CURRICULUM VITAE

Krishna R. Pattipati
Board of Trustees Distinguished Professor
UTC Professor in Systems Engineering
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Education:

1980	Ph.D. (Control and Communication Systems) Graduate Advisor: Prof. David L. Kleinman	University of Connecticut
1977	M.S. (Electrical Engineering)	University of Connecticut
1975	B. Tech (Electrical Engineering)	IIT, Kharagpur, INDIA

Professional Experience:

2016-Present	Board of Trustees Distinguished Professor, University of Connecticut
2011-Present	UTC Chair Professor of Systems Engineering, University of Connecticut
1992-2011	Professor of Electrical and Computer Engineering, University of Connecticut
1986-1992	Associate Professor of Electrical and Systems Engineering, University of Connecticut
1988-present	Director, Systems Optimization Laboratory, University of Connecticut
1980-1986	Senior Engineer and Senior Scientist, ALPHATECH, Inc., Burlington, MA

Consulting:
ALPHATECH, Inc.
IBM T.J. Watson Research Center
Qualtech Systems, Inc.
Aptima, Inc.

Directorships:
Qualtech Systems, Inc., Rocky Hill, CT (Chairman of the Board)
Aptima, Inc., Woburn, MA

Major Professional Activities:
1. Elected Fellow of IEEE for contributions to *Discrete Optimization Techniques for Large-Scale Systems and Team Decision-making*, 1995
2. Editor-in-Chief, IEEE Transactions on Systems, Man, and Cybernetics (SMC): Part B - Cybernetics, Jan. 1998-Dec. 2001
3. Vice-President, Technical Activities, IEEE SMC Society, Jan. 1998-Dec. 1999
4. Vice-President, Conferences and Meetings, IEEE SMC Society, Jan. 2000-Dec. 2001
5. Associate Editor, *IEEE Transactions on Systems, Man, and Cybernetics* (Jan. 1991-Dec. 1997)
6. Member of the administrative committee, IEEE SMC Society (1986-1987 and 1993-1994)
7. Program vice-chairman, Invited Sessions, IEEE SMC Conference, 1989
8. IEEE SMC Society delegate to the Region X Lecture series (1989)
9. Member of three CASE advisory committees on Energy Emergency Response and Broadband Communications in the State of Connecticut, 2010-2011.

Honors and Awards:
1. NASA Space Act Award, 2008 for "Real-Time Update of Fault-Test Dependencies of Dynamic Systems: A Comprehensive Toolset for Model-Based Health Monitoring and Diagnostics"
2. Elected to Connecticut Academy of Science and Engineering, 2006.
3. UConn School of Engineering Outstanding Teaching Award, April 2005
4. UConn AAUP Research Excellence Award, 2003.

5. NASA Space Act Award for "A Comprehensive Toolset for Model-based Health Monitoring and Diagnosis," 2002.
6. Co-recipient of Barry Carlton Award for the Best AES Transactions Paper of 2000, August 2002.
7. A.P. Sage Award for Best SMC Transactions Paper in Parts A, B and C of 1999, October 2000.
8. The Walter E. Peterson Awards for Best New Technology Paper at IEEE AUTOTEST conferences (September 2011, September 2005, September 2004, October 2002, September 1994, September 1990, October 1985).
9. Best Technical Paper Awards, Command and Control Research Symposium (June 2004, June 1997).
10. Outstanding Young Engineer of the IEEE Systems, Man, and Cybernetics Society. Received the Centennial Key to the Future Award (1984).
11. Outstanding Electrical Engineer, Indian Institute of Technology, Kharagpur, India (1975).

Teaching:
Dr. Pattipati has developed multi-disciplinary and popular courses on advanced machine learning (ECE6141: Neural Networks for Classification and Optimization), linear programming and network flows (ECE6108: Linear Programming and Network Flows), nonlinear optimization (ECE6437: Computational Methods for Optimization), computational methods in control and communications (ECE6435:Advanced Numerical Methods in Scientific Computation), and stochastic models (ECE6433: Stochastic Models for the Analysis of Computer Systems and Communication Networks). As part of his leadership in the UTC Institute for Advanced Systems Engineering (UTC-IASE), Dr. Pattipati worked closely with other center leaders in the layout of seven new courses, and developed and taught SE 5202 (Foundations of Control for Thermal Fluid Systems) to UTC employees as part of the teaching mission of the UTC-IASE. Professor Pattipati regularly teaches ECE3111: Systems Analysis and ECE 4121/6095: "Digital Control of Mechatronic Systems". He additionally developed an undergraduate systems Lab focused on cyber-physical systems. Major innovations in his teaching include widely acclaimed lecture notes for all courses (many students claim they are better than the assigned text books), extensive use of MATLAB in lectures, and the requirement to work in teams of three or fewer students on a project of their choice to amplify ideas in lectures. The latter is an enormous motivator for the creativity he sees in students.

Research Interests and Impact:
Dr. Pattipati's research has spanned the areas of agile planning, team decision-making, adaptive organizational design, modeling asymmetric threats, automated testing, model-based and data-driven diagnostics and prognostics, multi-target tracking, multi-user interference in wireless communications, computer system performance optimization, and scheduling of manufacturing systems. Dr. Pattipati's research in complex system diagnostics and prognostics has been recognized by way of 8 Best Paper Awards at IEEE Autotest conferences, 2 Best Paper Awards in two different IEEE Transactions (AES & SMC), and 2 NASA Space Act Awards. His algorithms have been applied in a number of applications at NASA (e.g., Space station, Ares-1X, Launch complex), semi-conductor fabrication facilities (where downtime incurs significant economic cost), medical equipment (where patient safety and equipment availability are paramount), and ground tactical vehicles, to name a few. Dr. Pattipati's work on fingerprinting of rare events was presented to JASON study group on rare events in June 2009. His work on command decision making and distributed dynamic resource allocation, weather-impacted ship routing and water space management has been transitioned to the US Navy. His algorithmic work on battery management systems has been patented and the algorithms are embedded in mobile devices by a leading semiconductor company.

Grants and Contracts:
PI/Co-PI on research grants/contracts from the Office of Naval Research, National Science Foundation, DARPA, the Air Force Office of Scientific Research, Naval Postgraduate School, Department of Economic Development of the State of Connecticut, General Motors (Warren, MI and India Science Lab, Bangalore), Toyota Technical Center (Ann Arbor, MI), National Aeronautics and Space Administration, Aptima, BAE Systems, Comcast, Fairchild Semiconductor, Hamilton Sundstrand, Harris Corporation, Pratt & Whitney, Sikorsky Aircraft, Pitney-Bowes and CALSPAN. Total funding value exceeded $15 M.

Citations: Google Scholar Citations: 10,783; h-index: 52; i-10 index: 201 (Accessed 2-23-2017).

Publications: (23 Book chapters, 140$^+$ Journal Papers, and 300$^+$ Conference papers)

Book Chapters:

1. J.G. Wohl, E.E. Entin, D.L. Kleinman and K.R. Pattipati, "Human Decision Processes in Military Command and Control," in W. B. Rouse (ed.) *Advances in Man-Machine Research*, Vol. I, JAI Press, Inc., Greenwich, CT, 1983, pp. 261-307.
2. K.R. Pattipati, S. Deb, Y. Bar-Shalom and R. Washburn, "Passive Sensor Data Association Using a New Relaxation Algorithm," in Y. Bar-Shalom (ed.) *Multitarget-Multi-Sensor Tracking: Advances and Applications*, Artech House, Norwood, MA, 1990, pp. 225-246.
3. K.R. Pattipati and D.L. Kleinman, "A Review of Engineering Models of Human Information-processing and Decision-making in Multi-Task Supervisory Control," Chapter 2 in D. Damos (ed.) *Multiple Task Performance*, Taylor and Francis, London, 1991, pp. 35-68.
4. D.L. Kleinman, P.B. Luh, K.R. Pattipati and D. Serfaty, "Mathematical Models of Team Distributed Decision-making," in R.W. Sweezy and E. Salas (eds.) *Teams: Their Training and Performance*, New York: ABLEX, 1990, pp. 177-218.
5. D. Hoitomt, P.B. Luh, E. Max and K.R. Pattipati, "Scheduling Jobs with Simple Precedence Constraints on Parallel Machines," in Y.C. Ho (ed.), *Discrete Event Dynamic Systems*, IEEE Press Book, 1991, pp. 271-277.
6. R. Mallubhatla, K.R. Pattipati and N. Viswanadham, "Discrete-time Markov Reward Models of Production Systems," in P.R. Kumar and P. Varaiya (eds.) *Discrete-event Systems, Manufacturing Systems, and Communication Networks*, Springer, NY, 1995, pp. 149-175.
7. M. Yeddanapudi, Y. Bar-Shalom, K.R. Pattipati and S. Deb, "Ballistic Missile Track Initiation from Satellite Observations with Extrapolation to Impact," invited chapter in AGGRDOGRAH (NATO publication), *Multi-sensor Multitarget Data Fusion, Tracking and identification techniques for Guidance and Control Applications*, October 1996, pp. 76-95.
8. K.R. Pattipati, R. Popp and T. Kirubarajan, "A Survey of Assignment Algorithms for Multitarget Tracking", Chapter 2 in Y. Bar-Shalom and W. Dale Blair (eds.) *Multi-target Multi-Sensor Tracking: Applications and Advances, Vol. III*, Artech House, Norwood, MA, 2000, pp. 77-159.
9. T. Kirubarajan, Y. Bar-Shalom and K.R. Pattipati, "Multi-assignment for Tracking a Large Number of Overlapping Objects," Chapter 4 in Y. Bar-Shalom and W. Dale Blair (eds.) *Multi-target Multi-Sensor Tracking: Applications and Advances, Vol. III*, Artech House, Norwood, MA, 2000, pp. 199-231.
10. T. Kirubarajan, Y. Bar-Shalom, K.R. Pattipati and I. Kadar, "Large-Scale Ground Target Tracking with Single and Multiple MTI Sensors," Chapter 6 in Y. Bar-Shalom and W. Dale Blair (eds.), *Multi-target Multi-Sensor Tracking: Applications and Advances, Vol. III*, Artech House, Norwood, MA, 2000, pp. 259-319.
11. K.R. Pattipati, R. Mallubhatla, N. Viswanadham and V. Gopalakrishna, "Markov-reward Models and Hyperbolic Systems," Chapter 5 in B.R. Haverkort, R. Marie, G. Rubino and K.S. Trivedi (eds.) *Performability Modeling: Techniques and Tools*, John Wiley, 2001, pp. 83-106.
12. K.R. Pattipati, C. Meirina, A. Pete, G. Levchuk and D.L. Kleinman, "Decision Networks and Command Organizations," in A.P. Sage (ed.) *Systems Engineering and Management for Sustainable Development*, Encyclopedia of Life Support Systems, 2002.
13. G. Levchuk, D. Serfaty and K.R. Pattipati, "Normative Design of Project-Based Adaptive Organizations," Chapter 8 in S. Burke, L. G. Pierce and E. Salas (Eds.), *Advances in Human Performance and Cognitive Engineering Research, Volume 6, Understanding Adaptability: A Prerequisite for Effective Performance within Complex Environments*, Emerald Group Publishing, 2006, pp. 249-287.
14. K.R. Pattipati, P.K. Willett, J. Allanach, H. Tu and S. Singh, "Hidden Markov Models and Bayesian Networks for Counter-terrorism," in R. Popp and J. Yen (eds.) *Emergent Information Technologies and Enabling Policies for Counter Terrorism*, Wiley-IEEE Press, New York, May 2006, pp. 27-50.
15. J. B. Sharkey, D. Weishar, J. Lockwood, R. Loui, R. Rohwer and J. Byrnes, K.R. Pattipati, S. Eick, and D. Cousins "Signal Processing and Information Management Technologies for

Counter-Terrorism," in R. Popp and J. Yen (eds.) *Emergent Information Technologies and Enabling Policies for Counter Terrorism*, Wiley-IEEE Press, New York, May 2006, pp. 75-104.

16. R. A. Ammar, S.A. Demurjian, Sr., I.R. Greenshields, K.R. Pattipati and S. Rajasekaran, "Analysis of Heterogeneous Data in Ultrahigh Dimensions," in R. Popp and J. Yen (eds.) *Emergent Information Technologies and Enabling Policies for Counter Terrorism*, Wiley-IEEE Press, New York, May 2006, pp. 105-124.
17. G. Levchuk, C. Meirina, S. Singh, K.R. Pattipati, P.K. Willett and K. Chopra "Learning from the Enemy: Approaches to Identifying and Modeling the Hidden Enemy Organization", in A. Kott (ed), *Information Warfare and Organizational Decision-making*, Artech House, 2007.
18. Y. Levchuk, G. Levchuk, C. Meirina, S. Ruan, K.R. Pattipati and D.L. Kleinman, "Organizational Armor: Design of Attack-resistant Organizations," in A. Kott (ed.) *Information Warfare and Organizational Performance*, Artech House, Norwood, MA, 2007.
19. K.R. Pattipati, A. Kodali, J. Luo, K. Choi, S. Singh, C. Sankavaram, S. Mandal, W. Donat, S. Namburu, S. Chigusa, L. Qiao, "Án Integrated Diagnostic Process for Automotive Systems," in D. Prokhorov, (ed.) *Studies in Computational Intelligence (SCI)*, Vol. 132, pp. 191-218, 2008.
20. A. Patterson-Hine, G. Aaseng, G. Biswas, S. Narasimhan and K.R. Pattipati, "Diagnostics and Testability, Chapter 16 in Stephen B. Johnson (Ed.), *System Health Management with Aerospace Applications*, Wiley, 2011, pp. 265-277.
21. K. Choi, V. Asal, J. Wilkenfeld and K.R. Pattipati, "Forecasting the Use of Violence in Ethno-Political Organizations: Middle Eastern Minorities and the Choice of Violence," in *Handbook of Computational Approaches to Counterterrorism*, Springer 2012.
22. A. Abdollahi, K.R. Pattipati, P.B. Luh, A. Kodali, S. Singh, S. Zhang, and P.B. Luh, "Probabilistic Graphical Models for Fault Diagnosis in Complex Systems", in Lance Fiondella and Antonio Puliafito (Eds.) *Book in honor of Prof. K.S. Trivedi's 70th birthday*, Springer, June 2016, pp. 109-139.
23. B. Balasingam, P. Mannaru, D. Sidoti, K.R. Pattipati and P.K. Willett, "Online Anomaly Detection in Big Data: The First Line of Defense Against Intruders," in Witold Pedrycz and Shy-Ming Chen (Eds.) *Data Science and Big Data: An Environment of Computational Intelligence*, Springer, 2017, pp. 1-25.

Journal Articles:

1. D.L. Kleinman and K.R. Pattipati, "Continuous-Discrete Gain Transformation Methods in Linear State Feedback Control," *Automatica*, Vol. 13, No. 4, July 1977, pp. 425-428.
2. D.L. Kleinman and K.R. Pattipati, "Extensions to the Bartels-Stewart Algorithm for Linear Matrix Equations," *IEEE Transactions on Automatic Control*, Vol. AC-23, No.1, February 1978, pp. 85-87.
3. B. Wittenmark and K.R. Pattipati, "Comments on "Single Step versus Multi-Step Performance Criteria for Steady State SISO Systems," *IEEE Transactions on Automatic Control*, Vol. AC-24, No.1, February 1979, pp. 140-141.
4. D.L. Kleinman, K.R. Pattipati and A.R. Ephrath, "Quantifying an Internal Model of Target Motion in a Manual Tracking Task," *IEEE Transactions on Systems, Man and Cybernetics*, Vol. SMC-10, October 1980, pp. 624-636.
5. K.R. Pattipati and D.L. Kleinman, "Application of Dynamic Programming to Priority Assignment in a Class of Queuing Systems with Impatient Customers," *IEEE Transactions on Automatic Control*, AC-26, October 1981, pp. 1095-1106.
6. K.R. Pattipati, D.L. Kleinman and A.R. Ephrath, "A Dynamic Decision Model of Human Task Selection Performance," *IEEE Transactions on Systems, Man and Cybernetics*, March 1983, pp. 145-166.
7. K.R. Pattipati and M.P. Kastner, "A Hierarchical Queuing Network Model of a Large Electronics Test Facility," *Journal of Large Scale Systems*, December 1988, pp. 45-63.
8. Y. Bar-Shalom, H.M. Shertukde and K.R. Pattipati, "Extraction and the Optimal Use of Measurements from an Imaging Sensor for Precision Target Tracking," *IEEE Transactions on Aerospace and Electronic Systems*, November 1989, pp. 863-872.
9. P.B. Luh, D. Hoitomt, E. Max and K.R. Pattipati, "Parallel Machine Scheduling for Jobs with Simple Precedence Constraints," *Control Systems Magazine*, February 1990, pp. 34-40.

10. Y. Bar-Shalom, H.M. Shertukde, and K.R. Pattipati, "Precision Target Tracking for Small Extended Objects," *Optical Engineering Journal*, February 1990, pp. 121-126.
11. K.R. Pattipati, and S.A. Shah, "On the Computational Aspects of the Performability Models of Fault-tolerant Computer Systems," *IEEE Transactions on Computers*, June 1990, pp. 632-636.
12. K.R. Pattipati and M.G. Alexandridis, "A Heuristic Search and Information Theory Approach to Sequential Fault Diagnosis," *IEEE Transactions on Systems, Man, and Cybernetics*, July/August 1990, pp. 872-887.
13. K.R. Pattipati, M.M. Kostreva and J.L. Teele, "Approximate Mean Value Analysis Algorithms for Queuing Networks: Existence, Uniqueness, and Convergence Results," *Journal of the Association of Computing Machinery*, July 1990, pp. 643-673.
14. K.R. Pattipati, T. Kurien, R.T. Lee and P.B. Luh, "On Mapping a Tracking Algorithm onto Parallel Processing Architectures," *IEEE Transactions on Aerospace and Electronic Systems*, September 1990, pp. 774-792.
15. P.B. Luh, D. Hoitomt, E. Max and K.R. Pattipati, "Schedule Generation and Reconfiguration for Parallel Machines," *IEEE Transactions on Robotics and Automation*, December 1990, pp. 687-696.
16. Z.-B. Tang, K.R. Pattipati and D.L. Kleinman, "An Algorithm for Determining the Decision Thresholds in a Distributed Detection Problem," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 21, No. 1, January/February 1991, pp. 231-237.
17. K.R. Pattipati, S. Deb, M. Dontamsetty and A. Maitra, "START: System Testability Analysis and Research Tool," *IEEE Aerospace and Electronic Systems Magazine*, Vol. 6, No. 1, pp. 13-20, January 1991 (Winner of Best Technical Paper Award at the 1990 IEEE AUTOTEST Conference, San Antonio, Texas, September 1990).
18. P. Kapasouris, D. Serfaty, K.R. Pattipati, J.C. Deckert, and J.G. Wohl, "Resource Allocation in Large Man-machine Organizations," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 21, No. 3, May/June 1991, pp. 521-532.
19. J. Shaw, K.R. Pattipati, and J.C. Deckert, "A Decision Support System for the Design of a Large Electronics Test Facility," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 21, No. 3, May/June 1991, pp. 533-544.
20. R. Mallubhatla, K.R. Pattipati, D.L. Kleinman and Z.-B. Tang, "A Model of Distributed Team Information Processing under Ambiguity," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 21, No. 4, July/August 1991, pp. 713-725.
21. Z.-B. Tang, K.R. Pattipati and D.L. Kleinman, "Optimization of Detection Networks: Part I - Tandem Structures," *IEEE Transactions on Systems, Man, and Cybernetics: Special issue on Distributed Sensor Networks*, Vol. 21, No. 5, September/October 1991, pp. 1045-1059.
22. K.R. Pattipati, S. Deb, Y. Bar-Shalom and R. Washburn, "A New Relaxation Algorithm and Passive Sensor Data Association," *IEEE Transactions on Automatic Control*, Vol. 37, No. 2, February 1992, pp. 198-213.
23. K.R. Pattipati and M. Dontamsetty, "On a Generalized Test Sequencing Problem," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 22, No. 2, March/April 1992, pp. 392-396.
24. Z.-B. Tang, K.R. Pattipati and D.L. Kleinman, "A Distributed M-ary Hypothesis Testing Problem with Correlated Observations," *IEEE Transactions on Automatic Control*, July 1992, pp. 1042-1046.
25. K.R. Pattipati, Z.-B. Tang and A. Pete, "On the Optimization of Detection Networks," invited paper for *Journal of Scientific and Industrial Research, special issue on Mathematical Modeling*, New Delhi, India, August/September 1992, JSIRAC, 51 (8&9), pp. 591-611.
26. Z.-B. Tang, K. Pattipati and D.L. Kleinman, "Optimization of Detection Networks: Part II - Tree Structures," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 23, No. 1, January/February 1993, pp. 211-221.
27. A. Pete, K.R. Pattipati and D.L. Kleinman, "Optimal Team and Individual Decision Rules in Uncertain Dichotomous Situations," *Public Choice*, 75, 1993, pp. 205-230.
28. D. Hoitomt, P.B. Luh and K.R. Pattipati, "A Practical Approach to Job Shop Scheduling Problems," *IEEE Transactions on Robotics and Automation*, February 1993, pp. 13-27.

29. K.R. Pattipati, Y. Li and H.A.P. Blom, "A Unified Framework for the Performability Evaluation of Fault-tolerant Computer Systems," *IEEE Transactions on Computers*, Vol. 42, No. 3, March 1993, pp. 312-326.
30. S. Deb, K.R. Pattipati and Y. Bar-Shalom, "A Multi-sensor Multitarget Data Association Algorithm for Heterogeneous Sensors," *IEEE Transactions on Aerospace and Electronic Systems*, March 1993, pp. 560-568.
31. V. Raghavan, K.R. Pattipati and Y. Bar-Shalom, "Efficient L-D Factorization Algorithms for PDA, IMM, and IMM-PDA Filters," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 29, October 1993, pp. 1297-1310.
32. A. Pete, K.R. Pattipati and D.L. Kleinman, "Team Relative Operating Characteristic Curve: A Normative-Descriptive Model of Team Decision-making," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 23, No. 6, December 1993, pp. 1626-1648.
33. A. Pete, D.L. Kleinman and K.R. Pattipati, "Tasks and Organizations: A Signal Detection Model of Organizational Decision-making," *Intelligent Systems in Accounting, Finance and Management*, Vol. 2, 1993, pp. 289-303.
34. A. Pete, K.R. Pattipati and D.L. Kleinman, "Optimization of Detection Networks with Generalized Even Structures," *IEEE Transactions on Automatic Control*, September 1994, pp. 1702-1707.
35. M. Shakeri, K.R. Pattipati and D.L. Kleinman, "Optimal Measurement Scheduling for State Estimation," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 31, April 1995.
36. S. Deb, K.R. Pattipati, V. Raghavan, M. Shakeri, and R. Shrestha, "Multi-signal Flow Graphs: A Novel Approach for System Testability Analysis and Fault Diagnosis," *IEEE Aerospace and Electronics Magazine*, May 1995, pp. 14-25. (Winner of the Best Technical Paper Award at the 1994 IEEE AUTOTEST Conference, Anaheim, CA, September 1994).
37. M. Yeddanapudi, Y. Bar-Shalom, K.R. Pattipati, and S. Deb, "Ballistic Missile Track Initiation from Satellite Observations," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 31, July 1995, pp. 1054-1076.
38. A. Song, A. Mathur, and K.R. Pattipati, "Design of Process Parameters Using Robust Design Techniques and Multiple Criteria Optimization," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 25, No. 11, 1995, pp. 1437-1446.
39. A. Pete, K.R. Pattipati, and D.L. Kleinman, "Structural Reconfiguration and Informal Coordination in Administrative Organizations," *Computational & Mathematical Organization Theory*, Vol. 1, No. 1, October 1995, pp. 93-116.
40. N. Viswanadham, K.R. Pattipati and V. Gopalakrishna, "Performability Studies of Automated Manufacturing Systems with Multiple Part Types," *IEEE Transactions on Robotics and Automation*, Vol. 11, No. 5, October 1996, pp. 692-709.
41. A. Pete, K.R. Pattipati and D.L. Kleinman, "Optimization of Decision Networks in Structured Task Environments," *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 26, No. 11, November 1996, pp. 739-748.
42. R. Popp, K.R. Pattipati, Y. Bar-Shalom and Y. Yeddanapudi, "Parallel Implementation of an IMM-based Multitarget Tracking Algorithm with Super-Linear Speedups," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 33, No. 1, January 1997, pp. 281-290.
43. M. Yeddanapudi, Y. Bar-Shalom and K.R. Pattipati, "IMM Estimation for Multitarget-Multisensor Air Traffic Surveillance," Proceedings of the IEEE, Special Issue on Data Fusion, Vol. 85, No. 1, pp. 80-94.
44. A. Mathur and K.R. Pattipati, "Single and Multi-Objective Optimization Techniques for Robust Parameter Design," invited paper *Sadhana*, Indian Academy of Sciences, February 1997.
45. S. Deb, K.R. Pattipati, Y. Bar-Shalom and M. Yeddanapudi, "A Generalized S-dimensional Assignment Algorithm for Multisensor Multitarget State Estimation," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 33, No. 2, April 1997, pp. 523-538.
46. R. Popp, K.R. Pattipati, Y. Bar-Shalom and R. Ammar, "Shared-Memory Parallelization of the Data Association Problem in Multitarget Tracking," *IEEE Transactions on Parallel and Distributed Systems*, Vol. 8, No. 10, October 1997, pp. 993-1007.

47. A. Pete, K.R. Pattipati, Y. Levchuk and D.L. Kleinman, "An Overview of Decision Networks," *IEEE Transactions on Systems, Man, and Cybernetics: Part C - Applications*, Vol. 28, May 1998, pp.172-192.
48. M. Shakeri, V. Raghavan, K.R. Pattipati and A. Patterson-Hine, "Optimal and Near-optimal Algorithms for Multiple Fault Diagnosis," *IEEE Transactions on Systems, Man, and Cybernetics: Part C - Applications*, No. 3, August 1998, pp. 431-440.
49. V. Raghavan, M. Shakeri and K.R. Pattipati, "Optimal and Near-optimal Test Sequencing Algorithms with Realistic Test Models," *IEEE Transactions on Systems, Man, and Cybernetics: Part A - Systems and Humans*, Vol. 29, No. 1, January 1999, pp. 11-27.
50. V. Raghavan, M. Shakeri and K.R. Pattipati, "Test Sequencing Problems Arising in Test Planning and Design for Testability," *IEEE Transactions on Systems, Man, and Cybernetics: Part A - Systems and Humans*, Vol. 29, No. 2, March 1999, p. 151-163.
51. Y. Levchuk, K.R. Pattipati and D.L. Kleinman, "Analytic Model Driven Organizational Design and Experimentation in Adaptive Command and Control," *Systems Engineering*, Vol. 2, No. 2, 1999.
52. V. Raghavan, M. Shakeri and K.R. Pattipati, "Test Sequencing Algorithms with Unreliable Tests," *IEEE Transactions on Systems, Man, and Cybernetics: Part A - Systems and Humans*, Vol. 29, No. 4, July 1999, pp. 347-357.
53. R. Popp, K.R. Pattipati and Y. Bar-Shalom, "Dynamically Adaptable M-Best 2D Assignment and Multilevel Parallelization," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 35, No. 4, October 1999, pp. 1145-1160.
54. M. Shakeri, V. Raghavan and K.R. Pattipati, "Sequential Testing Algorithms for Multiple Fault Diagnosis," *IEEE Transactions on Systems, Man, and Cybernetics: Part A - Systems and Applications*, Vol. 30, No. 1, January 2000, pp. 1-14.
55. R. Popp, K.R. Pattipati and Y. Bar-Shalom, "Distributed and Shared Memory Parallelization of Assignment-based Data Association for Multitarget Tracking," *Annals of Operations Research*, 90(0), 1999, pp. 293-322.
56. T. Kirubarajan, Y. Bar-Shalom, K.R. Pattipati and I. Kadar, "Ground Target Tracking with Topography-Based Variable Structure IMM Estimator," *IEEE Transactions on Aerospace and Electronic Systems*, AES-36(1), January 2000, pp. 26-46.
57. J. Ying, T. Kirubarajan, K.R. Pattipati and A. Patterson-Hine, "A Hidden Markov Model-based Algorithm for Online Fault Diagnosis with Partial and Imperfect Tests," *IEEE Transactions on Systems, Man, and Cybernetics: Part C – Applications and Reviews*, Vol. 30, No. 4, November 2000, pp. 463-473.
58. R. Mallubhatla and K.R. Pattipati, "Discrete-time Markov Reward Models of Automated Manufacturing Systems with Multiple Part Types," *IEEE Transactions on Robotics and Automation*, Vol. 16, No. 5, October 2000, pp. 553-566.
59. T. Kirubarajan, Y. Bar-Shalom and K.R. Pattipati, "Multi-assignment for tracking a large number of overlapping objects," *IEEE Transactions on Aerospace and Electronic Systems*, Vol. 37, No. 1, January 2001, pp. 2-21.
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322. Y. Qin, et al., "A Control Theoretic Approach to Rate Adaptation for ABR Video Streaming over Cellular: A Fresh Look at PID-based Control," *IEEE INFOCOM 2017*, Atlanta, GA, May 1-4, 2017.
323. M. Mishra, D. Sidoti, G.V. Avvari, P. Mannaru, D.F.M.Ayala, and K.R. Pattipati, "Context-Driven Proactive Decision Support: Challenges and Applications," invited paper *AAAI Spring 2017 Symposium Series*, Palo Alto, CA, March 27-29, 2017.
324. P. Mannaru, B. Balasingam, K.R. Pattipati, C. Sibley and J. Coyne, "Heterogeneous Hidden Markov Models for Context Modeling Through Eye Gaze Observations," *AAAI Spring 2017 Symposium Series*, Palo Alto, CA, March 27-29, 2017.
325. Y. Yan, P.B. Luh and K.R. Pattipati, "Fault Diagnosis of HVAC: Air Delivery and Terminal Systems," *2017 IEEE Conference on Automation Science and Engineering*, X'ian, China, August 20-23, 2017.

Patents:

1. U.S. Patent Number US 2014/0244193 A1, Battery State of Charge Tracking, Equivalent Circuit Selection and Benchmarking, August 28th, 2014.
2. U.S. Patent Number US 2014/0244225 A1, Battery State of Charge Tracking, Equivalent Circuit Selection and Benchmarking, August 28th, 2014.

Ph.D. Students Graduated:

1. Zhuang Bo Tang, 1991 (Senior Professional Staff, Johns Hopkins University)
2. Somnath Deb, 1994 (President and Chief Technology Officer at Qualtech Systems, Inc., Rocky Hill, CT)
3. Amit Mathur, 1996 (Principal Engineer at Pratt & Whitney, East Hartford CT)
4. Vijay Raghavan, 1996 (Senior Engineering Manager at Mathworks, Inc., Natick, MA)
5. Mojdeh Shakeri, 1996 (Senior Technical Leader at Mathworks, Inc., Natick, MA)
6. Andras Pete, 1998 (General Manager of Phillips' Hungarian Speaker Systems)
7. Robert L. Popp, 1999 (Formerly Deputy Director of DARPA IXO; now CEO of National Security Innovations, Inc., Boston, MA)
8. Ranga Mallubhatla, 1999 (Senior Manager at Avaya, Inc.)
9. Jie Luo, 2002 (Associate Professor, Colorado State University)
10. Georgiy M. Levchuk, 2003 (Principal Engineer at Aptima, Inc., Woburn, MA)
11. Yuri N. Levchuk, 2003 (Boeing, VA)
12. Fang Tu, 2003 (GE Health Care, Senior Knowledge Algorithms Development, Waukesha, WI)
13. Haiying Tu, 2006 (Software Quality Engineer at Mathworks, Inc., Natick, MA)
14. Jianhui Luo, 2006 (Senior Navigation Systems Engineer, Mayflower Communications, Inc., Burlington, MA)
15. Sui Ruan, 2006 (Software Engineer at People Answers, Dallas/Fort Worth, TX)
16. Feili Yu, 2007 (Senior R&D Engineer at SAIC)
17. Satnam Singh, 2008 (GM India Science Lab, Bangalore, India)
18. Candra Meirina, 2010 (now in Indonesia)
19. Kihoon Choi, 2011 (now at Qualtech Systems, Inc.)
20. Chulwoo Park, 2011 (now a Commander in the South Korean Navy)
21. Woosun An, 2012 (now at SIMNET, South Korea)
22. Anuradha Kodali, 2013 (now at NASA-Ames Research Center)
23. Xu Han, 2014 (now at Factset, New York)
24. Bharath Pattipati, 2014 (Advanced Transmission Controls Engineer, GM, Milton, MI)
25. Chaitanya Sankavaram, Nov. 2015 (now at GM R&D, Warren, MI)

Current Ph. D. Students:

26. David Sidoti (Expected 2017)
27. Manisha Mishra (Expected 2017)
28. Ali Abdollahi (Expected 2017)
29. Gopi Vinod Avvari (Expected 2017)
30. Rajeev Ghimire (Expected 2018)
31. Diego Fernando Martinez Ayala (Expected 2018)
32. Pujitha Mannaru (2019)
33. Lingyi Zhang (2019)
34. Niranjan Raghunathan (2020)
35. Donald McMenemy (2020)

MS Students Graduated:

1. Rong Tay Lee (consultant in CA)
2. Somnath Deb, 1994 (President and Chief Technology Officer of QSI, Rocky Hill, CT)
3. Mahesh Dontamsetty (software consultant)
4. Amit Maitra (now at Intel)
5. Ranga Mallubhatla, 1999 (Senior Manager at Avaya, Inc.)
6. Yong Li (now at a Wall street firm)
7. Andras Pete (General Manager of Phillips' Hungarian Speaker Systems)
8. Shiva Prasad Kalisetty (software consultant)
9. Roshan Shrestha (now an Entrepreneur in Nepal)
10. Vijay Raghavan (Senior Engineering Manager at Mathworks, Inc., Natick, MA)
11. James Monte (now at Qualtech Systems, Inc.)

12. Sujoy Sen (now a Lead Software Architect at Virten Systems, Beaverton, OR)
13. Sulakshana Shyam Nath (now at Intel)
14. Venkata N. Malepati (now Product Manager at Qualtech Systems, Inc.)
15. Eric Elias (now at Motorola)
16. Michael Curry (now at Draper Labs)
17. Sumnagal Chakrabarty (now at Intel)
18. Vivek Rajan (now at Intel)
19. Ying Jie (now at a Wall Street firm)
20. Hong Li (now at a Wall Street firm)
21. Z. Kadambaya (Math Teacher in Norwich)
22. Yuriy Shlapak (doing Ph.D. in Math department)
23. P. Nadushoni (VP Engineering at Layer3 TV, Inc.)
24. Mohammad Azam (now at P&W, East Hartford, CT)
25. David Pham, 2004 (Math faculty in CCSU, New Britain, CT)
26. Kihoon Choi (now employed at Qualtech Systems, Inc.)
27. Setu Madhavi Namburu, 2006 (now at Cummings, Columbus, IN)
28. Steve Butler (Pratt & Whitney, East Hartford, CT)
29. William Donat (Pratt & Whitney, East Hartford, CT)
30. Hyunsung Lee (Now in South Korea)
31. Bharath Pattipati (GM -Transmissions)
32. Han Xu (now at Factset, New York)
33. Suvasri Mandal (now at Progress Software, Bedford, MA.)
34. Huy Bui (now in Vietnam)
35. William Morrison (now in Montana)
36. Devaki Pasupuleti (now at Cisco)
37. Bala Kishore Nadella (now at Doran Jones in NYC)

Current MS students:

38. Moises Soto (now employed by State of CT)