awards are selected by an examining committee from all papers published from July 1, 2015 through June 30, 2016. Invited to present paper as part of a special session for IIE Transactions Best Papers at the 2017 ISERC Conference.

PhD Advisor for IIE Pritsker Doctoral Dissertation Awardee, 2016.

Mahyar Movahednejad was awarded the IIE Pritsker Doctoral Dissertation Award for 2016.

It recognizes individuals in academia who have shown outstanding research capabilities in industrial engineering along with a \$1,000 cash prize from the Pritsker Corp. Candidate is also invited to present a paper on the dissertation at the Industrial Engineering Research Conference:

Mahyar Movahednejad, *Frontiers in Operations Research for Overcoming Barriers to Vehicle Electrification*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2015.

Founding Co-Director, Interdisciplinary M.S. Program in Data Science & Business Analytics, Wayne State University, 2016.

Approved by the WSU BoG in Fall 2016, this is a novel interdisciplinary degree program that leverages the strengths of Wayne State in statistics, operations research, computing, and business by combining the expertise of the College of Engineering and the Mike Ilitch School of Business. It offers students three specialization tracks in Analytics, Engineering, and Business. See the Program Website (<https://bigdata.wayne.edu/degree>) for more information.

IIE Transactions Article profiled in IIE Magazine, 2016.

The following IIE Transactions Article is profiled in IIE Magazine, Vol 48, January 2016:

Movahednejad, M., Mashayekhy, L., Chinnam, R.B, and Phillips, A., “Hierarchical Time-Dependent Shortest Path Algorithms for Vehicle Routing under ITS,” *IIE Transactions*. Vol. 48, Issue 2, pp. 158-169, 2016.

PhD Advisor for IBM Service Science Best Student Paper Awardee (Finalist), 2015.

Mahyar Movahednejad is one of the few finalists among the 55 submissions for the IBM Service Science Best Student Paper Award for the following article based on his dissertation research (presentation at INFORMS 2015):

Movahednejad, M., Mashayekhy, L., Chinnam, R.B., and Grosu, D. “Scheduling and Pricing Services for Online Electric Vehicle Charging”.

PhD Advisor for INFORMS ENRE Best Student Paper Awardee, 2014.

Mahyar Movahednejad was awarded the 2014 Institute for Operations Research & Management Science Society (INFORMS) Section on Energy, Natural Resources, and the Environment (ENRE) Best Student Paper Award for the following article based on his dissertation research:

Movahednejad, M., Mashayekhy, L., Grosu, D., and Chinnam, R.B, “Optimal Routing for Plug-in Hybrid Electric Vehicles”.

PhD Advisor for Runner-Up Prize Awardee, POMS College of Sustainable Operations Student Paper Competition, 2014.

Mahyar Movahednejad was awarded the Production and Operations Management Society (POMS) College of Sustainable Operations 2014 Student Paper Competition award and prize for the following article based on his dissertation research:

Movahednejad, M., Mashayekhy, L., Grosu, D., and Chinnam, R.B, “Optimal Routing for Plug-in Hybrid Electric Vehicles”.

Outstanding Faculty Leadership Award, Industrial & Systems Engineering Department, Wayne State University, 2013.

“In appreciation for outstanding commitment to research, teaching, mentoring and advising graduate students and continued service to the Industrial & Systems Engineering Department at Wayne State University.”

- PhD Advisor for INFORMS Best Dissertation Prize Awardee - Aviation Applications Section, 2013.
Farshid Azadian, 2012 PhD alumnus of Wayne State University, co-advised by me and Dr. Alper Murat, won the Institute for Operations Research & Management Science Society (INFORMS) Best Dissertation Prize in the Aviation Applications Section of the INFORMS Transportation Science and Logistics Society. This is the first such award from INFORMS, our premier society, to WSU.
Farshid Azadian, *An Integrated Framework for Freight Forwarders: Exploitation of Dynamic Information for Multimodal Transportation*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012.
- Best Paper Award, Society of Operations Management, 2012.
Kumar, A., Chinnam, R.B., “Strategic Capacity Planning and Management of Remanufactured Products,” *16th Annual International Conference of the Society of Operations Management (SOM 2012)*, IIT Delhi, India, December 21-23, 2012.
- Gold Paper Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2012.
Movahednejad, M. and Chinnam, R.B., “Efficient Routing on Large-Scale Dynamic Networks under ITS Using Hierarchical Communities,” *ITS Michigan Annual Meeting & Exposition*, Dearborn, MI, May 30, 2012.
- Outstanding Faculty Service Award, Engineering Student Faculty Board, Wayne State University, 2012.
- Outstanding Graduate Mentor Award in the Natural Sciences/Engineering, Wayne State University, 2012.
Outstanding Graduate Mentor Awards honor Graduate Faculty recognized by their departments and their graduate students as excellent graduate mentors. Up to four awards are granted annually. Each award includes a \$2,500 honorarium and a citation presented at the Faculty Recognition Ceremony.
- Gold Paper Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2011.
Movahednejad, M. and Chinnam, R.B., “State-Space Reduction in Modeling Traffic Network Dynamics for Efficient Graph-Based Hierarchical Routing Algorithms under ITS,” *ITS Michigan Annual Meeting & Exposition*, Dearborn, MI, June 1, 2011.
- Bronze Paper Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2011.
Guner, A., Chinnam, R.B., and Murat, A.E., “Dynamic Routing Policies in Stochastic Time-Dependent Networks Under ITS,” *ITS Michigan Annual Meeting & Exposition*, Dearborn, MI, June 1, 2011.
- Best Data Mining Paper Award - Finalist, INFORMS Annual Meeting, 2010.
Kumar, A., Chinnam, R.B., Guo, Y., and Tseng, F., “Hidden-Markov Model based Sequential Clustering for Autonomous Diagnostics,” *INFORMS Annual Meeting*, Austin, TX, November 7-10, 2010.
- Bronze Paper Award, ITS Michigan Annual Meeting, Intelligent Transportation Society, 2010.
Guner, A., Chinnam, R.B., and Murat, A.E., “Dynamic Routing in Stochastic Time-Dependent Networks for Milk-Run Tours with Time Windows,” *ITS Michigan Annual Meeting & Exposition*, Dearborn, MI, May 19- 20, 2010.
- Founding Director, Global Executive Track (GET), Ph.D. in Industrial Engineering, Wayne State University, 2008.
First such track in the United States. By 2016, over 50 students have been admitted into the program from such international companies/agencies as Apple, Ford, Chrysler, GM, General Dynamics, TRW, American Axle, QSS, Henry Ford Health Care, HUD, and VA. Both the curriculum and its delivery are novel. Faculty and experts from around the globe participate in the program. See the GET Program Website (<http://engineering.wayne.edu/ise/programs/phd-get.php>) for more information.
- Best Paper Award, American Society for Engineering Management, 2008.
Nepal, B., Chinnam, R.B., Petrycia, J., Brush, E., Chisholm, C., Hearn, M., and Meixner, M., “A quality-based business model for determining non-product investment: A case study from a Ford automotive engine plant,” *Engineering Management Journal*, Vol. 19, No. 3, pp. 31-46, 2007.
- Outstanding Faculty Service Award, Engineering Student Faculty Board, Wayne State University, 2005.
- Outstanding Faculty Service Award, Engineering Student Faculty Board, Wayne State University, 2003.
- Best Paper Award - Finalist, ANNIE Conference, St. Louis, Missouri, 2000. Paper was later invited and published in *International Journal of Smart Engineering System Design*. Chinnam, R.B. and Mohan, P., “On-Line Reliability Estimation of Physical Systems Using Neural Networks and Wavelets,” *International Journal of Smart Engineering System Design*, Vol. 4, No. 4, pp. 253-264, 2002.

Preferred Professor, Mortar Board Honor Society, North Dakota State University, 1999.
Researcher of the Year Award - Runner Up, College of Engineering and Architecture, North Dakota State University, 1999.
Best Novel Engineering Application Paper - Finalist, ANNIE Conference, St. Louis, Missouri, 1997. Paper was later invited and published in *International Journal of Smart Engineering System Design*.
Chinnam, R. B. and May, G.S., "Role of Neural Networks and Genetic Algorithms in Developing Intelligent Quality Controllers for On-line Parameter Design," *International Journal of Smart Engineering System Design*, Vol. 3, pp. 51-64, 2001.
Nominee, Most Outstanding Graduating Doctoral Student, Texas Tech University, 1994.
Merit Scholarship, Texas Tech University, 1989-1990.
Outstanding Academic Performance Award, Manipal Institute of Technology, 1988.
General Proficiency Award, Manipal Institute of Technology, 1985, 1986, and 1987.
Sri Sudhakara Reddy Memorial Award for Best Mechanical Engineering Student of the Year, Manipal Institute of Technology, 1986.

BIOGRAPHICAL CITATIONS (National/Regional or Professional Directories):

Listed in Marquis *Who's Who in the World*, 2004.
Listed in Academic Key's *Who's Who in Engineering Education*, 2002.
Listed in Marquis *Who's Who in Science and Engineering*, 1997.

I. TEACHING

A. Years at Wayne State

Fall 2000 to Present

B. Years at Other Colleges/Universities

Fall 1994 to Summer 2000, Industrial & Manufacturing Engineering Department, North Dakota State University

C. Courses Taught at Wayne State

1. Undergraduate

Term	Course	Title	Credits	Enrollment	Course Rating	Course Learning	Instructor Rating
W03	IE 4310*	Production Control	4	3	4.5/5	4.5/5	4.6/5
W02	IE 4310*	Production Control	4	3	3.9/5	4.0/5	4.3/5

2. Graduate

Newer Format: ♦

Term	Course (Credits)	Students Responding	Q1. Course Rating		Q2. Course Learning		Q24. Instructor Rating		Summative Class Rating	Student Profile				Mean Sum
			Mean	Median	Mean	Median	Mean	Median		A (mean)	A (median)	B (mean)	B (median)	
S18	DSA7500(6)	6/6	4.7	5	4.3	5	5	5	14.0	5	5	5	5	10
S18	IE8960(1)	/2												
W18	IE7860(3)	14/22	4.9	5	4.4	5	4.9	5	14.1	4.7	5	4.7	5	9.4
F17	IE8944(2)	6/11	4.8	5	4.8	5	4.8	5	14.5	4.8	5	5	5	9.8
S17	IE8960(1)	3/8	4.3	4	4.7	5	4.7	5	13.7	4	5	4	5	8
W17	IE8943(3)	8/11	4.8	5	4.5	5	4.9	5	14.1	4.9	5	4.9	5	9.7
F16	IE7860(4)	12/13	4.4	4	4.3	4	4.6	5	13.2	4.8	5	4.7	5	9.6
S16	IE8960(1)	5/6	4.8	5	4.5	4.5	5	5	14.3	4.4	5	4.6	5	9.0
W16	IE7315(4)	28/81	4.3	4	4.4	4	4.7	5	13.3	4.5	5	4.7	5	9.2
F15	IE8944(2)	3/8	5	5	5	5	5	5	15	4.7	5	4.7	5	9.3
F15	IE7410(2)	24/35	4	3.8	4.2	4	4	4	12.1	3.7	4	3.9	4	7.6
S15	IE8960(1)	5/6	4.4	4	5	5	5	5	14.4	4.8	5	5	5	9.8
W15	IE8943(3)	4/9	4.8	5	4	4	5	5	13.8	5	5	5	5	10
F14	IE7860(4)	8/10	3.9	4	4.3	4	4.5	4	12.7	4.5	5	4.4	4.5	8.9
W14	IE7315(4)	27/43	4.2	4.5	4.1	4	4.4	5	12.7	4.5	5	4.5	4.5	9
F13	IE8944(2)	5/6	4.6	5	4.2	5	4.8	5	13.6	4.2	5	4.4	5	8.6
F13	IE7410(2)	18/27	3.2	3	3.4	4	4.2	4	10.8	3.7	4	3.7	3	7.5
S13	IE8960(1)	4												
W13	IE8943(3)	5/6	5	5	4.6	5	5	5	14.6	4.6	5	5	5	9.6
F12	IE7325(4)	10/11	4.5	5	4.5	5	4.8	5	13.8	4.6	5	4.4	4.5	9
F12	IE7860(4)	9/9	4.3	4	4.3	4	4.2	5	12.9	4.8	5	4.8	5	9.6
W12	IE7315(4)	10/12	4.1	4.5	4.5	5	4.5	5	13.1	4.4	5	4.3	5	8.8
F11	IE8944(3)	4/10	5	5	5	5	5	5	15	5	5	5	5	10
	IE7410(2)	19/22	3.6	4	3.6	3	4.1	4	11.3	3.9	4	3.8	4	7.7

* IE6310 and IE4310 are back then taught jointly and teaching evaluations are administered jointly as well.

♦ Q1: How would you rate this course? Q2: How much have you learned in this course? Q24: How would you rate the instructor's teaching in this course?

W11	IE8943(2)	9/10	4.8	5	4.7	5	4.9	5	14.3	4.6	5	4.4	4	9
	IE7315(4)	8/11	4	4	4.4	4.5	4.5	5	12.9	4.3	4	4.4	5	8.7
	IE8993(1)	6/6	4.6	5	4.6	5	4.7	5	13.9	5	5	4.7	5	9.7
F10	Sabbatical at TARDEC													
W10	IE7315(4)	12/14	4.6	5	4.4	5	4.7	5	13.8	4.5	4.5	4.7	5	9.2
	IE8993(1)	4/5	3.8	4	3.2	3	4.2	4	11.2	4.7	5	4.3	4	9
F09	IE8944(3)	9	SET Forms Not Received in Time to Administer											
	IE7410(2)	22/23	4.1	4	4.3	4	4.5	5	12.9	4	4	4.1	4	8.1

Older Format:

Term	Course	Title	Credits	Enrollment	Course Rating	Course Learning	Instructor Rating
F11	IE 8994	Launch Through Sustainability – Part II	3	10	5.0/5	5.0/5	5.0/5
W09	IE 8993	Launch Through Sustainability – Part I	3	15	4.6/5	4.1/5	4.6/5
W09	IE 7315	Production Systems	4	20	4.6/5	4.2/5	4.6/5
F08	IE 7325	Supply Chain Mgmt.	4	17	4.7/5	4.5/5	4.8/5
W08	IE 8993	Graduate Seminar: Supply Chain Mgmt.	1	8	4.5/5	3.8/5	4.2/5
W08	IE 8325	Advanced Supply Chain Management	4	9	3.6/5	3.8/5	4.3/5
W08	IE 7315	Production Systems	4	22	4.6/5	4.5/5	4.6/5
F07	IE 7325	Supply Chain Mgmt.	4	26	4.4/5	4.3/5	4.3/5
F07	IE 7410	Agile Systems for the Mfg. Enterprise	2	18	4.2/5	4.1/5	4.5/5
W07	IE 7315	Production Systems	4	39	3.9/5	4.0/5	4.0/5
F06	IE 7860	Intelligent Engineering Systems	4	9	4.11/5	4.56/5	4.78/5
F06	IE 7325	Supply Chain Mgmt.	4	31	4.06/5	4.11/5	4.17/5
W06	IE 7315	Production Systems	4	27	4.0/5	4.3/5	4.7/5
F05	IE 7325	Supply Chain Mgmt.	4	13	4.11/5	4.0/5	4.1/5
F05	IE 7410	Agile Systems for the Mfg. Enterprise	2	59	3.16/5	3.4/5	3.59/5
W05	IE 7995	Advanced Supply Chain Mgmt.	4	7	4.6/5	4.6/5	4.9/5
F04	IE 7325	Supply Chain Mgmt.	4	23	4.1/5	4.0/5	4.6/5
F04	IE 7410	Agile Systems for the Mfg. Enterprise	2	41	3.0/5	3.1/5	3.3/5
W04	IE 7315	Production Systems	4	36	4.1/5	4.2/5	4.4/5
F03	IE 7860	Intelligent Engineering Systems	4	5	4.4/5	4.8/5	4.6/5
F03	IE 7325**	Enterprise Operations Mgmt. & Integration	4	24	NA**	NA**	NA**
W03	IE 6310*	Production Systems I	4	43	4.5/5	4.5/5	4.6/5
F02	IE 7860	Intelligent Engineering Systems	4	8	5.0/5	4.9/5	5.0/5
F02	IE 7410	Agile Systems for the Mfg. Enterprise	2	41	3.1/5	3.1/5	3.4/5
W02	IE 6310*	Production Systems I	4	44	3.9/5	4.0/5	4.3/5
F01	IE 7860	Intelligent Engineering Systems	4	17	4.5/5	4.2/5	4.5/5
W01	IE 6310*	Production Systems I	4	44	4.3/5	4.1/5	4.3/5
F00	IE 6270	Engineering Experimental Design	4	39	4.3/5	4/5	4.3/5

D. Essays/Theses/Dissertations DirectedPh.D. Graduates – As Major Advisor

1. Fatih Camci, *Process Monitoring, Diagnostics & Prognostics Using SVMs and HMMs*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2005. [Department Chair, Antalya International University, Turkey; Previously with Cranfield University, UK and Fatih University, Turkey]
2. Mahmoud El-Banna, *Dynamic Resistance based Intelligent Resistance Welding*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2006 (Co-Advised by Dr. Filev). [Faculty Member, German Jordanian University, Jordan]
3. Ramakrishna Govindu, *Multi-Agent Systems for Supply Chain Modeling: Methodological Frameworks*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2006. [Faculty Member, University of South Florida – Sarasota-Manatee, USA]

** Teaching evaluation forms were not distributed in time by Wayne State University to administer in Fall 2003.

4. Pundarikaksha Baruah, *Supply Chains Facing Atypical Demand: Optimal Operational Policies and Benefits Under Information Sharing*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2006. [Manager, Avaya]
5. Gangaraju Vanteddu, *Strategic Supply Chain Modeling: A Supply Chain Perspective of Cost Efficiency and Responsiveness*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2008. (Co-Advised by Dr. Yang). [Faculty Member, Southeast Missouri State University, USA]
6. Ibrahim Dogan, *Modeling & Control of Closed-loop Remanufacturing Supply Chains under Non-stationary Demand*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2008. [Department Chair, Erciyes University, Turkey]
7. Ali Guner, *Dynamic Routing on Stochastic Time-Dependent Networks Using Real-Time ITS Information*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. (Co-Advised by Dr. Murat). [Faculty Member, Zirve University, Turkey]
8. Akhilesh Kumar, *An Integrated Decision Support Framework for Remanufacturing in the Automotive Industry*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. [Faculty Member at IIT Kharagpur, India; Previously Solution Architect, JDA Software Group, India]
9. Dingzhou Cao, *Novel Models and Algorithms for Systems Reliability Modeling and Optimization*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. (Co-Advised by Dr. Murat). [Reliability Analyst, BP]
10. Chongwen Zhou, *Early Warranty Detection Using Upstream Supply Chain Information*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. [Manager, Faurecia]
11. Jehad Zughyer, *Trucking Industry: Spot-Market Dispatching Model*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. (Co-Advised by Dr. Murat). [Senior Engineer, GM]
12. Hatice Ucar, *Bottleneck Management and Throughput Optimization in Production Flow Lines*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2011. (Co-Advised by Dr. Murat). [Faculty Member, Zirve University, Turkey]
13. Arun Timalisina, *A Framework for Personalized Dynamic Cross-selling in e-Commerce*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012. [Department Chair, Tribhuvan University, Nepal]
14. Ramesh Subramoniam, *Remanufacturing for the Aftermarket: Strategic Planning and Decision Making Framework*, Ph.D. Dissertation, International Off Campus Programme on Cleaner Production, Cleaner Products, Industrial Ecology and Sustainable Development, Erasmus University, Rotterdam, Netherlands, 2012. (Co-Advised by Dr. Donald Huisingh). [Director, FTI Consulting]
15. Farshid Azadian, *An Integrated Framework for Freight Forwarders: Exploitation of Dynamic Information for Multimodal Transportation*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012. (Co-Advised by Dr. Murat) [Faculty Member, Embry-Riddle Aeronautical University, Florida].
16. Ali Taghavi, *An Integrated Framework for Configurable Product Assortment Planning: Considerations for Supply, Demand, Manufacturing, and Distribution Issues*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012 [Senior Research Scientist, Llamasoft].
17. Erkan Isikli, *Marketing Analytics for Configurable Products: Managing External Variety*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012 [Faculty Member, Istanbul Technical University, Turkey].
18. Darrell Williams, *Product Development Framework for Managing Complexity & Flexibility in Defense Industry Projects*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2013 [Director of Engineering, Terumo].
19. Rachel-Itabashi Campbell, *Engineering Problem Solving & Sustained Learning*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2013. [Functional Safety Engineer, Takata].

20. Edward L. Umpfenbach, *Strategic Planning of Configurable Products: Considerations for Global Supply, Demand, and Sustainability Issues*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2013 [DOD SMART Scholar; Analyst, GM].
21. Saman Alaniazar, *Capacity Planning for Innovative Products*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2013 [Manager, Ford Analytics].
22. Nancy Philippart, *Global e-Mentoring: Overcoming Virtual Distance for an Effective Partnership*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2014 [General Partner, BELLE Michigan – An early stage investment company].
23. Shanshan Qiu, *Near Real-time Management of Patient Flow in Health Care Systems*, Industrial & Systems Engineering Department, Ph.D. Dissertation, Wayne State University, 2014 [Analyst, Ford Credit].
24. Mahyar Movahednejad, *Frontiers in Operations Research for Overcoming Barriers to Vehicle Electrification*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2015 [Assistant Professor, University of Delaware].
25. Peter Chhim, *Knowledge Reuse through Electronic Knowledge Repositories: An Empirical Study and Ontological Improvement Effort for the Manufacturing Industry*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2015 [Corporate Warranty Manager, Tenneco].
26. Fling (Finn) Tseng, *Evolving Clustering Algorithms and their Application for Condition Monitoring, Diagnostics, and Prognostics*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2017. [Research Engineer, Ford]
27. Mark D. Dolsen, *Developing Innovation Capability in a Mass Production Organization*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2017. [President, TRQSS]
28. Stephen Rapp, *Product Development Resilience Through Set-Based Design*, Industrial & Systems Engineering Department, GET Ph.D. Dissertation, Wayne State University, 2017. (Co-Advised by Dr. Witus). [Research Scientist, TARDEC, Army]
29. Sina Faridimehr, *Essays on Stochastic Programming in Service Operations Management*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2017. [Data Scientist, Time Warner]
30. Rita D'Angelo, *Laboratory Developed Tests: Designing an Agile Quality Management System*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2014-Present. [Independent Consultant]
31. Greg Hartman, *Enhanced Set-Based Design to Engineer Resilience for Long-Lived Systems*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2017. (Co-Advised by Dr. Witus). [Research Scientist, TARDEC, Army]
32. Haidar Almohri, *Big Data Analytics for Automotive Dealership Performance Management*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, Fall 2017. [Research Scientist, Siemens]
33. Seungyup Lee, *Proactive Resource and Task Allocation for Coordination in Service Networks*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2018. [PostDoc, University of Calgary]
34. Samira Fazel Anvaryazdi, *Managing Operational Efficiency & Health Outcomes at Outpatient Clinics through Effective Scheduling*, Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2018. [Visiting Professor, Louisiana Tech University]

Current Ph.D. Students (Candidates that completed Qualifiers) – As Major Advisor

1. Rick Mueller, *Disruptive Innovation: Regaining Momentum by Overcoming the Barrier of Tautology*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2014-Present.
2. Kenneth Gembel, *A Structured Methodology for Tailoring and Deploying Lean Manufacturing Systems*, GET Ph.D. Dissertation, Industrial & Systems Engineering Department, Wayne State University, 2012-Present.
3. Samira Fazel Anvaryazdi, *Stochastic Programming for Outpatient Scheduling*, Industrial & Systems Engineering Department, Wayne State University, 2014-Present.

4. Donna Bell, *Understanding the Relationship of Innovation and Quality in a Fast-Changing Market: An Automotive Industry Perspective*, Wayne State University, 2014-Present.
5. Shannon Dare, *Framework for Strategic Product Planning*, Industrial & Systems Engineering Department, Wayne State University, 2014-Present.
6. Gwendolyn Holowecky, *Framework for Effectively Integrating Flexibility and Lean*, Industrial & Systems Engineering Department, Wayne State University, 2017-Present.
7. Esam Qattan, *Discrete-Event Simulation: Process-logs Enabled Modeling & Execution Framework*, Industrial & Systems Engineering Department, Wayne State University, 2014-Present. (Co-Advised by Dr. Murat)
8. Elham Nosratmirshekarlou, *Characterizing Customer Choice for Product Introduction and Assortment Management*, Industrial & Systems Engineering Department, Wayne State University, 2014-Present. (Co-Advised by Dr. Dalkiran)
9. Michael Ini-Abasi, *Maximizing Customer Engagement Value through Persuasion Profiling: A Reinforcement Learning Perspective*, Industrial & Systems Engineering Department, Wayne State University, 2017-Present.

Current Ph.D. Students (Early Stages) – As Major Advisor

1. Najibesadat Sadatjafarkalaei, *Big Data Analytics for Process Parameter Design*, Industrial & Systems Engineering Department, Wayne State University, 2015-Present.
2. Elham Taghizadeh, *Big Data Analytics for Supply Chain Management*, Industrial & Systems Engineering Department, Wayne State University, 2016-Present.
3. Juman Doleh-Alomary, *Cyber Security*, Industrial & Systems Engineering Department, Wayne State University, 2016-Present.
4. Kevin Gembel, *Maintenance Management*, Industrial & Systems Engineering Department, Wayne State University, 2016-Present.
5. Rahul Dixit, *Product Development*, Industrial & Systems Engineering Department, Wayne State University, 2017-Present.
6. Ifeoma Okechukwu, *Service System Design*, Industrial & Systems Engineering Department, Wayne State University, 2017-Present.
7. Faria Manaj, *NICU Healthcare Analytics*, Industrial & Systems Engineering Department, Wayne State University, 2016-Present.
8. Ali Kamali Mohammadzadeh, *Healthcare Analytics*, Industrial & Systems Engineering Department, Wayne State University, 2018-Present.
9. Seung Jin Wang, *Automotive Analytics*, Industrial & Systems Engineering Department, Wayne State University, 2018-Present.
10. Hamed Niakan, *Automotive Analytics*, Industrial & Systems Engineering Department, Wayne State University, 2018-Present.
11. Andrew Pokoyoway, *Diagnostics & Prognostics*, Industrial & Systems Engineering Department, Wayne State University, 2018-Present.

M.S. Theses Advised

1. Vinodh Rengasamy, *Performance Reliability Prediction in Physical Systems: A Comparison of Statistical Methods and Artificial Neural Networks*, (One of Two Major Advisors), Mechanical Engineering Department, North Dakota State University, 1998.
2. Joshi Makarandh, *Utilization of Machining Forces and Elimination of Machining Interference to Generate Modular Fixture Design for Prismatic Work Pieces*, Industrial & Manufacturing Engineering Department, North Dakota State University, 1997.
3. Jie Ding, *Intelligent Quality Controllers for Manufacturing Processes*, Industrial & Manufacturing Engineering Department, North Dakota State University, 1999.
4. Pankaj Mohan, *On-Line Reliability Estimation of Physical Components through Degradation Signal Modeling: A Study of Time- and Mixed- Domain Analysis Methods*, Industrial & Manufacturing Engineering Department, North Dakota State University, 2000.
5. Shubha Murthy, *A Study of Condition Monitoring and Diagnostic Methods to Develop an Effective Framework for Prognostics Driven Condition-Based Maintenance*, Industrial & Systems Engineering Department, Wayne State University, 2003.

6. Asif Yasin, *Development of a Web-Based Remote Real-Time Monitoring System for Machining Processes*, Industrial & Systems Engineering Department, Wayne State University, 2003.
7. Hemalatha Sathyanarayanamurthy, *Decomposition of Variable Importance for Black-Box Metamodels with Applications to Probabilistic Engineering Design*, Industrial & Systems Engineering Department, Wayne State University, 2004.
8. Indrani Palaparthy, *An Evaluation of Methods for Generation of Uniform Designs with Applications to Probabilistic Engineering Design*, Industrial & Systems Engineering Department, Wayne State University, 2004.
9. Alok Rathod, *Role of Empirical Mode Decomposition in Diagnostics*, Industrial & Systems Engineering Department, Wayne State University, 2004.
10. Ahamed Salihe, *Rule Extraction in Artificial Neural Networks*, Industrial & Systems Engineering Department, Wayne State University, 2004.
11. Azade Tabaie, *Predictive Analytics for Patient Disease Prediction during Triage in Emergency Departments*, Industrial & Systems Engineering Department, Wayne State University, 2015. [PhD Program, Emory University]
12. Sheida Marashi. *Graphical Models for Disease Diagnosis using Triage Data*, Industrial & Systems Engineering Department, Wayne State University, 2016-present.
13. Vivek Soni. *Big Data Topic to be identified*, Industrial & Systems Engineering Department, Wayne State University, 2017-present.

Ph.D. Students – As Advisory Committee Member

1. Shaun Lynch, College of Engineering and Architecture, North Dakota State University, Advisory Committee Member, 1998.
2. Jim Casler, College of Engineering and Architecture, North Dakota State University, Advisory Committee Member, 1999.
3. Gary Witus, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2002.
4. Loah Salhieh, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2002.
5. Naveen Gautam, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2005.
6. Panayiotis Zaphiris, Gerontology Institute and Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2002.
7. O.P. Yadav, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2002.
8. Kirk Cornell, Anthropology Department, Wayne State University, Advisory Committee Member, 2005.
9. B.K. Rai, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2004.
10. Jim McNicol, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2007.
11. Reynaldo Pablo, Civil & Environmental Engineering Department, Wayne State University, Advisory Committee Member, 2004.
12. Hisham Younis, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2003.
13. Lisa Eshback, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2004.
14. Bimal Nepal, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2005.
15. Mahmoud Awad, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2005.
16. Y. Burak Canbolat, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2005.
17. Faysal Khalaf, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2005.

18. Tarik Najib, Civil & Environmental Engineering Department, Wayne State University, Advisory Committee Member, 2005.
19. Abdallah Abdallah, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2007.
20. Femi Famuyiwa, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2007.
21. Dinesh Devaraj, Civil & Environmental Engineering Department, Wayne State University, Advisory Committee Member, 2010.
22. Mostafa Ali, Computer Science Department, Wayne State University, Advisory Committee Member, 2008.
23. Nazmul (Shahin) Hassan, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2011.
24. Abel Sahlool, Civil & Environmental Engineering Department, Wayne State University, Advisory Committee Member, 2011.
25. Samaranthunga Dassanayaka, Mathematics Department, Wayne State University, Advisory Committee Member, 2010.
26. Dapeng Liu, Computer Science Department, Wayne State University, Advisory Committee Member, 2011.
27. Mohsen Farag Isa, Civil & Environmental Engineering Department, Wayne State University, Advisory Committee Member, 2013.
28. Luke Reisner, Electrical and Computer Engineering Department, Wayne State University, Advisory Committee Member, 2014.
29. Yousof Ahmad Radwan Gawasmeh, Computer Science Department, Wayne State University, Advisory Committee Member, 2015.
30. Lena Mashayekhy, Computer Science Department, Wayne State University, Advisory Committee Member, 2015.
31. Mahtab Fard, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2016.
32. Amir Sanayei, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2016.
33. Alireza Atin, Department of Civil Engineering, Wayne State University, Advisory Committee Member, 2016.
34. Johnson Fadeyi, Industrial & Systems Engineering Department, Wayne State University, Advisory Committee Member, 2018.
35. Nidhi Jain, Department of Operational Research, University of Delhi, Advisory Committee Member, 2011-Present.
36. Haotian Xu, Computer Science Department, Wayne State University, Advisory Committee Member, 2015-Present.
37. Faisal Waris, Computer Science Department, Wayne State University, Advisory Committee Member, 2015-Present.
38. Anas Al Tirawi, Computer Science Department, Wayne State University, Advisory Committee Member, 2015-Present.

M.S. Theses – As Advisory Committee Member

1. Jin Zhu, Industrial & Manufacturing Engineering Department, North Dakota State University, Advisory Committee Member, 1999.
2. Liu Jian, Industrial & Manufacturing Engineering Department, North Dakota State University, Advisory Committee Member, 1999.
3. Sudhakar Uppu, Industrial & Manufacturing Engineering Department, North Dakota State University, Advisory Committee Member, 2000.
4. Pranav Radhakrishnan, Industrial & Systems Engineering Department, Wayne State University, 2011.
5. Farah Dubaisi, Industrial & Systems Engineering Department, Wayne State University, 2015.
6. Azad Sadr Haghighi, Industrial & Systems Engineering Department, Wayne State University, 2015.
7. Tannaz Khaleghi, Industrial & Systems Engineering Department, Wayne State University, 2015.

E. Curriculum Development

Wayne State University (Fall 2000 – Present)

Global Executive Track PhD Program Development

Founding Director for the Global Executive Track PhD Program in Industrial Engineering. *This is the first such engineering program in the United States.* This novel program was launched in 2008 and to date has admitted over 25 doctoral students. The GET PhD Track has very little in common with traditional PhD programs. Both the curriculum and its delivery are quite novel. Faculty and experts from around the globe participate in the program. This is one of my most significant achievements. Several universities are now reviewing the program for copying it. See the GET Program Website (<http://ise.wayne.edu/get/index.php>) for more information.

Big Data & Business Analytics MS Program Development

Led the development of a brand-new MS program in collaboration with Computer Science Department and the School of Business. It is a novel program with three tracks in Analytics, Engineering, and Business. Program launched in Fall 2017.

Restructuring of MS Programs

Chaired the committee for restructuring the M.S. Programs (along with Dr. Olugbenga Mejabi) all through 2002 and Winter 2003. New and novel concentration tracks were established in the areas of *Lean Operations Management, Quality Management, and Integrated Product Engineering.* The process also led to the development of over 12 new courses.

Currently chairing the Ph.D. Program Committee that is looking to revamp the program and core-coursework.

North Dakota State University (Fall 1994 – Winter 2000)

Chaired the committee for restructuring the M.S. Program. New tracks were researched and proposed in the areas of *Manufacturing Systems, Operations Management, and Information Technology.*

Being a faculty member that was closer to manufacturing than most other faculty in the department, I was responsible for the development of the original curriculum for the B.S. Manufacturing Engineering program proposed through a merger with the Aero Manufacturing Engineering Technology Department.

F. Course Materials (Unpublished)

Wayne State University (Fall 2000 – Present)

Developed new material for the following new non-traditional courses:

Launch through Sustainability: Products & Services – Parts I & II (IE8943, IE8944). Teach the courses every other year.

Intelligent Engineering Systems (IE7860). Taught the course several times (2000-2012).

Intelligent Analytics (IE7860). Revised the course to increase emphasis on analytics. (2014 – Present)

Agile Systems for the Manufacturing Enterprise (IE7410). Taught several different versions of the course in the EMMP Program (at Ford and Visteon). Course is offered every other year.

Digital Enterprises. Course is under development for the GET PhD Program at the recommendation of the Advisory Board.

Developed the following new courses:

Supply Chain Management (IE7325). Primarily developed for M.S. students; teach the course annually.

Advanced Supply Chain Management (IE7995). Developed for the Ph.D. program; taught the course in 2005 and 2009.

North Dakota State University (Fall 1994 – Winter 2000)

Developed new material for the following courses:

Advanced Quality and Reliability Engineering (IE761). Taught the course several times.

Neural Networks (IE764 and CS 735). Developed a combined course for the Colleges of Engineering and Computer Science; taught the course several times.

II. RESEARCH

A. Research in Progress: Several Proposals in Progress/Pending.

B. Funded Research

Federal Grants – NSF [▪]

- 1) *BD Hubs: MIDWEST: SEEDCorn: Sustainable Enabling Environment for Data Collaboration.* Senior Personnel and Spoke Lead for a project funded by NSF IIS Program for \$1,499,999 (NSF Award #:1550320), 10/01/2015-9/30/2018. (P.I. Edward Seidel, University of Illinois at Urbana-Champaign). [▪] Project aims to build a sustainable hub of Big Data activities across the region and nation that enables research communities to better tackle complex science, engineering, and societal challenges that support competitiveness of US industry, and that enable decision makers to make more informed decisions on topics ranging from public policy to economic development.
- 2) *Planning Grant: I/UCRC for Excellence in Logistics and Distribution.* Co-P.I. for a planning grant proposal to setup a CELDi (Center for Excellence in Logistics and Distribution) center site at WSU for \$12,999, 08/01/2013-07/31/2014 (NSF Award #:1338928) (P.I. Dr. Murat). [▪] WSU seeks to join the Center for Excellence In Logistics and Distribution (CELDi) that is currently comprised of the University of Arkansas (lead), the University of Missouri at Columbia, Virginia Tech, the University of California at Berkeley, Clemson University, Oklahoma State and Arizona State University. The intellectual merit of this effort is the innovative applied logistics research solutions for addressing emerging challenges in the automotive, healthcare and defense industries.
- 3) *Pan-American Advanced Studies Institute on Manufacturing Innovation through Sustainable Design.* P.I. (100% share) for a project funded by NSF PASI and DOE for \$99,990, 01/01/2013-12/31/2013 (NSF Award # 1242268). [▪] Project is in collaboration with Drs. Kramer and Esparragoza of Penn State University and Dr. Haapala of Oregon State University. Project aims to develop and offer a two-week workshop in Columbia to address the need for fundamental research and holistic training in manufacturing innovation through sustainable design by bringing together accomplished researchers and educators from the Americas to share their knowledge through lectures, seminars, and workshop-like discussions with the purpose of fostering multinational and multidisciplinary collaboration.
- 4) *CI-TEAM Demonstration Project: Collaborative Research - A Sustainable Product Development Collaboratory.* Co-P.I. (25% share) for a project funded by NSF CI-TEAM for \$109,998, 09/01/2010-09/30/2012 (P.I. Dr. Kim) (NSF Award # 1041380). [▪] Project is in collaboration with Dr. Kramer of Penn State University and Dr. Haapala of Oregon State University. Project aims to develop a collaborative e-learning laboratory for sustainable design and manufacturing. The laboratory aims to convey sustainability principles in the context of product architectural design, manufacturing, assembly, and supply chain decisions across a spectrum of active learners (i.e., K-12, university, and practitioners).
- 5) *IGERT: Incentive-Centered Design for Information and Communication Systems (STIET).* Project funded by NSF: IGERT Program, \$3,000,000, 08/01/2007-07/31/2014 (NSF Award # 0654014). (Partnership between Univ. of Michigan and Wayne State University; Senior/Affiliated Personnel; \$720,076 for WSU with 6 faculty) (% share unknown). [▪] STIET addresses the extraordinary changes in communications and computing technology, and the uses and requirements people have for these technologies. SITET group designs cyberinfrastructure to support safe, meaningful, efficient, equitable, and productive interactions. Contact: Karen Woollams, (734) 615-7210.
- 6) *Statistical & Computational Intelligence Methods for Prognostics in Condition-Based-Maintenance Systems.* P.I. (85% share) for a project funded by NSF: CMMI - Manufacturing Enterprise Systems for \$100,000, 07/15/2003-07/14/2006 (NSF Award # 0300132). [▪] Project aims to develop autonomous diagnostics and prognostics algorithms using statistical and computational intelligence methods for monitoring a wide variety of industrial assets through rapidly configurable and adaptive software agents.
- 7) *Greenfield Coalition: Operations Management Curriculum Development.* P.I. (100% share) for a project funded by NSF for \$85,000, 2001-2004 (NSF Award # EEC-9630951). [▪] Project led to development of novel on-line curriculum material with rich industrial case studies for teaching operations management courses.
- 8) *Sensing Instrumentation for Designing and Monitoring Next Generation Products and Processes.* P.I. (100% share) for a project funded by NSF's Experimental Program for Stimulation of Competitive Research (EPSCoR) for \$44,500 to North Dakota State University, 1998-1999. [▪] Project

[▪] Federal Funding Grant

aims to develop cost effective sensing instrumentation and architectures for monitoring performance of advanced products and production processes.

- 9) *Intelligent On-line Reliability Monitoring Systems*. P.I. (100% share) for a project funded by NSF's Experimental Program for Stimulation of Competitive Research (EPSCoR) for \$20,000 to North Dakota State University, 1996-1998. [■] Project aims to develop generic yet efficient on-line reliability monitoring algorithms for critical assets.
- 10) *Acquisition of Networked Imaging Cluster for Characterization, Analysis, and Visualization of Materials, Processes, and Engineered Structures*. Research investigator (% share unknown) for a project funded by NSF: Academic Research Infrastructure (ARI) Program for \$288,640 to North Dakota State University, 1995-1998. [■] Funding provided to improve academic research infrastructure.

Federal Grants – Other (U.S. Army, U.S. DoT, VA)

- 1) *Charging Station Network Designed for Electrified Vehicles in Urban Communities: Reducing Congestion, Emissions, Improving Accessibility, and Promoting Walking, Bicycling, and use of Public Transportation*. Co-P.I. (25% share) for a grant funded by U.S. DoT through the TRCLC UTC at Central Michigan University for \$119,987 (\$79,990 external), 2017-2018 (P.I. Dr. Venkatachalam). [■] Project seeks to develop decision support tools for urban communities to effectively manage the deployment of EV charging stations within a community to promote livability.
- 2) *Near Real-Time Decision Support System (NRT-DSS) Services*. Continuation Grant. Co-P.I. (25% share) for a grant funded by Veterans Administration for \$159,500, 2016-2017 (P.I. Dr. Murat). [■]
- 3) *Community-Aware Charging Station Network Design for Electrified Vehicles in Urban Areas: Reducing Congestion, Emissions, Improving Accessibility, and Promoting Walking, Bicycling, and use of Public Transportation*. P.I. (50% share) for a grant funded by U.S. DoT through the TRCLC UTC at Central Michigan University for \$129,975 (\$79,956 external), 2015-2016. [■] Project seeks to develop decision support tools for urban communities to effectively manage the deployment of EV charging stations within a community to promote livability.
- 4) *Near Real-Time Decision Support System (NRT-DSS)*. Co-P.I. (25% share) for a grant funded by Veterans Administration for \$156,250, 2015 (P.I. Dr. Murat). [■]
- 5) *Improving Emergency Department Patient Flow: Through Increased Accuracy and Visibility of Bed Supply and Demand at VHA*. Co-P.I. (25% share) for a continuation project funded by the Veterans Administration for \$25,000, Fall 2014 (P.I. Dr. Dalkiran). [■] Project aims to improve streamline patient flow through Emergency Departments. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.
- 6) *Supply/Demand Alignment Toolkit: Comprehensive Performance Monitoring and Management*. P.I. for a continuation project funded by the Veterans Administration for \$47,500, Fall 2014. [■] Project aims to improve access for patients to primary care clinics. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.
- 7) *Improving Emergency Department Patient Flow: Through Increased Accuracy and Visibility of Bed Supply and Demand at VHA*. Co-P.I. (25% share) for a project funded by the Veterans Administration for \$100,000, 2013-2014 (P.I. Dr. Dalkiran). [■] Project aims to improve streamline patient flow through Emergency Departments. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.
- 8) *Supply/Demand Alignment Toolkit: Comprehensive Performance Monitoring and Management*. P.I. for a project funded by the Veterans Administration for \$190,000, 2013-2014. [■] Project aims to improve access for patients to primary care clinics. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.
- 9) *Near Real-Time Decision Support Systems for Reusable Medical Equipment – Phase III*. Co-P.I. (50% share) for a continuation grant funded by Veterans Administration for \$100,000, 2013-2014 (P.I. Dr. Murat). [■]
- 10) *Near Real-Time Decision Support Systems for Reusable Medical Equipment – Phase II*. Co-P.I. (40% share) for a continuation grant funded by Veterans Administration for \$135,000, 2012-2013 (P.I. Dr. Murat). [■] Project aims to improve the availability, utilization, and quality of sterilization for RME within each VHA medical center through near real-time (NRT) forecasting and optimal resource allocation decision support system (DSS) tools developed for primary (OR, SPS, Radiology, Laboratory, ER, Key Clinics) and secondary (ICU/PACU, Logistics, and Inpatient Wards) processes. It also aims to reduce delays/cancellations and improve quality of care provided by better integration of NRT DSS tools with next generation information technologies such as RTLS,

SQWM, and IVN. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.

- 11) *Near Real-Time Decision Support Systems for Reusable Medical Equipment*. Co-P.I. (50% share) for a project funded by Veterans Administration for \$175,000, 2011-2012 (P.I. Dr. Murat). [▣] Project aims to improve the availability, utilization, and quality of sterilization for RME within each VHA medical center through near real-time (NRT) forecasting and optimal resource allocation decision support system (DSS) tools developed for primary (OR, SPS, Radiology, Laboratory, ER, Key Clinics) and secondary (ICU/PACU, Logistics, and Inpatient Wards) processes. It also aims to reduce delays/cancellations and improve quality of care provided by better integration of NRT DSS tools with next generation information technologies such as RTLS, SQWM, and IVN. Contact: Will Jordan, VE-TAP Program Manager, VERC / VA-CASE, Will.Jordan@va.gov, (317) 988-1887.
- 12) *Novelty Detection Framework for Autonomous Monitoring & Diagnostics of Ground Vehicle Sub-Systems: Preliminary Investigation*. P.I. (100% share) for a project funded by TARDEC (Department of Defense) through ARC for \$33,600, 2010-2011. [▣] Project aims to develop unsupervised yet robust monitoring and diagnostic algorithms that rely on “novelty detection” methods for monitoring the health of ground vehicles. Contact: Andrea Simon, University Partnerships Team, TARDEC, Department of Defense, (586) 282-4932.
- 13) *Operational Management Optimization and Supporting Tools In Supply, Processing and Distribution (SPD) Service*. Co-P.I. (50% share) for a project funded by VA for \$160,000, 2010-2011 (P.I. Dr. Murat; Funding through multiple IPAs: Acct# 355047 for \$80,935; Another IPA to Student Assistant Shyamprasad Velumani). [▣] Project aims to improve the efficiency of the SPD through staff and equipment capacity planning and short-term (tactical) operational management of SPD work flow and resources. In addition, it aims to increase RME availability and improve sterilization quality by reducing safety incidents through more effective SPD processes, utilization, and load balancing. Contact: Susan (Qian) Yu, Program Analyst, Detroit VAMC, (313) 576-4558.
- 14) *Enhancing JIT Freight Logistics Impacted by Transportation System Projects under ITS*. P.I. (50% share) for a project funded by U.S. DoT through MI-OH UTC for \$40,000, 2010-2011 (Continuation Grant). [▣] Project aims to develop an analysis methodology to support effective planning of JIT freight logistics in transportation networks impacted by system improvement projects. Contact: Patricia A. Martinico, (313) 993-1510.
- 15) *Evaluation of Ohio-Michigan Regional Airports for Air Cargo Transportation: Freight Forwarders Perspective*. Co-P.I. (50% share) for a project funded by U.S. DoT through OH-MI UTC for \$29,838, 2010- 2011 (P.I. Dr. Murat) (Continuation Grant). [▣] Project aims to document the decision making processes of air freight forwarders and develop an alternative access airport and flight selection decision support tool. Contact: Christine Lonsway, (419) 530-2391.
- 16) *System Redesign Improvement Capability Grant*. Co-P.I. for a project funded by VA to improve system redesign capability at Detroit VA Medical Center for \$1,350,000, 2010-2012 (My Share: \$103,933; Funded through four IPAs – Acct#: 332278, 332268, 332199, and 332192; P.I. VA Staff). [▣] Project aims to improve system redesign improvement breadth by training managers and employees and deploying organization wide system redesign /improvement initiatives; Improve system redesign improvement depth by applying visual management, human factors, supply chain management, simulation and other effective tools; Further improve performances and system redesign improvement capabilities by conducting 16 high impact projects in administrative, inpatient, outpatient areas. Build hierarchical active performance dashboards to enable real-time performance monitoring and continuous improvement. Contact: Susan (Qian) Yu, Program Analyst, Detroit VAMC, (313) 576-4558.
- 17) *Call Center Configuration Analysis & Selection Model*. P.I. (27% share) for a project funded by VA: VISN11 Healthcare Network for \$50,000, 2010 (My Share: \$13,650; Funding through IPA: Acct# 332248). [▣] Project aims to develop a Call Center Configuration Analysis & Selection Model for VISN11 Pharmacy Call Centers and provide input to VA decision makers regarding optimal staffing levels required to meet target service goals under different operational and consolidation scenarios. Contact: Pamela Pau, VISN11 VERC Business Manager, (313) 576-1181.
- 18) *Enabling Congestion Avoidance and Reduction in the Michigan-Ohio Transportation Network to Improve Supply Chain Efficiency: Freight ATIS*. P.I. (50% share) for a project funded by U.S. DoT and M-DOT through MI-OH UTC for \$47,000, 2009-2010 (Continuation Grant). [▣] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to promote congestion avoidance for trucks delivering time-sensitive cargo shipments. Contact: Patricia A. Martinico, (313) 993-1510.

- 19) *Value of ITS Information for Congestion Avoidance in Intermodal Transportation Systems*. Co-P.I. (50% share) for a project funded by U.S. DoT through OH-MI UTC for \$50,000, 2009- 2010 (P.I. Dr. Murat) (Continuation Grant).[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to improve delivery performance in inter-modal transportation networks (in particular, air-road networks). Contact: Christine Lonsway, (419) 530-2391.
- 20) *Detroit VA Operations Improvement Grant*. Co-P.I. (% share unknown) for a project funded by VA to improve operations at Detroit VA Medical Center, 2009-2011 (My Share: \$22,743; Funding through IPA: Acct# 332186).[▫] The project aims to improve Detroit VA Medical Center operations. My involvement is in the areas of Logistics/ Inventory Management and Management of Reusable Medical Equipment Operations. Contact: Susan (Qian) Yu, Program Analyst, Detroit VAMC, (313) 576-4558.
- 21) *Enabling Congestion Avoidance and Reduction in the Michigan-Ohio Transportation Network to Improve Supply Chain Efficiency: Freight ATIS*. P.I. (50% share) for a project funded by U.S. DoT and M-DOT through MI-OH UTC for \$120,545, 2008-2009 (Continuation Grant).[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to promote congestion avoidance for trucks delivering time-sensitive cargo shipments. Contact: Patricia A. Martinico, (313) 993-1510.
- 22) *Value of ITS Information for Congestion Avoidance in Intermodal Transportation Systems*. Co-P.I. (50% share) for a project funded by U.S. DoT through OH-MI UTC for \$102,041, 2008- 2009 (P.I. Dr. Murat) (Continuation Grant).[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to improve delivery performance in inter-modal transportation networks (in particular, air-road networks). Contact: Christine Lonsway, (419) 530-2391.
- 23) *Enabling Congestion Avoidance and Reduction in the Michigan-Ohio Transportation Network to Improve Supply Chain Efficiency: Freight ATIS*. P.I. (50% share) for a project funded by U.S. DoT and M-DOT through MI-OH UTC for \$123,864, 2008 (Continuation Grant).[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to promote congestion avoidance for trucks delivering time-sensitive cargo shipments. Contact: Patricia A. Martinico, (313) 993-1510.
- 24) *Value of ITS Information for Congestion Avoidance in Intermodal Transportation Systems*. Co-P.I. (50% share) for a project funded by U.S. DoT through OH-MI UTC for \$55,000, 2007- 2008 (P.I. Dr. Murat).[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to improve delivery performance in inter-modal transportation networks (in particular, air-road networks). Contact: Christine Lonsway, (419) 530-2391.
- 25) *Enabling Congestion Avoidance and Reduction in the Michigan-Ohio Transportation Network to Improve Supply Chain Efficiency: Freight ATIS*. P.I. (50% share) for a project funded by U.S. DoT and M-DOT through MI-OH UTC for \$104,735, 2007.[▫] Project aims to develop stochastic dynamic routing algorithms that exploit real-time information from Intelligent Transportation Systems (ITS) to promote congestion avoidance for trucks delivering time-sensitive cargo shipments. Contact: Patricia A. Martinico, (313) 993-1510.

State Grants

- 1) *Intelligent Process Quality Controllers for Advanced Manufacturing Systems*. Research Investigator and Contractor (%share unknown) in a project funded by the State of Texas: Advanced Research Program and Advanced Technology Program (ARP/ATP) for \$81,000 to Texas Tech University and North Dakota State University, 1993-1995 (My Share: \$16,423). Project aims to develop methods for on-line parameter design that exploit information from sensors indicative of noise and uncontrollable factors/variables for promoting quality and yield.

Industry Research Grants

- 1) *Product Content & Assortment Optimization*. P.I. for a project funded by Ford Motor Company for \$60,000, 2018-2019. Ford GDIA desires the development of decision support platforms for automotive product content and assortment optimization to improve program resilience under market uncertainties.
- 2) *Dealer Performance Analytics: Investigating the Learning Loop*. P.I. for a continuation project funded by Urban Science for \$54,000, 2018. Urban Science desires to use the large amount of data (“big data”) available at the dealership and potentially other levels to investigate its learning loop. Project investigates historical dealership data, changes in that data, the impact of changes in operations to build recommendation models to improve performance.
- 3) *Dealer Performance Analytics: Investigating the Learning Loop*. P.I. for a continuation project funded by Urban Science for \$54,000, 2017. Urban Science desires to use the large amount of data (“big

- data”) available at the dealership and potentially other levels to investigate its learning loop. Project investigates historical dealership data, changes in that data, the impact of changes in operations to build recommendation models to improve performance.
- 4) *Automation of Prescriptive Analytics for the Retail Industry using SPARK*. P.I. for a continuation project funded by Loven Systems \$40,000, 2017. Loven System seeks the development of novel and scalable machine learning algorithms for retail recommendation systems using the Hadoop SPARK environment.
 - 5) *Dealer Performance Analytics: Investigating the Learning Loop*. P.I. for a continuation project funded by Urban Science for \$54,000, 2016. Urban Science desires to use the large amount of data (“big data”) available at the dealership and potentially other levels to investigate its learning loop. Project investigates historical dealership data, changes in that data, the impact of changes in operations to build recommendation models to improve performance.
 - 6) *Automation of Prescriptive Analytics for the Retail Industry using SPARK*. P.I. for a project funded by Loven Systems \$40,000, 2016. Loven System seeks the development of novel and scalable machine learning algorithms for retail recommendation systems using the Hadoop SPARK environment.
 - 7) *Design of Real-time Recommendation Systems for Chained Stores using SPARK*. P.I. for a project funded by Loven Systems \$40,000, 2015. Loven System seeks the development of novel and scalable machine learning algorithms for retail recommendation systems using the Hadoop SPARK environment.
 - 8) *Dealer Performance Analytics: Investigating the Learning Loop*. P.I. for a continuation project funded by Urban Science for \$54,000, 2015. Urban Science desires to use the large amount of data (“big data”) available at the dealership and potentially other levels to investigate its learning loop. Project investigates historical dealership data, changes in that data, the impact of changes in operations to build recommendation models to improve performance.
 - 9) *Product Assortment Optimization Models*. P.I. for a project funded by Ford Motor Company for \$55,000, 2015. Ford is seeking the development of strategic product definition and assortment optimization models for future vehicle program targeting the U.S. The models seek to improve overall program profitability by balancing marketing interests with engineering, manufacturing, purchasing, and supply chain considerations along with sustainability performance (carbon footprint and emissions).
 - 10) *Dealer Performance Analytics: Investigating the Learning Loop*. P.I. for a project funded by Urban Science for \$54,000, 2014. Urban Science desires to use the large amount of data (“big data”) available at the dealership and potentially other levels to investigate its learning loop. Project investigates historical dealership data, changes in that data, the impact of changes in operations to build recommendation models to improve performance.
 - 11) *ACSOM Enhancements for Abrams Block-Modernization Program*. Co-P.I. (50% share) for a project funded by General Dynamics Land Systems for \$30,000, 2012 (P.I.: Dr. Murat)
 - 12) *Abrams AED Whole System Design-for-Reliability (DFR)*. Co-P.I. (50% share) for a project funded by General Dynamics Land Systems for \$82,400, 2010 (P.I.: Dr. Murat) (Continuation Grant). Project aims to improve the system design for the Abrams AED for reliability by developing a dedicated reliability data extraction, storage and transformation process using the available field and test reliability data. The output of this project will support the RAM ACSOM system optimization tool in identifying optimal Abrams AED designs. Contact: Steve Rapp, (586) 825-4963.
 - 13) *Abrams AED Whole System Design-for-Reliability (DFR)*. Co-P.I. (50% share) for a project funded by General Dynamics Land Systems for \$331,400, 2009-2012 (P.I.: Dr. Murat; Acct# 425112, 425111). Project aims to improve the system design for the Abrams AED for reliability by developing a dedicated reliability data extraction, storage and transformation process using the available field and test reliability data. The output of this project will support the RAM ACSOM system optimization tool in identifying optimal Abrams AED designs. Contact: Steve Rapp, (586) 825-4963.
 - 14) *Future Combat Systems (FCS) Rooftop Deconfliction: Optimization Analysis*. Co-P.I. (50% share) for a project funded by General Dynamics Land Systems for \$48,000, 2009 (P.I.: Dr. Murat). Project aims to develop an optimization model based on prioritized space claims of sensors and antennas with regard to interference patterns and line of sight requirements. Contact: Darrell Williams, (586) 825-5715.
 - 15) *Reliability, Availability and Maintainability (RAM) Injection into Advanced Collaborative System Optimization Modeler (ACSOM)*. Co-P.I. (50% share) for a project funded by General Dynamics Land Systems for \$91,400, 2008 (P.I.: Dr. Murat). Project aims to enhance reliability and maintainability modeling and assessment functionality within ACSOM to facilitate objective evaluation of products and configurations during the earliest stages of product development. Contact: Steve Rapp, (586) 825-4963.
 - 16) *Algorithms for Enhancing Fuel Economy in Hybrid Electric Vehicles*, P.I. (100% share) for a project funded by Ford Motor Company, \$108,146, 2007-2008 (Acct# 446984, 425016). Project aims to develop algorithms for automated on-line assessment of driver’s driving style and vehicle environment to better control engine performance for promoting fuel economy. Contact: Dimitar Filev, (313) 594-1775.

- 17) *Autonomous Vibration Diagnostics and Reliability Monitoring*. P.I. (100% share) for a project funded by AMTD of Ford Motor Company for \$52,000, 2006. Project aims to develop autonomous diagnostics and prognostics algorithms for monitoring a wide variety of industrial assets through rapidly configurable and adaptive software agents. Contact: Dimitar Filev, (313) 594-1775.
- 18) *Models for Identification and Management of Bottlenecks in Production Facilities*. P.I. (75% share) for a project funded by AMTD of Ford Motor Company for \$52,000, 2006. Project aims to develop algorithms and methods for identification, anticipation, and management of bottleneck stations in production facilities by mining data from Factory Information Systems (FIS) for throughput management. Contact: Dimitar Filev, (313) 594-1775.
- 19) *Intelligent Resistance Welding*. P.I. (100% share) for a project funded by Advanced Manufacturing Technology Development (AMTD) group of Ford Motor Company for \$45,000, 2004-2005 (Acct# 446878, 446866). Project aims to develop efficient monitoring and control algorithms based on neural networks and fuzzy logic for resistance welding stations to promote consistency and quality in weld nuggets. Contact: Dimitar Filev, (313) 594-1775.
- 20) *Diagnostic and Prognostic Algorithms for Condition-Based-Maintenance*. P.I. (100% share) for a project funded by Advanced Manufacturing Technology Development (AMTD) group of Ford Motor Company for \$70,000, 2003-2004 (Acct# 446770, 446696). Project aims to develop autonomous diagnostics and prognostics algorithms for monitoring a wide variety of industrial assets through rapidly configurable and adaptive software agents. Contact: Dimitar Filev, (313) 594-1775.
- 21) *Achieving World Class Quality Assurance and Control at Tecton Products*. P.I. (100% share) for a project funded by Tecton Products, Fargo, North Dakota for \$19,989 to North Dakota State University, 1999. Project aims to develop and implement an appropriate corporate quality system for managing throughput, quality, and reliability of Tecton's pultrusion composite products.

Industry Education Grants

- 1) *Ford EMMP Leadership Research Projects*. Co-P.I. (7.5% share) for projects funded by Ford Motor Company for \$823,444, 2011.
- 2) *Ford EMMP Leadership Research Projects*. Co-P.I. (7.5% share) for projects funded by Ford Motor Company for \$645,011, 2010.
- 3) *Ford EMMP Leadership Research Projects*. Co-P.I. (15% share) for projects funded by Ford Motor Company for \$935,789, 2009.
- 4) *Ford EMMP Leadership Research Project*. Co-P.I. (15% share) for a project funded by Ford Motor Company for \$219,310, 2008.
- 5) *Ford EMMP Program*. Co-P.I. (10% share) for a project funded by Ford Motor Company for \$482,547, 2008.
- 6) *Dana Corp. EMMP Program*. Co- P.I. (10% share) for a project funded by Dana Corporation for \$20,266, 2008.
- 7) *Continental Automotive EMMP Program*. Co- P.I. (10% share) for a project funded by Continental Automotive for \$20,266, 2008.
- 8) *Ford EMMP Leadership Research Project*. Co-P.I. (15% share) for a project funded by Ford Motor Company for \$487,512, 2007.
- 9) *Visteon EMMP Leadership Research Project*. Co- P.I. (15% share) for a project funded by Visteon Corporation for \$206,500, 2007.
- 10) *Ford EMMP Program*. Co-P.I. (10% share) for a project funded by Ford Motor Company for \$444,527, 2007.
- 11) *Visteon EMMP Program*. Co- P.I. (10% share) for a project funded by Visteon Corporation for \$143,449, 2007.
- 12) *Ford EMMP Leadership Research Project*. Co-P.I. (15% share) for a project funded by Ford Motor Company for \$394,256, 2006.
- 13) *Visteon EMMP Leadership Research Project*. Co- P.I. (15% share) for a project funded by Visteon Corporation for \$321,776, 2006.
- 14) *Ford EMMP Program*. Co-P.I. (10% share) for a project funded by Ford Motor Company for \$547,100, 2006.
- 15) *Visteon EMMP Program*. Co- P.I. (10% share) for a project funded by Visteon Corporation for \$414,830, 2006.

- 16) *Ford EMMP Leadership Research Project*. Co-P.I. (20% share) for a project funded by Ford Motor Company for \$478,233, 2005.
- 17) *Visteon EMMP Leadership Research Project*. Co- P.I. (20% share) for a project funded by Visteon Corporation for \$381,472, 2005.

Wayne State University Grants

- 1) *Graduate Research Assistant Competition for FY 2018*. The award to Drs. Chinnam and Dalkiran is effective August 17, 2018 through August 15, 2019 and includes a stipend of \$23,472, tuition assistance for up to ten graduate credits during each of the Fall and Winter terms, and two graduate credits during the Spring/Summer term, plus subsidized medical, vision and dental insurance coverage.
- 2) *Student Success & Retention Project: Big Data Tools & Technologies*. P.I. for a project funded by OVPR for \$50,000, 2014-2015.
- 3) *Student Success & Retention Project: Big Data Tools & Technologies*. Co-P.I. for a project funded by OVPR for \$50,000, 2013-2014.

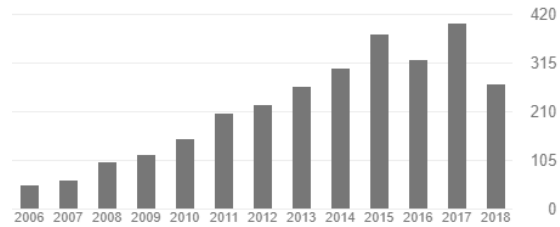
C. Fellowships/Grants/Special Awards

Summer Faculty Research Fellowship, DaimlerChrysler Corporation, Summers of 2001-2007.
Summer Faculty Research Fellowship, Chrysler Corporation, Summer 2008.

III. PUBLICATIONS

Overall Citation Statistics (September 22, 2018):
Google Scholar Citations: 2,926 (h-Index 29) (i10-Index 51)

Citation Indices	All	Since 2013
Citations	2,926	1,945
<i>h</i> -Index	29	24
<i>i</i> 10-Index	51	41



Scopus Citations: 1,729 (81 Citations for Secondary Documents) (h-Index 22)

<u>KEY for Publication Notes:</u>		<u>Role:</u>	
GS:	Google Scholar Citations	†	= mentored doctoral student
Scopus:	Scopus Citations	‡	= mentored M.S. student
ISI:	ISI impact factor	§	= other graduate student
ISI-5:	Five-year ISI impact factor	C	= corresponding author
		P	= primary/senior author
		E	= equal contribution
		S	= supporting/contributing author

A. Scholarly Books Published

1. Camci, F. † and Chinnam, R.B., *Process Monitoring, Diagnostics and Prognostics in Machining Processes*, LAP Lambert Academic Publishing, Saarbrücken, Germany, 2010, ISBN 978-3-8383-3566-7. (Mostly based on F. Camci's PhD Dissertation) | Role: S |

B. Chapters Published

1. Authored
 1. Chinnam, R. B., "Intelligent Quality Controllers for On-Line Parameter Design," *Handbook of Computational Intelligence in Design and Manufacturing*, Editors: Jun Wang and Andrew Kusiak, FL: Boca Raton, CRC Press, 2001. |
2. Co-Authored
 1. Holowecky, G. † and Chinnam, R.B., "Balancing Flexibility and Lean in Manufacturing Environments," *Production Management: Advanced Tools, Models, and Applications for Pull Systems*, Edited by Yacob Khojasteh, CRC Press, 2018. | Role: C |
 2. Govindu, R. †, Chinnam, R.B., and Murat, A., "Manufacturing in Supply Chain," *The Handbook of Technology Management*, Edited by Hossein Bidgoli, John Wiley & Sons, 2010. (ISBN: 978-0-470-24948-2; pp. 132-145). | Role: C |
 3. El-Banna, M. †, Filev, D., and Chinnam, R.B., "Automotive Manufacturing: Intelligent Resistance Welding," *Computational Intelligence in Automotive Applications*, Edited by Danil Prokhorov, Springer Berlin / Heidelberg, 2008 (ISBN-13: 978-3-540-79256-7; pp. 219-235). | Role: C |
 4. Chinnam, R.B. and Rai, B., "Computational Intelligence in Online Reliability Monitoring," *Computational Intelligence in Reliability Engineering: New Metaheuristics, Neural and Fuzzy Techniques in Reliability*, Edited by Gregory Levetin, Springer Berlin / Heidelberg, 2007 (ISBN-13: 978-3-540-37371-1). | Role: C |
 5. Chinnam, R. B. and Kolarik, W. J., "Process Monitoring: Variables Control Charts for Grouped Measurements," *Creating Quality: Process Design for Results*, William J. Kolarik, Boston: WCB/McGraw-Hill, 1999. | Role: P |
 6. Chinnam, R. B. and Kolarik, W. J., "Process Monitoring: Variables Control Charts for Individual Measurements and Related Topics," *Creating Quality: Process Design for Results*, William J. Kolarik, Boston: WCB/McGraw-Hill, 1999. | Role: P |
 7. Chinnam, R. B. and Kolarik, W. J., "Process Monitoring: Attributes Control Charts for Classification Measurements," *Creating Quality: Process Design for Results*, William J. Kolarik, Boston: WCB/McGraw-Hill, 1999. | Role: P |

8. Chinnam, R. B. and Kolarik, W. J., "Variable Control Charts," *Creating Quality: Concepts, Systems, Strategies, and Tools*, William J. Kolarik, New York: McGraw-Hill, 1995. | Role: P |
9. Chinnam, R. B. and Kolarik, W. J., "Attribute Control Charts," *Creating Quality: Concepts, Systems, Strategies, and Tools*, William J. Kolarik, New York: McGraw-Hill, 1995. | Role: P |

B. Journal Articles Published

1. Refereed Journals

Published

1. Kumar, A.[†], Chinnam, R. B., & Tseng, F. (2018). An HMM and Polynomial Regression Based Approach for Remaining Useful Life and Health State Estimation of Cutting Tools. *Computers & Industrial Engineering*, In Press. | ISI: 2.623 | Role: E |
2. Faridimehr, S.[†], Venkatachalam, S., and Chinnam, R.B., "A Stochastic Programming Approach for Electric Vehicle Charging Network Design," *IEEE Transactions on Intelligent Transportation Systems*, In Press. | ISI: 3.724 | Role: E |
3. D'Angelo, R.[†], Weiss, R., Wolfe, D., Chinnam, R.B., "Facing the Inevitable: Being Prepared for Regulatory Requirements for Laboratory Developed Tests," *American Journal of Clinical Pathology*, 149(6), pp. 484-498. | ISI: 2.4 | Role: E |
4. Rapp, S.[†], Chinnam, R.B., Doerry, N., Murat, A.E., Witus, G., "Product Development Resilience through Set-Based Design," *Systems Engineering*, In Press. | ISI: 0.5 | Role: E |
5. Dolsen, M.[†] and Chinnam, R.B., "Developing Innovation Capability in A Mass Production Organization," *Journal of Enterprise Transformation*, In Press. | ISI: NA | Role: E,C |
6. Umpfenbach, E.[†], Dalkiran, E., Chinnam, R.B., and Murat, A.E., "Promoting Sustainability of Configurable Products through Strategic Assortment Planning," *European Journal of Operational Research*, 269 (1), August 2018, pp. 272-285. | ISI: 3.297 | Role: E |
7. Chhim, P.[†], Chinnam, R.B., and N. Sadawi, "Product Design and Manufacturing Process Based Ontology for Manufacturing Knowledge Reuse," *Journal of Intelligent Manufacturing*, In Press. | ISI: 3.035 | Role: C |
8. Fard, M.J., Ameri, S.[†], Ellis, R.D., Klein, M.D., Chinnam, R.B., and Pandya, A.K., "Distance-based time series classification approach for task recognition with application in surgical robot autonomy," *International Journal of Medical Robotics and Computer Assisted Surgery*, In Press. | ISI: 1.613 | Role: E |
9. Fard, M.J.[§], Ameri, S.[§], Darin Ellis, R., Chinnam, R.B., Pandya, A.K., & Klein, M.D., "Automated robot-assisted surgical skill evaluation: Predictive analytics approach," *International Journal of Medical Robotics and Computer Assisted Surgery*, 14(1), 2018. | ISI: 1.613 | Role: E |
10. Sadati, N.[†], Chinnam, R.B., and Nezhad, M.Z., "Observational Data-Driven Modeling and Optimization of Manufacturing Processes," *Expert Systems With Applications*, Vol. 93, pp. 456-464, 2018. | ISI: 3.928 | Role: E,C |
11. Umpfenbach, E.[†], Dalkiran, E., Chinnam, R.B., and Murat, A.E., "Optimization of Strategic Planning Processes for Configurable Products," To appear in *Journal of the Operational Research Society*, Accepted in July 2017. | ISI: 1.077 | Role: E |
12. Zhou, C.[†], Chinnam, R.B., Dalkiran, E., and Korostelev, A., "Bayesian Approach to Hazard Rate Models for Early Detection of Warranty and Reliability Problems using Upstream Supply Chain Information," *International Journal of Production Economics*, Vol. 193, pp. 316-331, 2017. | ISI: 3.493 | Role: E |
13. Azadian, F.[†], Murat, A.E., and Chinnam, R.B., "An Unpaired Pickup and Delivery Problem with Time Dependent Assignment Costs: Application in Air Cargo Transportation," *European Journal of Operations Research*, Vol. 263(1), pp. 188-202, 2017. | ISI: 3.297 | Role: E |
14. Chhim, P.[†], Somers, T., and Chinnam, R.B., "Knowledge Reuse through Electronic Knowledge Repositories: A Multi Theoretical Study," *Journal of Knowledge Management*, Vol. 21, No. 4, pp. 741-764, 2017. | ISI: 1.689 | Role: E |
15. Tseng, F.[†], Filev, D., and Chinnam, R.B., "A Mutual Information Based Online Evolving Clustering Approach and its Applications," *Evolving Systems*, Vol. 8 (3), pp. 179-191, 2017. | ISI: N/A | Role: E |

16. Kumar, A.[†], Chinnam, R.B., and Murat, A.E., “Hazard Rate Models for Core Return Duration Modeling in Remanufacturing,” *International Journal of Production Economics*, Vol. 183, pp. 354-361, 2017. | ISI: 3.493 | Role: P |
17. Movahednejad, M.[†], Mashayekhy, L., Chinnam, R.B., and Grosu, D., “Online Scheduling and Pricing for Electric Vehicle Charging,” *IIE Transactions*, Vol. 49, No. 2, pp. 178-193, 2017. | ISI: 1.451 | Role: C |
18. Movahednejad, M.[†], Mashayekhy, L., Grosu, D., and Chinnam, R.B., “Optimal Routing for Plug-in Hybrid Electric Vehicles,” *Transportation Science*, Vol. 51(4), pp. 1304-1325, 2017. | ISI: 3.275 | Role: C |
19. Guner, A.[†], Murat, A.E., and Chinnam, R.B., “Dynamic Routing for Milk-Run Tours with Time Windows in Stochastic Time-Dependent Networks,” *Transportation Research Part E: Logistics and Transportation Review*, Vol. 97, pp. 251-267, 2017. | ISI: 2.974 | Role: E |
20. Fard, M.J., Ameri, S.[†], Chinnam, R.B., and Ellis, R.D., “Soft Boundary Approach for Unsupervised Gesture Segmentation and Recognition in Robotic-Assisted Surgery,” *IEEE Robotics and Automation Letters*, Vol. 2, No. 1, pp. 171-178, 2017. | ISI: N/A | Role: E |
21. Baruah, P.[†], Chinnam, R.B., and E. Dalkiran, “Optimal Soft-Order Revisions under Demand and Supply Uncertainty and Upstream Information,” *International Journal of Production Economics*, Vol. 182, pp. 14–25, 2016. | ISI: 3.493 | Role: P |
22. Xie, N., Duan, M., Chinnam, R.B., Li, A., and Xue, W., “An energy modeling and evaluation approach for machine tools using Generalized Stochastic Petri Nets,” *Journal of Cleaner Production*, Vol. 113, pp. 523-531, 2015. | ISI-5: 5.315 | Role: E |
23. Kramer, G., Haapala, K., Murat, A., Chinnam, R.B., Kim, K.Y., Monplaisir, L., and Lei, T., “Directions for Instilling Economic and Environmental Sustainability across Product Supply Chains,” *Journal of Cleaner Production*, Vol. 112, No. 3, pp. 2066–2078, 2016. | ISI-5: 5.315 | Role: C |
24. Guner, H.[†], Chinnam, R.B., and Murat, A.E., “Simulation Platform for Anticipative Plant-Level Maintenance Decision Support System,” *International Journal of Production Research*. Vol. 54, No. 6, pp. 1785-1803, 2016. | ISI-5: 1.867 | Role: E |
25. Movahednejad, M.[†], Mashayekhy, L., Chinnam, R.B., and Phillips, A., “Hierarchical Time-Dependent Shortest Path Algorithms for Vehicle Routing under ITS,” *IIE Transactions*. Vol. 48, No. 2, pp. 158-169, 2016. | ISI-5: 1.723 | Role: C |
26. Azadian, F.[†], Murat, A.E., and Chinnam, R.B., “Integrated Production and Logistics Planning: Contract Manufacturing and Choice of Air/Surface Transportation,” *European Journal of Operations Research*, Vol. 247, No. 1, pp. 113-123, 2015. | ISI-5: 3.109 | Role: E |
27. Wang, G.[§], Jia, Y.[†], Chinnam, R.B., Dogan, I.[†], Houston, M., Ockers, J.[§], “Focused Factories: A Bayesian Framework for Estimating Non-Product Related Investment,” *International Journal of Production Research*, Vol. 53, No. 13, pp. 3917-3933, 2015. | ISI-5: 1.867 | Role: C |
28. Qiu, S.[†], Chinnam, R.B., Murat, A., Batarse, B., Neemuchwala, H., and Jordan, W., “A Cost Sensitive Inpatient Bed Reservation Approach to Reduce Emergency Department Boarding Times,” *Health Care Management Science*, Vol. 18, No. 1, pp. 67-85, 2015. | ISI-5: 1.599 | Role: C |
29. Taghavi, A.[†] and Chinnam, R.B., “Assortment Planning of Automotive Products: Considerations for Economic and Environmental Impacts of Technology Selection,” *Journal of Cleaner Production*, Vol. 70, pp. 132-144, May 2014. | ISI-5: 5.315 | Role: C |
30. Vanteddu, G.[†] and Chinnam, R.B., “Supply Chain Focus Dependent Sensitivity of the Point of Product Differentiation,” *International Journal of Production Research*, Vol 52, No. 17, pp. 4984-5001, 2014. | ISI-5: 1.867 | Role: E |
31. Cao, D.[†], Murat, A.E., and Chinnam, R.B., “Efficient Construction of Pareto-optimal Sets for System Redundancy Allocation Problems,” *Reliability Engineering & System Safety*, Vol. 111, pp. 154–163, March 2013. | ISI-5: 2.441 | Role: C |
32. Subramoniam, R.[†], Huisingh, D., Chinnam, R.B., and Subramoniam, S., “Remanufacturing Decision Making Framework (RDMF): Research Validation using the Analytical Hierarchical Process,” *Journal of Cleaner Production*, Vol. 40, pp. 212-220, February 2013. | ISI-5: 5.315 | Role: E |
33. Zhou, C.[†], Chinnam, R.B., and Korostelev, A., “Hazard Rate Models for Early Detection of Reliability Problems Using Information from Warranty Databases and Upstream Supply Chain,”

- International Journal of Production Economics*, Vol. 139, No. 1, pp. 180-195, September 2012. | ISI-5: 3.548 | Role: E,C |
34. Nepal, B.[§], Murat, E.A., and Chinnam, R.B., “Bullwhip Effect in Capacitated Supply Chains with Consideration for Product Life-cycle Aspects,” *International Journal of Production Economics*, Vol. 136, No. 2, pp. 318–331, April 2012. | ISI-5: 3.548 | Role: E |
 35. Azadian, F.[†], Murat, A.E., and Chinnam, R.B., “Dynamic Routing of Time-Sensitive Air Cargo using Real-Time Information,” *Transportation Research Part E: Logistics and Transportation Review*, Vol. 48, No. 1, pp. 355-372, January 2012. | ISI-5: 2.764 | Role: E |
 36. Guner, A.[†], Murat, A.E., and Chinnam, R.B., “Dynamic Routing under Recurrent and Non-Recurrent Congestion Using Real-time ITS Information,” *Computers & Operations Research*, Vol. 39, No. 2, pp. 358–373, February 2012. | ISI-5: 2.374 | Role: E |
 37. Unler, A., Murat, A.E., and Chinnam, R.B., “mr²PSO: A Maximum Relevance Minimum Redundancy Wrapper Framework for Feature Selection Based on Swarm Intelligence,” *Information Sciences*, Vol. 181, No. 20, pp. 4625-4641, October 2011. | ISI-5: 3.676 | Role: E |
 38. Vanteddu, G.[†], R.B. Chinnam, and O. Gushikin, “Supply Chain Focus Dependent Supplier Selection Problem,” *International Journal of Production Economics*, Vol. 129, No. 1, pp. 204-216, January 2011. | ISI-5: 3.548 | Role: E |
 39. Subramoniam, R.[†], Huisingh, D., and Chinnam, R.B., “Aftermarket Remanufacturing Strategic Planning Decision-Making Framework: Theory & Practice,” *Journal of Cleaner Production*, Vol. 18, No. 16-17, pp. 1575-1586, November 2010. | ISI-5: 5.315 | Role: E |
 40. Filev, D.P., Chinnam, R.B., Tseng, F.[†], and Baruah, P.[†], “An Industrial Strength Novelty Detection Framework for Autonomous Equipment Monitoring and Diagnostics,” *IEEE Transactions on Industrial Informatics*, Vol. 6, No. 4, pp. 767-779, November 2010. | ISI-5: 3.148 | Role: E,C |
 41. Camci, F.[†] and Chinnam, R.B., “Health-State Estimation and Prognostics in Machining Processes,” *IEEE Transactions on Automation Science and Engineering*, Vol. 7, No. 3, pp. 581-597, July 2010. | ISI-5: 1.677 | Role: E,C |
 42. Govindu, R.[†] and Chinnam, R.B., “A Software Agent-Component Based Framework for Multi-Agent Supply Chain Modelling and Simulation,” *International Journal of Modelling and Simulation*, Vol. 30, No. 2, pp. 155-171, June 2010. | ISI-5: n/a – SJR: 0.22 | Role: E,C |
 43. Sathyanarayanamurthy, H.[‡] and Chinnam, R.B., “Metamodels for Variable Importance Decomposition with Applications to Probabilistic Engineering Design,” *Computers & Industrial Engineering*, Vol. 57, No. 3, pp. 996-1007, October 2009. | ISI-5: 1.872 | Role: E,C |
 44. Subramoniam, R.[†], Huisingh, D., and Chinnam, R.B., “Remanufacturing for the Automotive Aftermarket – Strategic Factors: Literature Review and Future Research Needs,” *Journal of Cleaner Production*, Vol. 17, No. 13, pp. 1163-1174, September 2009. | ISI-5: 5.315 | Role: E |
 45. McNicol, J.[§], Monplaisir, L., and Chinnam, R.B., “A Framework for Developing a CSCW Environment to Improve Concept-Based Decision Making,” *International Journal of Collaborative Enterprise*, Vol. 1, No.1, pp. 39-52, 2009. | ISI-5: n/a | Role: E |
 46. Chinnam, R.B. and Baruah, P.[†], “Autonomous Diagnostics and Prognostics in Machining Processes through Competitive Learning-Driven HMM-Based Clustering,” *International Journal of Production Research*, Vol. 47, No. 23, pp. 6739-6758, August 2009. | ISI-5: 1.733 | Role: E |
 47. Camci, F.[†] and Chinnam, R.B., “General Support Vector Representation Machine for One-class Classification of Non-stationary Classes,” *Pattern Recognition*, Vol. 41, No. 10, pp. 3021-3034, October 2008. | ISI-5: 3.48 | Role: E,C |
 48. Rai, B.[§], Chinnam, R.B., and Singh, N., “Prediction of Drill-Bit Breakage from Degradation Signals Using Mahalanobis-Taguchi System Analysis,” *International Journal of Industrial and Systems Engineering*, Vol. 3, No. 2, pp.134-148, January 2008. | ISI-5: n/a | Role: E |
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75. D'Angelo, R., Weiss, R., Wolfe, D., Chinnam, R.B., Monplaisir, L., "Designing a Regulatory Agile Quality Management System for Development of Laboratory Developed Tests," Submitted to *American Journal of Clinical Pathology*, November 2017. | ISI: 2.4 | Role: E |

C. Papers Published in Conference Proceedings

1. Refereed Papers

1. Almohri, H. and Chinnam, R.B., "Deriving Business Recommendations for Franchises Using Competitive Learning Driven MLP-Based Clustering," *Proc. of 18th International Conference on Engineering Applications of Neural Networks (EANN 2017)*, Athens, Greece, August 25–27, 2017.
2. Ameri, S., Fard, M.J., Chinnam, R.B., and Reddy, C., "Survival Analysis based Framework for Early Prediction of Student Dropouts", *Proc. of 25th ACM International Conference on Information and Knowledge Management (CIKM 2016)*, Indianapolis, Indiana, October 24-28, 2016. Acceptance Rate: 20%.
3. Fard, M.J., Ameri, S., Chinnam, R.B., and Ellis, R.D., "Soft Boundary Approach for Unsupervised Gesture Segmentation and Recognition in Robotic-Assisted Surgery," *Proc. of 12th IEEE International Conference on Automation Science and Engineering (CASE 2016)*, Fort Worth, Texas, August 21-24, 2016.
4. Fard, M.J., Ameri, S., Chinnam, R.B., Pandya, A.K., Klein, M.D., & Ellis, R.D., "Machine learning approach for skill evaluation in robotic-assisted surgery," *Proc. of 2016 World Congress on Engineering and Computer Science*, San Francisco, California, October 19-21, 2016.
5. Tseng, F., Filev, D., Makki, I., and Chinnam, R.B., "A Novel Feature Extraction Method for Monitoring (Vehicular) Fuel Storage System Leaks," *Proc. of 2014 Annual Conference of the Prognostics and Health Management Society (2014 PHM)*, Fort Worth, Texas, September 29-October 2, 2014.
6. Movahednejad, M., Mashayekhy, L., and Chinnam, R.B., "Effects of Traffic Network Dynamics on Hierarchical Community-Based Representations of Large Road Networks," *Proc. of 15th International IEEE Conference on Intelligent Transportation Systems (ITSC 2012)*, Anchorage, Alaska, September 16-19, 2012.
7. Movahednejad, M., Mashayekhy, L., Taghavi, A., and Chinnam, R.B., "State Space Reduction in Modeling Traffic Network Dynamics for Dynamic Routing under ITS," *Proc. of 14th International IEEE Conference on Intelligent Transportation Systems (ITSC 2011)*, Washington, DC, October 5-7, 2011.

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10. Kumar, A., Tseng, F., and Chinnam, R.B., "Role of Hidden-Markov Models for Autonomous Diagnostics," *Proc. of International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011)*, Istanbul, Turkey, June 15-18, 2011.
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12. Murat, E.A., Chinnam, R.B., Rapp, S., Hartman, G., and Tananko, D., "Injection of Reliability, Availability, and Maintainability (RAM) Modeling & Assessment into the Advanced Collaborative System Optimization Model (ACSOM)," *Proc. of 2010 NDIA Ground Vehicle Systems Engineering And Technology Symposium*, Dearborn, Michigan, August 17-19, 2010.
13. Subramoniam, R., Huisingh, D., Chinnam, R.B., "Remanufacturing for the Automotive Aftermarket – Strategic Factors: Literature Review and Future Research Needs," *AUR-EUR Sustainable Development Workshop*, American University in Cairo, Egypt, October 27-29, 2009.
14. Guner, A., Murat, A., and Chinnam, R.B., "Dynamic Routing Using Real-time ITS Information," *Proc. of Third International Workshop on Intelligent Vehicle Controls & Intelligent Transportation Systems - IVC & ITS*, July 4-5, Milan, Italy, 2009.
15. Kumar, A., Tseng, F., Guo, Y., and Chinnam, R.B., "Hidden-Markov Model Based Sequential Clustering for Autonomous Diagnostics," *Proc. of International Joint Conference on Neural Networks*, Hong Kong, June 1-6, 2008.
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17. Camci, F. and Chinnam, R.B., "Hierarchical HMMs for Autonomous Diagnostics and Prognostics," *Proc. of International Joint Conference on Neural Networks*, Vancouver, BC, Canada, July 16-21, 2006.
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20. Baruah, P. and Chinnam, R.B., "The Value of Early Forecast Information Sharing for a Manufacturer of Seasonal Goods in a Two-player Supply Chain," *Proc. of CORS / Optimization Days 2006 - Joint Conference*, Montreal, May 8-10, 2006.
21. El-Banna, M., D. Filev, and Chinnam, R.B., "Mahalanobis Taguchi System for Feature Extraction and Nugget Quality Classification in Resistance Spot Welding," *Proc. of Sheet Metal Welding Conference XII*, Livonia, Michigan, May 9-12, 2006.
22. Camci, F. and Chinnam, R.B., "Dynamic Bayesian Networks for Machine Diagnostics: Hierarchical Hidden Markov Models vs. Competitive Learning," *Proc. of IJCNN'05 International Joint Conference on Neural Networks*, Montreal, Canada, July 31-August 4, 2005.
23. Nepal, B. and Chinnam, R.B., "A Process Capability based Framework for Determining Non-Product Investment at Ford Motor Company," *Proc. of PICMET'05 Portland International Conference on Management of Engineering and Technology*, Portland, Oregon, July 31 - August 4, 2005.

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28. Camci, F. and Chinnam, R.B., "On-line Novelty Detection for Non-Stationary Classes using a Modified Support Vector Machine," *Proc. of Neural Networks and Computational Intelligence (NCI 2004)*, Grindelwald, Switzerland, February 23-25, 2004.
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31. Wang-Chavez, J., Chinnam, R.B., Sathyanarayananmurthy, H., and Nguyen, J., "Integrating Real World Experience in Designing Operations Management Course," *Proc. of 2003 ASEE Annual Conference & Exposition*, Nashville, Tennessee, June 22-25, 2003.
32. Baruah, P. and Chinnam, R.B., "HMMs for Diagnostics and Prognostics in Machining Processes," *Proc. of the 57th Society for Machine Failure Prevention Technology Conference*, Virginia Beach, VA, April 14-18, 2003.
33. Baruah, P., Murthy, S., and Chinnam, R.B., "A Neuro-Fuzzy Approach for On-line Reliability Estimation and Condition-Based-Maintenance using Degradation Signals." *Proc. of 8th ISSAT Conference on Reliability and Quality in Design*, Anaheim, CA, August 6-9, 2002.
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35. Chinnam, R.B., Kumar. V., and Wasserman, G.S., "Forecasting Warranty Claims: A Comparison of SVMs with Statistical Methods and Neural Networks." *Proc. of ANNIE '01 Artificial Neural Networks in Engineering*, St. Louis, MI, November 4-7, 2001.
36. Chinnam, R.B. and Kumar. V., "Using SVMs to Recognize Shifts and Trends in Correlated and Other Manufacturing Processes." *Proc. of ANNIE '01 Artificial Neural Networks in Engineering*, St. Louis, MI, November 4-7, pp. 2276-2281, 2001.
37. Chinnam, R.B. and Kumar. V., "Using Support Vector Machines to Recognize Shifts and Trends in Correlated Manufacturing Processes," *Proc. of IJCNN'01 International Joint Conference on Neural Networks*, Washington, D.C., July 15-19, 2001.
38. Chinnam, R.B. and Mohan, P., "On-Line Reliability Estimation Of Physical Systems Using Neural Networks And Wavelets," *Proc. of ANNIE '00 Artificial Neural Networks in Engineering*, St. Louis, MI, November 5-8, pp. 605-610, 2000.
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40. Chinnam, R.B., Qiao, H., and Fu, X., "On-line Parameter Design of Dynamic Systems Modeled Using Recurrent Multilayer Perceptron Networks," *Proc. of ANNIE '99 Artificial Neural Networks in Engineering*, St. Louis, MI, November 7-10, pp. 697-702, 1999.
41. Kellogg, K., Kallmeyer, A., Dutta, P.K., Chinnam, R.B., "Influence of Moisture and Low Temperature on Notched Izod Impact Toughness in a Pultruded Reinforced Composite," *Proc. of ISOPE-99 International Offshore and Polar Engineering Conference*, Brest, France, May 30-June 4, pp. 270-275, 1999.

42. Hiebert, S. and Chinnam, R.B., "On-line Reliability Estimation of Individual Components Using Neural Networks and Wavelets," *Proc. of ANNIE '98 Artificial Neural Networks in Engineering*, St. Louis, MI, November 1-4, pp. 761-766, 1998.
43. Chinnam, R.B. and Ding, J., "Intelligent Quality Controllers for On-line Parameter Design," *Proc. of ANNIE '98 Artificial Neural Networks in Engineering*, St. Louis, MI, November 1-4, pp. 831-836, 1998.
44. Chinnam, R.B., Hiebert S., and Ding, J., "On-line Performance Reliability Estimation Techniques and Issues," *Proc. of the 7th IERC*, May 9-10, Banff, Alberta, Canada, 1998.
45. Chinnam, R. B. and Ding, J., "Confidence Limit Estimation for Neural Network Models," *Proc. of ANNIE '97 Artificial Neural Networks in Engineering*, St. Louis, MI, November 9-12, pp. 159-164, 1997.
46. Chinnam, R. B., "Performance Reliability Monitoring of Physical Systems Using Artificial Neural Networks," *Proc. of the 6th IERC*, Miami Beach, FL, May 17-18, pp. 471-476, 1997.
47. Chinnam, R. B. and Shrikhande, N., "Reliability Prediction Using Temporal Processing and Self Organizing Feature Maps," *Proc. of ANNIE '96 Artificial Neural Networks in Engineering*, St. Louis, MI, November 12-15, 1996.
48. Chinnam, R. B., "Performance Reliability Prediction: Estimating Confidence Intervals for FFNS using Self-Organizing Feature Maps," *Proc. of ANNIE '96 Artificial Neural Networks in Engineering*, St. Louis, MI, November 12-15, pp. 897-902, 1996.
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50. Kolarik, W. J. and Chinnam, R. B., "Quality Control in Advanced Manufacturing Processes," *Proc. of the 48th AQC*, Las Vegas, NV, May 24-26, pp. 430-435, 1994.
51. Chinnam, R. B., Kolarik, W. J., and Manne, V. C., "Performance Reliability Prediction using the Validity Index Neural Network," *Proc. of the ISSAT Intl. Conf. on Reliability and Quality in Design*, Seattle, WA, March 16-18, 1994.
52. Chinnam, R. B. and Kolarik, W. J., "Simulation Test-Bed for Testing Effectiveness of Quality Control Strategies and Experimental Designs," *Proc. of the 2nd IERC*, Los Angeles, CA, May 26-27, pp. 639-644, 1993.
53. Chinnam, R. B. and Kolarik, W. J., "Automation and the Total Quality Paradigm," *Proc. of the 1st IERC*, Chicago, IL, May 20-21, 1992.
54. Ayoub, M. M., Simon, H. M., and Chinnam, R. B., "Biomechanical Simulation of Lifting," *Proc. of the 11th Congress of International Ergonomic Association*, Miami, FL, 1991.

D. Book Reviews Published

1. Reviews for Publisher

Major reviewer for book manuscript entitled *Manufacturing Processes: Integrating Product and Process Design*, by Wysk, Niebel, and Cohen for McGraw-Hill, 1998-1999.

Major reviewer for book manuscript entitled *Manufacturing Engineering*, by Jiri Tlustý for Addison-Wesley, 1997.

E. Papers Presented

1. Keynote Presentations at International Conferences

1. R.B. Chinnam, "Toward Autonomous Diagnostics and Prognostics," *International Congress on Pervasive Computing and Management*, New Delhi, India, December 12-14, 2008.

2. Invited, Sponsored, Contributed and/or Refereed - Internationally or Nationally

1. Rapp, S., Chinnam, R.B., Doerry, N., Monplasil, L., Murat, A., Witus, G., "Set-Based Design (SBD) and Optimization: Can They Live Together and Make Program Trade Space Decisions Better?," *Ground Vehicle Systems Engineering and Technology Symposium: GV-SETS*, Novi, MI, August 7-9, 2018.
2. Rapp, S., Chinnam, R.B., Doerry, N., Monplasil, L., Murat, A., Witus, G., "Product Development Resilience through Set-Based Design," *MORS 86th Symposium*, Monterey, CA, June 18-21, 2018.
3. Lee, S.Y., Chinnam, R.B., Dalkiran, E., Krupp, S., Nauss, M. "Proactive Inpatient Bed Reservations from ED to Reduce Patient Boarding," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.

4. Nosrat, E., Chinnam, R.B., Dalkiran, E., Rana, S., "Characterizing Customer Choice from Sales Transaction Data for Introducing Niche Products," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.
5. Azadian, F., Murat, A., Chinnam, R.B. "An Unpaired Pickup and Delivery Problem with Time-Dependent Assignment Costs," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.
6. Lee, S.Y., Chinnam, R.B., Dalkiran, E., Krupp, S., Nauss, M., Welchans, M., "Proactive Inpatient Bed Reservations for Admissions from Emergency Department," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.
7. Anvaryazdi, S., Venkatachalam, S., Chinnam, R.B., "Managing Operational Efficiency & Health Outcomes at Outpatient OB/GYN Clinics through Effective Scheduling," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.
8. Sadati, N., Chinnam, R.B., Murat, A., "Perspectives on Real Time Orchestration of Operations in Health Systems," *2017 INFORMS Annual Meeting*, Houston, Texas, October 22-25, 2017.
9. Lee, S.Y., Chinnam, R.B., Dalkiran, E., Krupp, S., Nauss, M., "Proactive Inpatient Bed Reservations from ED to Reduce Patient Boarding," *SAEM Midwest Regional Meeting*, Grand Rapids, MI, September 14, 2017.
10. Lee, S.Y., Chinnam, R.B., and Dalkiran, E., "Proactive Inpatient Bed Reservations for Admissions Predicted from Emergency Department," *2017 POMS Annual Conference*, Seattle, WA, May 5-8, 2017.
11. Faridimehr, S., Chinnam, R.B., Venkatachalam, S., "Managing Access to Primary Care Through Advanced Scheduling," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
12. Almohri, H., Chinnam, R.B., Amini, A.A., "Expectation Maximization for Finite Mixture of Linear Regression Models with Group Structure Data," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
13. Faridimehr, S., Venkatachalam, S., Chinnam, R.B., "Community-aware Charging Station Network Design for Electrified Vehicles in Urban Areas: Improving Accessibility, Reducing Emissions, And Promoting Walking," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
14. Lee, S.Y., Chinnam, R.B., Dalkiran, E., "Proactive Inpatient Bed Allocation for Emergency Department Patients Using Predictive Analytics," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
15. Turgut, O., Chinnam, R.B., "Building Ensembles of Support Vector Machine Classifiers Through Multi Objective Optimization," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
16. Almohri, H., Chinnam, R.B., Amini, A.A., "Multi-objective Optimization Under Multicollinearity," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
17. Sadati, N., Chinnam, R.B., "Observational Data Driven Modeling and Optimization of Manufacturing Processes," *2016 INFORMS Annual Meeting*, Nashville, Tennessee, November 13-16, 2016.
18. Azadian, F., Murat, A., Chinnam, R.B., "Pricing under Zoning Policy in Transportation," *DSI 2015 Annual Meeting*, Seattle, WA, USA, November 21-24, 2015.
19. Almohri, H., Chinnam, R.B., and Colosimo, M., "Data Science Approach for Dealership Performance Analysis," *INFORMS 2015 Annual Meeting*, Philadelphia, PA, November 1-4, 2015.
20. Faridimehr, S. and Chinnam, R.B., "Managing Access to Primary Care Clinics," *INFORMS 2015 Annual Meeting*, Philadelphia, PA, November 1-4, 2015.
21. Nejad, M., Chinnam, R.B., Grosu, D., and Mashayekhy, L., "Scheduling and Pricing Services for Online Electric Vehicle Charging," *INFORMS 2015 Annual Meeting*, Philadelphia, PA, November 1-4, 2015.
22. Lee, S.Y., Chinnam, R.B., et al., "Improving Proactive Coordination between Emergency Department and Inpatient Wards using Electronic Medical Records," *MSOM 2015 Conference*, Toronto, ON, Canada, June 29-30, 2015.

23. Faridimehr, S., Tabaie, A., Lee, S.Y., Chinnam, R.B., Murat, A., Dalkiran, E., and Yang, Q., "Supply and Demand Alignment at Primary Care Facilities," *2015 POMS Annual Conference*, Washington DC, May 8-11, 2015.
24. Lee, S.Y., Chinnam, R.B., Tabaie, A., Faridimehr, S., Murat, A., Dalkiran, E., Yang, Q., Neemuchwala, H., and Lederle, M., "Advance Ward Predictions with Multi-Class Classification and Feature Selection," *2015 POMS Annual Conference*, Washington DC, May 8-11, 2015.
25. Movahednejad, M. and Chinnam, R.B., "Online Scheduling and Pricing for Electric Vehicle Charging," *Industrial and Systems Engineering Research (ISERC 2015)*, Nashville, TN, May 30-June 2, 2015.
26. Lee, S.Y., Chinnam, R.B., et al., "Hazard Rate Models for Estimating Patient's Length-of-Stay in Emergency Departments," *INFORMS 2014 Annual Meeting*, San Francisco, CA, November 9-12, 2014.
27. Movahednejad, M. and Chinnam, R.B., "Optimal Routing for Plug-in Hybrid Electric Vehicles," *INFORMS 2014 Annual Meeting*, San Francisco, CA, November 9-12, 2014.
28. Faridimehr, S., Chinnam, R.B., et al., "Supply and Demand Alignment at Primary Care Facilities," *INFORMS 2014 Annual Meeting*, San Francisco, CA, November 9-12, 2014.
29. Azadian, F., Chinnam, R.B., Murat, A., "Third Party Logistics Planning and Production Scheduling Integration," *INFORMS 2014 Annual Meeting*, San Francisco, CA, November 9-12, 2014.
30. Azadian, F., Chinnam, R.B., Murat, A., "Integrated Production Scheduling and Logistics Decision Making," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
31. Umpfenbach, E., Chinnam, R.B., "Assortment Planning of Configurable Products," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
32. Qiu, S., Chinnam, R.B., Murat, A., "Cost Sensitive Inpatient-Ward Bed Reservation Model for Emergency Department Triage," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
33. Alaniazar, S., Chinnam, R.B., Kempt, K., Murat, A., "Demand Modeling and Capacity Planning for Innovative Short Life Cycle Products," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
34. Movahednejad, M. and Chinnam, R.B., "Optimal and Approximate Algorithms for Energy-efficient Routing of Plug-in Hybrid Electric Vehicles," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
35. Qiu, S., Chinnam, R.B., Murat, A., "Two-stage Statistical Model for Predicting Hospital Admissions at Emergency Department Triage," *INFORMS 2013 Annual Meeting*, Minneapolis, MN, October 6-9, 2013.
36. Qiu, S., Chinnam, R.B., Murat, A., Batarse, B., "Improving ED Patient Flow: Multi-Class Admit Prediction Models At Triage," *2nd INFORMS Conference on Healthcare*, Chicago, IL, June 23-26, 2013.
37. Azadian, F., Murat, A., and Chinnam, R.B., "Integrated planning of air transportation and production for time-sensitive goods," *Industrial and Systems Engineering Research (ISERC 2013)*, San Juan, Puerto Rico, May 18-22, 2013.
38. Qiu, S., Chinnam, R.B., Murat, A., "Streamlining Patient Flow: Models for Emergency Department Patient Destination Prediction," *2013 POMS Annual Conference*, Denver, CO, May 3-6, 2013.
39. Umpfenbach, E., Chinnam, R.B., "Streamlining Patient Flow: Models for Emergency Department Patient Destination Prediction," *2013 POMS Annual Conference*, Denver, CO, May 3-6, 2013.
40. Azadian, F., Chinnam, R.B., Murat, A., "Air Cargo Pickup and Delivery Problem with Alternative Access Airports," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
41. Taghavi, A., Chinnam, R.B., "Assortment Planning for Configurable Products," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
42. Bolooriarabani, A., Murat, A., Chinnam, R.B., "Community-based Chronic Care for Diabetic Patients through Intervention and Prevention," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
43. Mahmoudi, M., Chinnam, R.B., "Competitive Pricing Dynamics under a Price Leader: Dairy Industry Case," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.

44. Alaniazar, S., Chinnam, R.B., Murat, A., "Dynamic Capacity Planning for Innovative Products with Short Life Cycles," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
45. Movahednejad, M. and Chinnam, R.B., "Efficient Routing on Large-scale Dynamic Networks under ITS Using Hierarchical Communities," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
46. Qiu, S., Chinnam, R.B., Murat, A., "Reducing Patient Wait Times in Emergency Departments," *INFORMS 2012 Annual Meeting*, Phoenix, AZ, October 14-17, 2012.
47. Taghavi, A., Umpfenbach, E., Chinnam, R.B., "Integrated Strategic Planning of Product Assortments in the Automotive Industry" *XVI Annual International Conference of Society of Operations Management*, New Delhi, India, December 21-23, 2012.
48. Kumar, A., Chinnam, R.B., "Strategic Capacity Planning and Management of Remanufactured Products" *XVI Annual International Conference of Society of Operations Management*, New Delhi, India, December 21-23, 2012.
49. Taghavi, A., Chinnam, R.B., Dalkiran, E., "Assortment Planning for Configurable Products," 23rd *Annual POMS Conference*, Chicago, IL, April 20-23, 2012.
50. Williams, D., Chinnam, R.B., "A Framework for Proactive Assessment and Management of Complexity in Product Development," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
51. Movahednejad, M. and Chinnam, R.B., "A Graph-Based Hierarchical Routing Algorithm under ITS," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
52. Senol, M.B., Murat, A., Chinnam, R.B., Taghavi, A., "A Sequential Heuristic Approach for Solving Layout Design Problems," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
53. Boloriarabani, A., Murat, A., Chinnam, R.B., "Analyzing the Kidney Transplantation System with Immediate and Long-term Effects," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
54. Azadian, F., Murat, A., Chinnam, R.B., "Application of Pickup and Delivery Problem in Air-cargo Routing with Alternative Access Airport," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
55. Taghavi, A. and Chinnam, R.B., "Assortment Planning for Configurable Products," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
56. Guner, A., Chinnam, R.B., Murat, E.A., "Dynamic Vehicle Routing in Networks with Arc Interactions under ITS," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
57. Qiu, S., Murat, A., Chinnam, R.B., "Error Estimation of Decomposition Methods for Analysis of Queuing System with Finite Buffer," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
58. Alaniazar, S., Chinnam, R.B., Murat, A., "Forecasting and Capacity Management of Innovative Products," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
59. Umpfenbach, E., Chinnam, R.B., Murat, A., "Strategic Planning of a Configurable Product," *INFORMS 2011 Annual Meeting*, Charlotte, NC, November 13-16, 2011.
60. Guner, A., Murat, A., Chinnam, R.B., "Dynamic Routing in Stochastic Time-Dependent Networks for Milk-Run Tours with Time Windows under ITS," 4th *METRANS National Urban Freight Conference*, Long Beach, CA, October 12-14, 2011.
61. Azadian, F., Murat, A., Chinnam, R.B., "Improving Air-cargo Transportation through Alternative Access Airport Routing," 4th *METRANS National Urban Freight Conference*, Long Beach, CA, October 12-14, 2011.
62. Movahednejad, M. and Chinnam, R.B., "State-Space Reduction in Modeling Traffic Network Dynamics for Efficient Graph-Based Hierarchical Routing Algorithms under ITS", *ITS Michigan Annual Meeting and Exposition*, Dearborn, MI, June 1, 2011.
63. Guner, A., Murat, E.A., and Chinnam, R.B., "Dynamic Routing Policies in Stochastic Time-Dependent Networks under ITS", *ITS Michigan Annual Meeting and Exposition*, Dearborn, MI, June 1, 2011.
64. Chinnam, R.B., Guner, A., Murat, A., "Dynamic Routing in Stochastic Time-Dependent Networks under ITS," 19th *Triennial Conference of the International Federation of Operational Research Societies (IFORS2011)*, Melbourne, Australia, July 10-15, 2011.

65. Chinnam, R.B., Umpfenbach, E., Murat, A., "Strategic Planning of Configurable Products," *19th Triennial Conference of the International Federation of Operational Research Societies (IFORS2011)*, Melbourne, Australia, July 10-15, 2011.
66. Murat, A., Azadian, F., Chinnam, R.B., "Pickup, Routing and Delivery of Air-cargo with Alternative Access Airports," *19th Triennial Conference of the International Federation of Operational Research Societies (IFORS2011)*, Melbourne, Australia, July 10-15, 2011.
67. Murat, A., Azadian, F., Chinnam, R.B., "Dynamic Routing of Time-Sensitive Air Cargo using Real-Time Information," *19th Triennial Conference of the International Federation of Operational Research Societies (IFORS2011)*, Melbourne, Australia, July 10-15, 2011.
68. Kumar, A., Tseng, F., and Chinnam, R.B., "Role of Hidden-Markov Models for Autonomous Diagnostics," *International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011)*, Istanbul, Turkey, June 15-18, 2011.
69. Chinnam, R.B. and Tseng, F., "Novelty Detection Framework for Autonomous Monitoring & Diagnostics of Ground Vehicle Sub-Systems: Preliminary Investigation," *17th Annual Automotive Research Center (ARC) Conference*, Ann Arbor, MI, May 23-24, 2011.
70. Taghavi, A. and Chinnam, R.B., "Configurable Product Assortment Planning with Considerations for Supply and Manufacturing Issues," *22nd Annual POMS Conference*, Reno, NV, April 29 – May 2, 2011.
71. Ma, X., Chinnam, R.B., Dogan, I., "Medical Inventory Management under Returns," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
72. Ucar, H., Chinnam, R.B., Murat, A., "Look-Ahead Bottleneck Analysis and Effective Maintenance Management," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
73. Dogan, I., Chinnam, R.B., "Inventory Management in Closed-loop Supply Chains under Non-stationary Demand," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
74. Kumar, A., Chinnam, R.B., Guo, Y., Tseng, F., "Hidden-Markov Model based Sequential Clustering for Autonomous Diagnostics," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
75. Guner, A., Chinnam, R.B., Murat, A., "Dynamic Routing in Stochastic Time-Dependent Networks for Milk-Run Tours with Time Windows," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
76. Alaniazar, S., Chinnam, R.B., Murat, A., "Dynamic Capacity Planning for Short Life Cycle Products," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
77. Cao, D., Chinnam, R.B., Murat, A., "Analysis of Availability and Reliability of Repairable System using Continuous Time Bayesian Networks," *INFORMS 2010 Annual Meeting*, Austin, TX, November 7-10, 2010.
78. Umpfenbach, E., Chinnam, R.B., Murat, A., "Assortment Planning of Configurable Products," *INFORMS 2010 Annual Meeting*, Austin, TX, Nov 7-10, 2010.
79. Chinnam, R.B. and Dogan, I., "Inventory Management in Closed-loop Supply Chains under Non-stationary Demand," *EURO Conference*, Lisbon, Portugal, July 11-14, 2010.
80. Guner, A., Murat, A., and Chinnam, R.B., "Dynamic routing in stochastic time-dependent networks for milk-run tours with time windows," *EURO Conference*, Lisbon, Portugal, July 11-14, 2010.
81. Guner, A., Chinnam, R.B., and Murat, A.E., "Dynamic Routing in Stochastic Time-Dependent Networks for Milk-Run Tours with Time Windows," *ITS Michigan Annual Meeting*, Dearborn, MI, May 19- 20, 2010.
82. Guner, A., Chinnam, R.B., and Murat, A., "Dynamic Vehicle Routing Under Congestion Using Real-time ITS Information," *ALIO-INFORMS Joint International Meeting*, Buenos Aires, Argentina, June 6-9, 2010.
83. Cao, D., Chinnam, R.B., Murat, A., "A Framework for Estimation of Configurable Product Substitution Rates: Application to Auto Markets," *INFORMS 2009 Annual Meeting*, San Diego, CA. (Oct 11-14, 2009).
84. Alaniazar, S., Chinnam, R.B., Murat, A., "Dynamic Capacity Planning Using Bass and Markowitz Model in Agent Based Supply Chain," *INFORMS 2009 Annual Meeting*, San Diego, CA. (Oct 11-14, 2009).

85. Timalsina, A., Chinnam, R.B., Murat, A., "Dynamic Cross-selling in E-commerce using "Hub-authority" Ranking Framework," *INFORMS 2009 Annual Meeting*, San Diego, CA. (Oct 11-14, 2009).
86. Guner, A., Chinnam, R.B., Murat, A., "Dynamic Routing Using Real-time ITS Information," *INFORMS 2009 Annual Meeting*, San Diego, October 11-14, 2009.
87. Ucar, H., Chinnam, R.B., Murat, A., "Effective Real Time Maintenance Management," *INFORMS 2009 Annual Meeting*, San Diego, October 11-14, 2009.
88. Kumar, A., Chinnam, R.B., "Forecasting Automotive Core Returns Using Cox-proportional Hazard Rate Models," *INFORMS 2009 Annual Meeting*, San Diego, October 11-14, 2009.
89. Rapp, S., Chinnam, R.B., Hartman, G., Murat, A., "Injection of RAM Modeling & Assessment into Armored Combat System Optimization Modeler (ACSOM)," *INFORMS 2009 Annual Meeting*, San Diego, October 11-14, 2009.
90. Dogan, I., Chinnam, R.B., "Inventory Control of Closed-loop Remanufacturing Supply Chain," *INFORMS 2009 Annual Meeting*, San Diego, CA., October 11-14, 2009.
91. Azadian, F., Chinnam, R.B., Murat, A., "Vehicle Routing with Alternative Access Airport Selection for Air Cargo," *INFORMS 2009 Annual Meeting*, San Diego, CA., October 11-14, 2009.
92. Subramoniam, R., Huisingh, D., and Chinnam, R.B., "Remanufacturing for the Automotive Aftermarket – Strategic Factors: Literature Review and Future Research Needs," *AUC-EUR Sustainable Development Workshop*, American University in Cairo, New Campus – Egypt, October 27-29, 2009.
93. Alaniazar, S., Chinnam, R.B., and Murat, A., "Dynamic Capacity Planning Using Bass Model and Markowitz Investment Model in Agent-Based Supply Chain," *INFORMS 2008 Annual Meeting*, Washington D.C., Oct 12-15, 2008.
94. Azadian, F., Chinnam, R.B., and Murat, A., "Dynamic Freight Routing on Air-road Intermodal Network using Real-time Congestion Information," *INFORMS 2008 Annual Meeting*, Washington D.C., Oct 12-15, 2008.
95. Dogan, I., Chinnam, R.B., "Inventory Management in Closed-loop Supply Chains under Non-stationary Demand," *INFORMS 2008 Annual Meeting*, Washington D.C., Oct 12-15, 2008.
96. Ucar, H., Chinnam, R.B., and Murat, A., "Production Line Throughput Prediction: A Hybrid Aggregation/Decomposition Method," *INFORMS 2008 Annual Meeting*, Washington D.C., October 12-15, 2008.
97. Guner, A., Chinnam, R.B., and Murat, A., "Dynamic Vehicle Routing under Real-time Congestion and Incident Information for JIT Logistics," *INFORMS 2008 Annual Meeting*, Washington D.C., Oct 12-15, 2008.
98. Guner, A., Chinnam, R.B., and Murat, A. "Modeling Traffic Incidents for Dynamic Vehicle Routing Applications," *INFORMS 2008 Annual Meeting*, Washington D.C., Oct 12-15, 2008.
99. S. Rapp, A. Murat, and R.B. Chinnam, "RAM Injection into Advanced Collaborative System Optimization Modeler," *MSTV – Modeling & Simulation, Testing & Validation Conference*, Sterling Heights, MI, November 18-19, 2008.
100. Aktas, E., Murat, A., Chinnam, R.B., Puskorius, G., Goodman, B., and Li, H., "Strategic Model for Selection of Vehicle Configurations: To Improve Profitability," *19th Annual POMS Conference*, La Jolla, CA, May 9-12, 2008.
101. E. Bramson, R.B. Chinnam, "Strategic Value Stream Management and Analysis for Automotive Commodity Supply Networks," *SAE World Congress*, Detroit, MI, April 14-17, 2008.
102. M. Saripalle, R.B. Chinnam, A. Guner, A. Murat, "Modeling Incidents for Dynamic Vehicle Routing Applications," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
103. G. Vanteddu, R.B. Chinnam, K. Yang, "Supply Chain Focus Dependent Safety Stock Placement Problem," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
104. Dogan, R.B. Chinnam, "Modeling a Two-stage Closed-loop Remanufacturing Supply Chain," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
105. Kumar, R.B. Chinnam, "Hidden-Markov Model Based Hierarchal Clustering for Autonomous Diagnostics," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.

106. Guner, R.B. Chinnam, A. Murat, M. Saripalle, "Enabling Congestion Avoidance in Stochastic Transportation Networks Under ATIS," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
107. D. Cao, R.B. Chinnam, D. Filev, "Design of a FE/HEV Driving Style Advisor," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
108. S. Alaniazar, E. Aktas, R.B. Chinnam, R. Govindu, A. Murat, "Application of BDI (Belief-Desire-Intention) Reasoning in Agents for Strategic Planning of New Facility Investment in Supply Chain," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
109. H. Ucar, R.B. Chinnam, A. Murat, "A Novel Throughput Optimization Framework Using SPSA and AAP," *INFORMS Annual Meeting*, Seattle, Washington, November 4-7, 2007.
110. R. Govindu and R.B. Chinnam, "Methodological Frameworks for Multi-Agent Supply Chain Modeling," *INFORMS Annual Meeting*, Pittsburgh, Pennsylvania, November 5-8, 2006. (Interactive Presentation).
111. P. Baruah and R.B. Chinnam, "An Optimal Soft Order Revision Policy for a Vendor Facing Atypical Demand and Supply Uncertainty," *INFORMS Annual Meeting*, Pittsburgh, Pennsylvania, November 5-8, 2006.
112. Dogan and R.B. Chinnam, "Modeling Closed-Loop Supply Chains Using Dynamic Bayesian Networks," *INFORMS Annual Meeting*, Pittsburgh, Pennsylvania, November 5-8, 2006.
113. Murat, I. Dogan, and R.B. Chinnam, "A New Reservation Contract For Capacity Management In High-Tech Industries," *INFORMS Annual Meeting*, Pittsburgh, Pennsylvania, November 5-8, 2006.
114. R. Govindu and R.B. Chinnam, "Methodological Frameworks for Multi-Agent Supply Chain Modeling," *Symposium on Complexity and Advanced Analytics: Theory and Applications*, SIAM: Great Lakes Section, Wayne State University, Detroit, MI, U.S.A., October 14, 2006. | GS Citations: 2|
115. P. Baruah and R.B. Chinnam, "Impact of Early Forecast Information Sharing on Manufacturers Cost with Capacity Uncertainty," *INFORMS Annual Meeting*, San Francisco, California, November 13-16, 2005.
116. G. Vanteddu, R.B. Chinnam, and K. Yang, "Safety Stock Placement in a Serial Supply Chain," *INFORMS Annual Meeting*, San Francisco, California, November 13-16, 2005.
117. R. Govindu and R.B. Chinnam, "Understanding Supply Chain Dynamics through Multi-Agent Modeling," *INFORMS Annual Meeting*, San Francisco, California, November 13-16, 2005.
118. Camci, F. and Chinnam, R.B., "Dynamic Bayesian Networks for Machine Diagnostics: Hierarchical Hidden Markov Models vs. Competitive Learning," *IJCNN'05 International Joint Conference on Neural Networks*, Montreal, Canada, July 31-August 4, 2005.
119. Camci, F. and Chinnam, R.B., "Health-State Estimation and Diagnostics in Machining Systems using Hidden Markov Model Committees," *15th International Conference on Flexible Automation Intelligent Manufacturing*, Bilbao, Spain, July 18-20, 2005.
120. Camci, F. and Chinnam, R.B., "On-line Novelty Detection for Non-Stationary Classes using a Modified Support Vector Machine," *Neural Networks and Computational Intelligence (NCI 2004)*, Grindelwald, Switzerland, February 23-25, 2004.
121. Baruah, P. and Chinnam, R.B., "An Adaptive Clustering Algorithm for Autonomous Agents," *Neural Networks and Computational Intelligence (NCI 2004)*, Grindelwald, Switzerland, February 23-25, 2004.
122. Chinnam, R.B. and Baruah, P., "Autonomous Diagnostics and Prognostics through Competitive Learning Driven HMM-Based Clustering," *IJCNN'03 International Joint Conference on Neural Networks*, Portland, OR, July 20-24, 2003.
123. Baruah, P. and Chinnam, R.B., "HMMs for Diagnostics and Prognostics in Machining Processes," *57th Society for Machine Failure Prevention Technology Conference*, Virginia Beach, VA, April 14-18, 2003.
124. Chinnam, R.B. and Baruah, P., "Empirical Prediction Limit Estimation Methods for Feed-forward Neural Networks." *IJCNN'02 International Joint Conference on Neural Networks*, Honolulu, HI, May 12-17, 2002.

125. Chinnam, R.B., Kumar. V., and Wasserman, G.S., "Forecasting Warranty Claims: A Comparison of SVMs with Statistical Methods and Neural Networks." *ANNIE '01 Artificial Neural Networks in Engineering*, St. Louis, MI, November 4-7, 2001.
126. Chinnam, R.B. and Kumar. V., "Using SVMs to Recognize Shifts and Trends in Correlated and Other Manufacturing Processes." *ANNIE '01 Artificial Neural Networks in Engineering*, St. Louis, MI, November 4-7, 2001.
127. Chinnam, R.B. and Kumar. V., "Using Support Vector Machines to Recognize Shifts and Trends in Correlated Manufacturing Processes," *IJCNN'01 International Joint Conference on Neural Networks*, Washington, D.C., July 15-19, 2001.
128. Chinnam, R.B. and Mohan, P., "On-Line Reliability Estimation of Physical Systems Using Neural Networks and Wavelets," *ANNIE '00 Artificial Neural Networks in Engineering*, St. Louis, MI, November 5-8, 2000.
129. Chinnam, R.B., Qiao, H., and Fu, X., "On-line Parameter Design of Dynamic Systems Modeled Using Recurrent Multilayer Perceptron Networks," *ANNIE '99 Artificial Neural Networks in Engineering*, St. Louis, MI, November 7-10, 1999.
130. Hiebert, S. and Chinnam, R.B., "On-line Reliability Estimation of Individual Components Using Neural Networks and Wavelets," *ANNIE '98 Artificial Neural Networks in Engineering*, St. Louis, MI, November 1-4, 1998.
131. Chinnam, R.B. and Ding, J., "Intelligent Quality Controllers for On-line Parameter Design," *ANNIE '98 Artificial Neural Networks in Engineering*, St. Louis, MI, November 1-4, 1998.
132. Chinnam, R.B., Hiebert S., and Ding, J., "On-line Performance Reliability Estimation Techniques and Issues," *7th IERC*, Banff, Alberta, Canada, May 9-10, 1998.
133. Chinnam, R. B. and Ding, J., "Confidence Limit Estimation for Neural Network Models," *ANNIE '97 Artificial Neural Networks in Engineering*, St. Louis, MI, November 9-12, 1997.
134. Chinnam, R. B., "Performance Reliability Monitoring of Physical Systems Using Artificial Neural Networks," *Proc. of the 6th IERC*, Miami Beach, FL, May 17-18, 1997.
135. Chinnam, R. B. and Shrikhande, N., "Reliability Prediction Using Temporal Processing and Self Organizing Feature Maps," *ANNIE '96 Artificial Neural Networks in Engineering*, St. Louis, MI, November 12-15, 1996.
136. Chinnam, R. B., Rengasamy, V., Mehta, S., "Performance Reliability Prediction in Physical Systems: Comparison of Statistical Methods and Artificial Neural Networks," *5th IERC*, Minneapolis, May 18-20, 1996.
137. Chinnam, R. B., "Neural Networks for Performance Reliability Prediction," *ANNIE '95 Artificial Neural Networks in Engineering*, St. Louis, MI, November 12-15, 1995.
138. Chinnam, R. B., "Neural Networks for Real-time Process Parameter Design," *INFORMS Fall '95 National Meeting*, New Orleans, October 29-November 1, 1995.
139. Kolarik, W. J. and Chinnam, R. B., "Quality Control in Advanced Manufacturing Processes," *48th AQC*, Las Vegas, May 24-26, 1994.
140. Chinnam, R. B. and Kolarik, W. J., "Simulation Test-Bed for Testing Effectiveness of Quality Control Strategies and Experimental Designs," *2nd IERC*, Los Angeles, May 26-27, 1993.
141. Chinnam, R. B. and Kolarik, W. J., "Empirical Model Based Real-time Process Quality Control in Advanced Manufacturing Systems," *TIMS/ORSA Joint National Meeting*, Chicago, May 16-19, 1993.
142. Chinnam, R. B. and Kolarik, W. J., "Automation and the Total Quality Paradigm," *1st IERC*, Chicago, May 20-21, 1992.

A. Invited Talks, Seminars, and Lectures

1. Chinnam, R.B., "Big Data Driven Business Analytics: We are just getting started!," Addressed 40 visiting students from Palestine, *Global Ties Detroit - TechTown*, September 13, 2018.
2. Chinnam, R.B., "Using Big Data for Growth," Panel Session, *Association for Corporate Growth*, Detroit Chapter, August 8, 2018.
3. Chinnam, R.B., "Big Data Is Driving a Supply Chain Management Revolution," Panel Session, *Institute for Supply Management*, Detroit Chapter, January 23, 2018.
4. Chinnam, R.B., "Big Data Driven Business Analytics: We are just getting started!," *Siemens*, November 6, 2017.

5. Chinnam, R.B., "Wayne State's New MS Data Science & Business Analytics Program," *American Statistical Association – Detroit Chapter*, October 10, 2017.
6. Chinnam, R.B., "Big Data Driven Business Analytics: We are just getting started!," Inaugural Symposium of *MIDAS Institute*, University of Michigan, October 6, 2015.
7. Chinnam, R.B., "Towards Autonomous Monitoring, Diagnostics, and Prognostics for CBM," *NAC – TARDEC Seminar*, DoD, December 6, 2010.
8. Chinnam, R.B., "Ground-Vehicle Rooftop Deconfliction: KPP Requirements Management through Systems Engineering & Optimization," *NAC – TARDEC Seminar*, DoD, November 15, 2010.
9. Chinnam, R.B., "Toward Autonomous Diagnostics." *STIET (Socio-Technical Infrastructure for Electronic Transactions) – Incentive-Centered Design Seminar* – University of Michigan and Wayne State University, February 21, 2007.
10. Chinnam, R.B., "A Project Centric Approach to Teaching CI to Students with Weak Computer Background." *IJCNN'02 International Joint Conference on Neural Networks*, Honolulu, HI, May 12-17, 2002.

B. Other Scholarly Work – Case Studies and Teaching Notes*

1. Gembel, K.J. and Chinnam, R.B., "Total Productive Maintenance: Determining Right Strategy for the Plant and Changing its Culture for Successful Execution," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2010.
2. Williams, D. and Chinnam, R.B., "Hybrid Technology Decision," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2010.
3. Gembel, K.J. and Chinnam, R.B., "Total Productive Maintenance: Determining Right Strategy for the Plant and Changing its Culture for Successful Execution," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2010.
4. Dolsen, M., Chinnam, R.B., and Chelst, K., "Global Effect of a Natural Disaster on a Lean Supply Network," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2011.
5. Chhim, P. and Chinnam, R.B., "Process Improvement & Management: Elusive Cost Savings for an Automotive Supplier," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2011.
6. Dolsen, M. and Chinnam, R.B., "Failure at Launch," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2011.
7. Chhim, P. and Chinnam, R.B., "Corporate Governance within an Automotive Supplier: Navigating the economic depression of 2008/2009," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2011.
8. Williams, D. and Chinnam, R.B., "Hybrid Electric Vehicle: Mature Companies Launching Innovative Technologies," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2011.
9. Colosimo, M., Chinnam, R.B., and Chelst, K., "Managing Automotive Dealer Performance through Scorecards," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2012.
10. Colosimo, M., Chinnam, R.B., and Chelst, K., "Managing the Performance of Automotive Dealer Networks," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2012.
11. Philippart, N. and Chinnam, R.B., "Vehicle Personalization at Point of Sale: Developing an Integrated Business Strategy for Starting a New Business within a Mature Corporation," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2012.
12. Vadhavkar, A., Chinnam, R.B., and Plonka, F., "Global Tooling Supplier Selection," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2013.
13. Bell, D., Chinnam, R.B., and Gluesing, J., "Innovation and Collaboration Challenges in a Mature Firm: Ford's Plans to Develop a Connected Car," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2013.

* These one of a kind case studies and teaching notes are being produced as a part of the PhD Preliminary Exam requirement for the Global Executive Track PhD students.

14. Hartman, G., Chelst, K., and Chinnam, R.B., "Structured Process for Balancing Design Trade-offs: Case of Ground Combat Vehicles," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2014.
15. Mueller, R., Chinnam, R.B., and Gluesing, J., "Entertainment Publications – Another Chance," GET Case Study and Teaching Notes, Industrial & Systems Engineering Department, Wayne State University, 2014.

IV. SERVICE

A. Administrative Appointments at Wayne State

Graduate Program Director, Industrial & Systems Engineering Department, Fall 2003 – Present.

Founding Director, Global Executive PhD Track – Industrial & Systems Engineering Department, Winter 2007 – Present.

This is the first such engineering program in the United States. This novel program was launched in 2008 and admits 6~8 doctoral students annually. The GET PhD Track has very little in common with traditional PhD programs. Both the curriculum and its delivery are quite novel. Faculty and experts from around the globe participate in the program. This is one of my most significant achievements. Several universities reviewed the program for imitation. See the GET Program Website (<http://engineering.wayne.edu/ise/programs/phd-get.php>) for more information.

Founding Director, Interdisciplinary M.S. Program in Data Science & Business Analytics, Wayne State University, Fall 2016 – Present.

Approved by the WSU BoG in Fall 2016, this is a novel interdisciplinary degree program that leverages the strengths of Wayne State in statistics, operations research, computing, and business by combining the expertise of the College of Engineering and the Mike Ilitch School of Business. It offers students three specialization tracks in Analytics, Engineering, and Business. See the Program Website (<https://bigdata.wayne.edu/degree>) for more information.

Founding Co-Director, Big Data & Business Analytics Group, 2013 – Present.

B. Administrative Appointments at Other Colleges/University

Graduate Program Coordinator, Industrial & Manufacturing Engineering Department, North Dakota State University, Fall 1995 – Winter 2000.

C. Committee Assignments in Last Five Years

1. University Committee Membership

Big Data & Analytics Ecosystem – Planning Committee, 2017-2018.

University – RCM Committee, 2017-2018.

Graduate School – GTA Allocation Committee, 2017.

Research IT Advisory Group, 2015 – Present.

Data Coordinating Committee, 2015 – Present.

Strategic Planning Committee, October 2014 – 2015.

Graduate Council Academic Standards Committee, Fall 2015-2016.

Graduate School – PhD Advisory Committee, 2014 – 2015.

Graduate School Awards Committee, 2013.

Executive Committee of the Graduate Council, Fall 2007-Summer 2008.

Graduate Council, Fall 2006-Summer 2008; Fall 2015-Winter 2017.

Sustainability@Wayne Seminar Series, Steering Committee Member, 2011-2015.

Civil Engineering Graduate Program Review Committee, 2018.

2. College/Department Committee Chaired

Wayne State University – Fall 2000 to Present

Faculty Search Committee, 2012-2013.

Industrial & Systems Engineering Department's Executive PhD Track Oversight Committee, Winter 2007-Present

Industrial & Systems Engineering Department's M.S. Programs Committee, Summer 2003-Summer 2005

Industrial & Systems Engineering Department's Doctoral and Research Committee, Fall 2003-Present

North Dakota State University - Fall 1998 to Spring 2000

College of Engineering & Architecture's (CEA) Research and Extension Committee, Fall 1995-Spring 1999

CEA Graduate Program Committee, Spring 1998-Spring 2000

3. College/Department Committee Membership

Wayne State University – Fall 2000 to Present

College of Engineering's Promotion & Tenure Committee, 2013 – Present
College of Engineering's Research Advisory Committee, 2013 –2017
College of Engineering's Research Advisory Committee, 2007 –2011
College of Engineering's Recruiting and Retention Committee, 2007 – 2014
College of Engineering's Faculty Assembly Executive Committee, 2006-2007
College of Engineering's Academic Operations Committee, 2001- 2004
College of Engineering's Academic Operations Committee, 2013- Present
College of Engineering's Machine Shop Committee, 2001-2004
Industrial & Systems Engineering Department's Promotion & Tenure Committee, 2007 – Present.
Industrial & Systems Engineering Department's M.S. Programs Committee, Fall 2001-Summer 2003;
Fall 2005-2014.
Industrial & Systems Engineering Department's PhD Committee, Winter 2002-Summer Present.
Industrial & Systems Engineering Department's EMMP Committee, Fall 2003-Summer 2005; 2011.
Industrial & Systems Engineering Department's Faculty Search Committee, 2003-2005, 2011-2012,
2014, 2016-2018.
Industrial & Systems Engineering Department's MS Programs Redesign Committee, Fall 2017 – 2018.
North Dakota State University - Fall 1998 to Spring 2000
College of Engineering & Architecture's (CEA) Academic Affairs Committee, Spring 1999-Spring
2000
CEA Computer Committee, Fall 1997-Spring 1998
CEA Graduate Program Committee, Spring 1998-Spring 2000
Industrial & Manufacturing Engineering Department's Faculty Search Committee, 1997-Spring 2000
Industrial & Manufacturing Engineering Department's Chair Search Committee, 1995-1999

D. Membership/Offices Held in Public or Private Agencies Related to Discipline

Member, SAE's (Society of Automotive Engineers) Global Supply Chain & Manufacturing Committee,
May 2007 – 2017
Member, EURO Working Group on Vehicle Routing and Logistics Optimization (VeRoLog), February
2011 – Present
Member, Sustainable Manufacturing Strategic Interest Group (SM SIG), National Center for
Manufacturing Sciences (NCMS), August 2011 – Present
Member, Technical Committee on Diagnostics & Prognostics, IEEE Systems, Man, & Cybernetics
(IEEE SMC) Society, May 2013 – Present

E. Professional Consultation

1. Consulting to Private Enterprises
Consultant, Tecton Products, Fargo, ND, 1998-2000.
Consultant, Energy Conversion Devices, Rochester Hills, MI, 2003.
Consultant, Sirius Satellite Radio, 2005.
Consultant, MTS Technologies LLC, 2011.
Consultant, General Dynamics Land Systems, 2011-2013.
Consultant, Instant Innovation Session for Steelcase, Faurecia, and Whirlpool, 2014.
Consultant, CapGemini, 2014.
Consultant, Dominos, 2014, 2015.
Consultant, dFoundry, 2015, 2016.
Consultant, MRF Tyres, 2015, 2016.
Consultant, Magna International, 2016.
Consultant, DataFactZ, 2016.
2. Advisor to Private Enterprises
Chief Analytics Advisor, DataFactZ, April 2015 – Present
Data Science Strategy & Solutions Advisor, Loven Systems, April 2015 – Present
Strategic Advisor & Mentor, Kybba Xcelerator, June 2017 - Present

F. Journal/Editorial Activity

1. Editorial Board Memberships

- Associate Editor, *International Journal of Modelling and Simulation*, Taylor & Francis (ACTA Press), 2000–Present. http://www.actapress.com/Content_of_Journal.aspx?JournalID=146
- North-American Area Editor, *Journal of Remanufacturing*, Springer, 2012–Present. <http://www.springer.com/engineering/journal/13243>
- Associate Editor, *Statistics, Optimization and Information Computing*, 2013–Present. <http://www.iapress.org/index.php/soic/>
- Editorial Board, *International Journal of Mathematics and Statistics*, 2014–Present. <http://www.ceser.in/ijms.html>
- Associate Editor, *International Journal of Quality, Statistics, and Reliability*, Hindawi, 2009–2017. <http://www.hindawi.com/journals/ijqsr/>
- Associate Editor, *Journal of Industrial Engineering*, Hindawi, 2012–2017. <http://www.hindawi.com/journals/jie/>
- Guest Editor:
- “Machinery Diagnostics and Prognostics” Special Issue of *Machines*, 2014 (along with Prof. Andrew Ball, University of Huddersfield, UK). http://www.mdpi.com/journal/machines/special_issues/diagnostics-prognostics

2. Reviewer

Journals (Regular Reviewer)

Computers & Industrial Engineering
 Computers and Operations Research
 European Journal of Operations Research
 Expert Systems with Applications
 IEEE Transactions on Automation Science and Engineering
 IEEE Transactions on Fuzzy Systems
 IEEE Transactions on Neural Networks
 IEEE Transactions on Reliability
 IEEE Transactions on Systems, Man and Cybernetics – Part A
 IEEE Transactions on Systems, Man and Cybernetics – Part C
 IIE Transactions
 International Journal of Machine Tools and Manufacture
 International Journal of Modeling and Simulation
 International Journal of Production Economics
 International Journal of Production Research
 International Journal of Smart Engineering System Design
 International Journal of Sustainable Engineering
 Journal of Cleaner Production
 Journal of Machining Science and Technology
 OMEGA

Conferences

Proceedings papers submitted annually to *International Joint Conference on Neural Networks*, 2002-2008.
 Proceedings papers submitted annually to *Artificial Neural Networks in Engineering Conference*, 1995-2001.
 Proceedings papers submitted annually to *International Conference on Neural Networks and Computational Intelligence*, 2003-2005.
 Proceedings papers submitted annually to *Industrial Engineering Research Conference*, 1994-2000.

G. Other Professionally Related Service

Conference Chair

Big Data & Business Analytics Symposium, Wayne State University, Detroit, MI, March 22-23, 2018.
 [Symposium Chair]
Data Explosion: Societal Benefits and Risks, Wayne State University, Detroit, MI, March 21, 2018.
 [Symposium Chair]

- Big Data & Business Analytics Symposium*, Wayne State University, Detroit, MI, March 22-23, 2018.
[Symposium Chair]
- Big Data & Business Analytics Symposium*, Wayne State University, Detroit, MI, March 23-24, 2017.
[Symposium Chair]
- Big Data & Business Analytics Symposium*, Wayne State University, Detroit, MI, March 23-24, 2016.
[Symposium Chair]
- Big Data & Business Analytics Symposium*, Wayne State University, Detroit, MI, March 10-11, 2015.
[Symposium Co-Chair]
- Big Data & Business Analytics Symposium*, Wayne State University, Detroit, MI, March 26, 2014.
[Symposium Co-Chair]
This is the first symposium organized by the Big Data & Business Analytics Group formed in 2014 at Wayne State University and I was instrumental in conceiving, planning, and organizing the symposium.
- CAS 2011 – *Complex Adaptive Systems*, Chicago, IL, October 31 - November 2, 2011. [Conference Program Co-Chair]
This is the first international conference on Complex Adaptive Systems and I was instrumental in conceiving, planning, and organizing the conference.
- PASI 2013 – *PASI Institute on Manufacturing Innovation through Sustainable Design*, NSF Sponsored Institute, Universidad Del Norte in Barranquilla, Colombia, July 14-27, 2013. [Institute Director] Conference Planning Committee and/or Technical/Review Committee Member
- ICMATS '14 – *1st International Conference on Modern Automotive Technology and Service*, Wuhan, China, October 24-27, 2014. [Organizing Committee]
- GreenUp '12 – *2012 Michigan Green Chemistry and Engineering Conference*, Michigan.
- CIB 2011 – *6th IASTED International Conference on Computational Intelligence and Bioinformatics*, Pittsburgh, USA, November 7-9, 2011. [International Program Committee]
- SAE '10 – *SAE World Congress*, Detroit, MI, April 13-15, 2010.
- IVC & ITS '09 – *3rd International Workshop on Intelligent Vehicle Controls & Intelligent Transportation Systems*, Milan, Italy, July 4-5, 2009. [Workshop Program Committee]
- SAE '09 – *SAE World Congress*, Detroit, MI, April 20-23, 2009.
- ICPCM '08 - *International Congress on Pervasive Computing and Management*, New Delhi, India, Dec 12-14, 2008. [Advisory Board Member]
- 3rd Biennial Conference on *Complexity and Business Analytics*, University of Michigan-Dearborn, October 10, 2008. [Conf. Planning Committee]
- IJCNN '08 – *International Joint Conference on Neural Networks*, Hong Kong, June 1-6, 2008.
- SMC-IA '08, *IEEE Workshop on Soft computing in Industrial Applications*, Muroran, Japan, June 25-27, 2008.
- SAE '08 – *SAE World Congress*, Detroit, MI, April 14-17, 2008.
- SMC-IA '07, *IEEE Workshop on Soft computing in Industrial Applications*, Passau, Germany, August 1-3, 2007.
- IJCNN '07 – *International Joint Conference on Neural Networks*, Orlando, Florida, USA, August 12-17, 2007.
- FUZZ IEEE '07 – *International Conference on Fuzzy Systems*, London, England, July 24-26, 2007.
- 2nd Biennial Conference on *Complexity and Business Analytics*, University of Michigan-Dearborn, October 14, 2006. [Conf. Planning Committee]
- SMC-ALS '06, *IEEE Workshop on Adaptive Learning Systems*, Utah State University, Logan, Utah, U.S.A., July 24 to 26, 2006.
- IJCNN '06 – *International Joint Conference on Neural Networks*, Vancouver, BC, Canada, July 16-21, 2006.
- FUZZ IEEE '06 – *International Conference on Fuzzy Systems*, Vancouver, BC, Canada, July 16-21, 2006.
- IJCNN '05 – *International Joint Conference on Neural Networks*, Montreal, Canada, July 31-August 4, 2005.
- The 2nd IASTED *International Conference on Neural Networks and Computational Intelligence* (NCI-2004), Grindelwald, Switzerland, February 23-25, 2004.

IASTED *International Conference on Neural Networks and Computational Intelligence* (NCI-2003), Cancun, Mexico, May 19-21, 2003.

International Joint Conference on Neural Networks '03, Portland, Oregon, July 20-24, 2003.

International Joint Conference on Neural Networks '02, Honolulu, Hawaii, May 12-17, 2002.

Artificial Neural Networks in Engineering Conferences, St. Louis, Missouri, 1998-Present (Annual Conference).

58th Annual *ASEE North Midwest Conference*, North Dakota State University, Fargo, North Dakota, October 3-5, 1996.

Invited Conference Session Organizer

Session Organizer, OEM Global Supply Chain, *2010 SAE World Congress*, Detroit, Michigan, April 13-15, 2010.

Session Organizer, OEM Global Supply Chain, *2009 SAE World Congress*, Detroit, Michigan, April 20-23, 2009.

Session Organizer, Dynamic Routing and Logistics under Real-Time ITS Information, *INFORMS*, Washington D.C., October 12-15, 2008.

Session Organizer and Session Chair, OEM Global Supply Chain, *2008 SAE World Congress*, Detroit, Michigan, April 14-17, 2008.

Session Organizer, Urban Transportation Planning Models: Dynamic Routing with Real-time ITS Information, *INFORMS*, Seattle, November 3-7, 2007.

Organizer and Chair, Multi-agent Systems in Supply Chain Management, *Industrial Engineering Research Conference*, Nashville, Tennessee, May 19-23, 2007.

Invited Conference Session Chair

Session Chair, *19th International Federation of Operational Research Societies (IFORS2011)*, Melbourne, Australia, July 10-15, 2011.

Session Chair, *ALIO-INFORMS Joint International Meeting*, Buenos Aires, Argentina, June 6-9, 2010.

Session Co-Chair, OEM Global Supply Chain, *2010 SAE World Congress*, Detroit, Michigan, April 13-15, 2010.

Session Co-Chair, OEM Global Supply Chain, *2009 SAE World Congress*, Detroit, Michigan, April 20-23, 2009.

Session Chair, Fault Diagnosis, *International Joint Conference on Neural Networks*, Hong Kong, June 1-6, 2008.

Session Co-Chair, OEM Global Supply Chain, *2008 SAE World Congress*, Detroit, Michigan, April 14-17, 2008.

Organizer and Chair, Multi-agent Systems in Supply Chain Management, *Industrial Engineering Research Conference*, Nashville, Tennessee, May 19-23, 2007.

Federal Proposal Review Panels

Panel Member, Modelling and Simulation, *SBIR/STTR Program - National Science Foundation*, February 21, 2018.

Panel Member, MI-UH UTC at University of Detroit Mercy, *U.S. Department of Transportation*, Detroit, 2006-2010.

Panel Member, Manufacturing Enterprise Systems Program, *National Science Foundation*, Washington D.C., December 18, 2007.

Panel Member, Manufacturing Enterprise Systems Program, *National Science Foundation*, Washington D.C., November 28 and 29, 2005.

H. Community Service

Parent Volunteer, *First Robotics*, Hart Middle School, Rochester, 2010.