

# Timothy I. Matis, Ph.D. P.E.

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## Licenses

- (1) **Professional Engineer**, State of Texas, License Number: 126264

## Education

- 2001** **Doctor of Philosophy**, Industrial Engineering, Texas A&M University, Dissertation: “Using Cumulant Functions in Queueing Theory”, Research Advisor: Richard M. Feldman
- 1998** **Master of Science**, Industrial Engineering, Texas A&M University, Thesis: “Queueing Systems Subject to Random Server Failures: An Approximation”, Research Advisor: Richard M. Feldman
- 1997** **Bachelor of Science**, Industrial Engineering, Texas A&M University, Undergraduate Research Project: “On the Optimal Blending of Fats and Oils in Margarine Production”

## Employment

- 2009 – ...** **Associate Professor**, Department of Industrial, Manufacturing, and Systems Engineering, Texas Tech University, Lubbock, TX
- 2015 – 2018** **Adjunct Professor**, Escuela de Ingenieria Industrial, Valparaiso, Pontificia Universidad Catolica de Valparaiso, Chile
- 2014 – 2015** **Fulbright Visiting Professor**, Escuela de Ingenieria Industrial, Valparaiso, Pontificia Universidad Catolica de Valparaiso, Chile
- 2016 – 2017** **Consultant**, Community Health Center of Lubbock, Lubbock, TX
- 2012 – 2017** **Site Director**, Systems Engineering Research Center, Texas Tech University, Lubbock, TX
- 2011 – 2012** **Director**, Center of Excellence in High Reliability Organizations and Processes, Texas Tech University, Lubbock, TX
- 2006 – 2011** **Site Director**, Center for Engineering Logistics and Distribution, Industry University Cooperative Research Center, National Science Foundation, Texas Tech University, Lubbock, TX
- 2005 – 2009** **Assistant Professor**, Department of Industrial Engineering, Texas Tech University, Lubbock, TX
- 2003 – 2005** **Director**, Center for Stochastic Modeling, New Mexico State University, Las Cruces, NM
- 2003** **Consultant**, Physical Science Laboratory, Las Cruces, NM
- 2001 – 2005** **Assistant Professor**, Department of Industrial Engineering, New Mexico State University, Las Cruces, NM
- 1997 – 2001** **Graduate Research/Teaching Assistant and Lecturer**, Department of Industrial Engineering, Texas A&M University, College Station, TX
- 1997** **Internship**, Texas Manufacturing Assistance Center, College Station, TX
- various** **Expert Witness**, Product Liability and Personal Injury Cases, Deposition and Trial Experience

## Publications

### *Journal Articles*

- (34) Hevert, L., Smith, N., Matis, T. and Vargas, C. (2017), “Optimal Location of RFID Reader Antennas in a Three Dimensional Space”, *Annals of Operations Research*, 258(2), 815-823.
- (33) Chen, B., Matis, T.I. and Benneyan, J. (2016), “Computing Exact Bundle Compliance Control Charts via Probability Generating Functions”, *Healthcare Management Science*, 19(2), 103-110.

## Publications (continued)

- (32) Chyu, M., Austin, T., Calisir, F., Changaplammotil, S., Davis, M., Favela, J., Gan, H., Gefen, A., Haddas, R., Hahn-Goldberg, S., Hornero, R., Huan, Y., Jensen, O., Jiang, Z., Katsanis, J., Lee, J., Lewis, G., Lovell, N., Luebbers, H., Morales, G., Matis, T., Matthews, J., Mazur, L., Ng, E., Oomen, K., Ormand, K., Rohde, T., Sanchez-Morillo, D., Sanz-Calcedo, J., Sawan, M., Shen, C., Shieh, J., Su, C., Sun, L., Sun, M., Sun, Y., Tewolde, S., Williams, E., Yan, C., Zhang, J. and Zhang, Y. (2015), "Healthcare Engineering Defined: A White Paper", *Journal of Healthcare Engineering*, 6(4), 635-648.
- (31) Matis, T.I., Farris, J., McAllister, M., Dunavan, C., and Snider, A. (2015), "Target Times for Inpatient Discharge Scheduling", *IIE Transactions on Healthcare Systems Engineering*, 5(1), 33-41.
- (30) De la O, G. and Matis, T.I. (2014), "Supply Chain Strategies for the International Interoceanic Mazatlan-Houston Logistic Corridor", *Journal of Applied Research and Technology*, 12(4), 666-673.
- (29) Kalashnikov, V.V., Perez-Valdes, G.A., Matis, T.I. and Kalashnikov, N.I. (2014), "US Natural Gas Market Classification Using Pooled Regression", *Mathematical Problems in Engineering*, 9 pages, doi:10.1155/2014/695084.
- (28) Chen, B. and Matis, T.I.(2013), "A Flexible Dispatching Rule for Minimizing Tardiness in Job Shop Scheduling", *International Journal of Production Economics*, 141(1), 360-365.
- (27) Maharjan, B. and Matis, T.I. (2012), "Multi-commodity Flow Network Model of the Flight Gate Assignment Problem", *Computers and Industrial Engineering*, 63(4), 1135-1144.
- (26) Chen, B., Phillips, A. and Matis, T.I.(2012), "Two-Terminal Reliability of a Mobile Ad-hoc Network Under the Asymptotic Spatial Distribution of the Random Waypoint Model", *Reliability Engineering and Systems Safety*, 106, 72-29.
- (25) Matis, J.H., Michels, G.J. and Matis, T.I. (2011), "A Population Dynamics Perspective on Effect of Irrigation Regimes and Plant Densities on Greenbug (Hemiptera: Aphididae) Abundance in Grain Sorghum Using Regression", *Agricultural and Forest Entomology*, 13(1), 15-24.
- (24) Maharjan, B. and Matis, T.I. (2011), "An Optimization Model for Gate Reassignment in Response to Flight Delays", *Journal of Air Transport Management*, 17(4), 256-261.
- (23) Chen, B., Matis, T.I., and Benneyan, J. (2011), "One-Sided Control Charts for Positively-Skewed Populations Using Truncated Saddlepoint Approximations", *Quality and Reliability Engineering International*, 27(8), 1043-1058.
- (22) Jayaraman, R. and Matis, T.I. (2010), "On Prorated Servicing Costs for Two-Dimensional Warranties with Combined Repair-Replacement Strategies", *International Journal of Product Development*, 12(3/4), 274-295 .
- (21) Matis, T. I. and Guardiola, I.G. (2010), "Achieving Moment Closure Through Cumulant Neglect", *The Mathematica Journal*, 12, 1-18.
- (20) Farris, J.A., Matis, T.I., Conklin, R., Hunter, P., Care, S., McAllister, M., Snider, A. (2010), "Applying Healthcare Systems Engineering Methods to the Patient Discharge Process", *International Journal of Collaborative Enterprise*, 1(3/4), 293-315.
- (19) Kalashnikov, V.V., Matis, T.I., Perez-Valdez, G.A. (2009), "Time Series Analysis Applied to Construct US Natural Gas Price Functions for Groups of States", *Energy Economics*, 32(4), 887-900.
- (18) Phillips, A. and Matis, T.I. (2009), "Using GPS-based Link Exclusion to Reduce Overhead and Increase Route Reliability in FTP/TCP-Based MANETs", *International Journal of Mobile Network Design and Innovation*, 3(1), 46-52.
- (17) Matis, J.H., Kiffe, T.R., Van der Werf, W., Costamagna, A.C., Matis, T.I., Grant, W.E. (2009), "Population dynamics models based on cumulative density dependent feedback: A link to the logistic growth curve and a test for symmetry using aphid data", *Ecological Modeling*, 220(15), 1745-1751.
- (16) Matis, J.H., Kiffe, T.R., Matis, T.I., Chattopadhyay, C. (2008), "Generalized Insect Population Growth Models with Immigration and Cumulative Size Dependency", *Mathematical Biosciences*, 215, 137-143.
- (15) Matis, J.H., Kiffe, T.R., Matis, T.I., Jackman, J.A., Grant, W.E., and Singh H. (2008), "On the Use of Growth Rate Parameters for Projecting Population Sizes: Application to Aphids", *Ecological Modelling*, 213(1), 133-142.
- (14) Matis, T. I., Feldman, R.F., and Curry, G. (2008), "Queues with Non-Exponential Failure Times", *Journal of Quality, Technology, and Quantitative Management*, 5(2), 101-110.
- (13) Guardiola, I.G., and Matis, T.I. (2008) "Fast-fading, An Additional Mistaken Axiom of Wireless-Network Research", *International Journal of Mobile Network Design and Innovation*, 3-4, 153-158.

## Publications (continued)

- (12) **Matis, T. I., Jayaraman, R., and Rangan, A. (2008)** “Optimal Price and Pro-Rata Period Decisions for Combined Warranty Policies with Different Repair Options”, *IIE Transactions*, 40(10), 984-991.
- (11) **Matis, T.I., Parajulee, M.N., Matis, J.H., Shrestha, R. B. (2008)** “A Mechanistic Model Based Analysis of Cotton Aphid Population Dynamics Data”, *Agricultural and Forest Entomology*, 10, 355-362.
- (10) **Matis, J.H., Zhou, L.M., Kiffe, T.R., and Matis, T.I. (2007)**, “Fitting Cumulative Size Mechanistic Models to Insect Population Data: A Nonlinear Random Effects Model Analysis”, *Journal of the Indian Society of Agricultural Statistics*, 61(2), 147-155.
- (9) **Guardiola, I.G. and Matis, T.I. (2007)** “A Statistical Viewpoint on the Use of GPS Information in Wireless Ad-hoc Networks”, *International Journal of Mobile Network Design and Innovation*, 2(2), 125-128.
- (8) **Matis, T.I., Rangan, A., and Thagarajan, D. (2007)** “Optimal Replacement Policies of Repairable Systems Subject to Shocks”, *International Journal of Industrial and Systems Engineering*, 2(3), 286-298.
- (7) **Matis, J.H., Kiffe, T.R., Matis, T.I., Jackman, J.A., and Singh H. (2007)** “Population Size Models Based on Cumulative Size, with Application to Aphids”, *Ecological Modelling*, 205, 81-92.
- (6) **Matis, J.H., Kiffe, T.R., Matis T.I., and Stevenson, D. (2007)** “Stochastic Modeling of Aphid Population Growth with Nonlinear Power-Law Dynamics”, *Mathematical Biosciences*, 208(2), 469-494.
- (5) **Matis, J.H., Kiffe, T.R., Matis, T.I., and Jackman, J.A., (2007)** “Population Size Models Based on Cumulative Size, with Application to Aphids”, *Ecological Modelling*, 205(1-2), 81-92.
- (4) **Matis, J.H., Kiffe, T.R., Matis T. I., and Stevenson, D. (2006)** “Applications of Population Growth Models Based on Cumulative Size to Pecan Aphids”, *Journal of Agricultural, Biological, and Environmental Statistics*, 11(4), 425-449.
- (3) **Matis, J.H., Kiffe, T.R., Matis, T.I., and Stevenson, D.E. (2005)**, “Nonlinear Stochastic Modeling of Aphid Population Growth”, *Mathematical Biosciences*, 198, 148-168.
- (2) **Matis, T. I. and Feldman R. M. (2002)** “Using Cumulant Functions in Queueing Theory”, *Queueing Systems*, 40, 341-353.
- (1) **Matis, T. I. and Feldman R. M. (2001)** “Transient Analysis of State-Dependent Queueing Networks via Cumulant Functions”, *Journal of Applied Probability*, 38, 841-859.

### *Journal Articles Under Review*

- (3) **Baty, A., Matis, T.I., Tolk, J., Griswold, J., and Barrington, L.,** ”On the Performance of Surgical Teams Displaying Intraoperative Communication Patterns of a High Reliability Organization ”, *Journal of Healthcare Quality* (2nd Review).
- (2) **Peimbert-Garcia, R., Matis, T.I., Cuevas-Ortuno, J., and Nucamendi-Guillen, S.** “A Systematic Review of Literature on Lean and Six Sigma Process Improvement Initiatives in Healthcare”, *BMC Health Services Research* (1st Review).
- (1) **Peimbert-Garcia, R., Matis, T.I., Beltran-Godoy, J., Garay-Rondero, C., Vicencio-Ortiz, J., and Lopez-Soto, D.** “The Current State of Lean Six-Sigma Practices in the Mexican Healthcare System”, *Total Quality Management and Business Excellence* (1st Review).

### *Books Under Development*

- (1) **Matis, T.I.,** “Markov Based Modeling of Random Processes”, Book Proposal, Wiley-Blackwell.

### *Book Chapters*

- (6) **Jayaraman, R. and Matis, T.I. (2010)** “Queueing Models with Batch Arrivals and/or Services”, in *Encyclopedia of Operations Research and Management Science* 3rd ed., eds. Gass, S. and Fu, M. (ISBN:978-1441911377), Springer-Verlag, New York.
- (5) **Jayaraman, R. and Matis, T.I. (2010)** “Finite Population Queueing Models”, in *Encyclopedia of Operations Research and Management Science* 3rd ed., eds. Gass, S. and Fu, M. (ISBN:978-1441911377), Springer-Verlag, New York.
- (4) **Mullen, J.O., Matis T.I. and Rangan, S. (2005)** “The Receiver’s Dilemma”, in *Mobile and Wireless Communication Networks*, eds. E.M. Belding-Royer, K.A. Agha, and G. Pujolle (ISBN-13: 978-0387231488), Springer-Verlag, New York, 299-310.

## Publications (continued)

- (3) **Matis T.I., Riley L.A., and Matis J.H. (2004)**, “Integrating Technologically-Based Laboratory Modules into the Stochastic Processes Curriculum”, Curricular Development in Statistics Education: International Association for Statistical Education 2004 Roundtable, eds. Burrill, G. and Camden, M. (ISBN 90-73592-22-4), International Statistics Institute, Voorburg, the Netherlands, 93-103.
- (2) **Begg, A., Erickson, T., MacGillivray, H., and Matis, T. (2004)**, “Statistics Curriculum: Content and Framing”, Curricular Development in Statistics Education: International Association for Statistical Education 2004 Roundtable, eds. Burrill, G. and Camden, M. (ISBN 90-73592-22-4), International Statistics Institute, Voorburg, the Netherlands, 275-277.
- (1) **Matis, T.I. (2002)** “On the Cumulant-Based Transient Analysis of State-Dependent Queueing Networks: Applied to Helicopter Repair Modeling”, in Advances in Stochastic Modelling, eds. J.R. Artalejo and A. Krishnamoorthy (ISBN 0-9665847-3-2)), Notable Publications Inc., Neshanic Station, New Jersey, 393-412.

### *Editorial Commentaries*

- (3) **Kalashnikov, V.V., Dempe, S., Matis, T.I., Camacho-Vallejo, J.F. and Kavun S.V. (2016)**, “Bilevel Programming, Equilibrium, and Combinatorial Problems with Applications to Engineering”, Mathematical Problems in Engineering, 3 pages, doi:10.1155/2016/4360909.
- (2) **Kalashnikov, V.V., Matis, T.I., Camacho-Vallejo, J.F. and Kavun, S.V. (2015)**, “Bilevel Programming, Equilibrium, and Combinatorial Problems with Applications to Engineering”, Mathematical Problems in Engineering, 2 pages, doi: 10.1155/2015/490758.
- (1) **Matis, T.I. and Guardiola, I. (2009)**, “Special Issue on Mobile Ad-Hoc Networking”, International Journal of Mobile Network Design and Innovation, 3(1), 1-2.

### *Peer-Reviewed Conference Papers*

- (19) **Hervert-Escobar, L., Hernandez-Gress, N., and Matis, T. (2018)**, “Bayesian-Based Approach of Learning for Outcome Prediction of Soccer Matches”, International Conference on Computational Science, Wuxi, China.
- (18) **Kundu, A. and Matis, T. (2017)**, “A Delivery Time Reduction Heuristic using Drones under Windy Conditions”, Institute of Industrial and Systems Engineering Annual Conference, 1864-1869.
- (17) **Mejia, G., Angel-Diaz, M., Matis, T. (2016)**, “A Stochastic Petri Net Model for the Mass Public Transportation System of Bogota, Colombia”, Proceedings of the Congreso Latino-Iberoamericano de Investigacion Operativa, Santiago, Chile.
- (16) **Hervert-Escobar, L., Smith, N., Matis, T.I. (2014)** “Optimal Location of RFID Reader Antennas in a Three Dimensional Space”, Proceedings of the Joint ALIO/SMIO Conference on Operations Research.
- (15) **Herrera-Maldonado, R.C., Kalashnikov, V., Matis, T.I. (2014)** “A Heuristic Algorithm for Solving Bi-Level Toll Optimization Problems”, Proceedings of the Joint ALIO/SMIO Conference on Operations Research.
- (14) **Alvarado, A., Limon, J., Matis, T.I. (2014)** “On the Convenience of Pooling Three Heterogenous Queues”, Proceeding of the Industrial and Systems Engineering Research Conference, 3682.
- (13) **Farris, J.A., Matis, T.I., McAllister, M., Snider, A. (2010)** “Perceived vs. Actual Causes of Patient Discharge Delay: Results from an Exploratory Field Study”, Proceedings of the Institute of Industrial Engineering Annual Research Conference (CD-ROM).
- (12) **Farris, J.A., Matis, T.I., McAllister, M., Snider, A. (2010)** “Improving the Patient Discharge Through a Managed System”, Proceedings of the Society for Health Systems of the American Society for Quality Conference and Expo.
- (11) **Matis, J.H., Kiffe, T.R., Matis, T.I., Van der Werf, W., Costamagna, A.C. and Michels, G.J.Jr (2008)** “Comparisons of Two Symmetric Density Function Solutions of Aphid Population Growth Models.” Proceedings of the 20th Annual Conference on Applied Statistics in Agriculture, Kansas State University, (CD-ROM).
- (10) **Guardiola, I.G., and Matis, T.I. (2007)**, “On the Utility of Supplementary Control Overhead in Mobile Ad-hoc Network Protocols.” Proceedings of the Networking and Electronic Commerce Research Conference (ISBN 0-9716253-0-1), pp. 282-296.

## Publications (continued)

- (9) **Matis, T. I., Matis, J.H., Michels, G.J., and Parajulee, M.N. (2007)**, "Using the Cumulative Size Mechanistic Model for Analyzing Insect Data", Proceedings of the 19th Annual Conference on Applied Statistics in Agriculture, Kansas State University, (CD-ROM), pp.23-38.
- (8) **Matis, T. I. (2006)**, "Conceptualizing Applied Probability Through Project Based Learning", Proceedings of the 7th International Conference on Teaching Statistics (ISBN-10: 90-73592-24-0, ISBN-13: 978-90-73592-24-7), session 2C.
- (7) **Matis, T. I. and Guardiola, I.G. (2006)**, "Estimating Rare Event Probabilities Using Truncated Saddlepoint Approximations", Proceedings of the Spring Simulation Multiconference of the Society for Modeling and Simulation International (ISBN 1-56555-303-9), session 3.
- (6) **Matis T. I., Riley L. A., and Matis J. H. (2005)**, "Integrating Probability Modeling Concepts in Secondary Education", Proceedings of the Gulf Southwest Regional Conference of the American Society of Engineering Education (CD-ROM).
- (5) **Matis T. I. and Kolloffel M. (2004)**, "Reliability Systems Subject to Non-Fatal Shocks", Proceedings of the Institute of Industrial Engineering Annual Research Conference (CD-ROM).
- (4) **Mullen J. O., Matis T. I., Rangan S., and Adams K. (2004)**, "Achieving Robust Protocols for Mobile Ad-Hoc Networks", Proceedings of the Institute of Industrial Engineering Annual Research Conference (CD-ROM).
- (3) **Jayaraman R., Matis T. I., and Guardiola I. (2004)**, "Effect of Polynomial Intensity Functions on Cumulant Derivation Procedures", Proceedings of the Institute of Industrial Engineering Annual Research Conference (CD-ROM).
- (2) **Matis, T. I. and Riley L. A. (2004)**, "Teaching Theoretical Stochastic Modeling Courses Using Industrial Partners and Their Applied Problem", Proceedings of the American Society for Engineering Education Annual Conference and Exposition (CD-ROM).
- (1) **Matis T. I. and Riley L. A. (2003)**, "Integrating Technology and Industrial Applications into the Stochastic Processes Curriculum, Proceedings of the Institute of Industrial Engineering Annual Research Conference (CD-ROM).

### *Technical Reports*

- (10) **Farris, J.A., Matis, T.I., Gonzales, C. and Nimoh, C. (2013)** 'Assessment of ED Lab Workflow', Odessa Medical Center Hospital , Technical Report, 13M-01.
- (9) **Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2011)** "The Assessment of the Safety Culture within the Pantex Plant: Explosives Technology Division", Center for Engineering Logistics and Distribution Industrial Report for B&W Pantex, Technical Report, 11B-02.
- (8) **Farris, J.A., Matis, T.I., Rivero, I. (2011)** "Patient Discharge Process Improvement Project: Phase 2" Center for Engineering Logistics and Distribution Industrial Report for Odessa Medical Center Hospital, Technical Report, 11M-01.
- (7) **Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2011)** "Development of a Safety Culture Assessment Methodology at B&W Pantex", Center for Engineering Logistics and Distribution Industrial Report for B&W Pantex, Technical Report, 11B-01.
- (6) **Matis, T.I., Guardiola, I., Hunter, P. (2009)** "Shop Level Scheduling Using the Relative Index Operator", Center for Engineering Logistics and Distribution Industrial Report for B&W Pantex, Technical Report, 08B-02.
- (5) **Hunter, P., Matis, T.I. (2009)** "Issue Resolution: Resolution Methods at Points of Discrepancy", Center for Engineering Logistics and Distribution Industrial Report for B&W Pantex. Technical Report, 08B-01.
- (4) **Farris, J.A., Matis, T.I., Rivero, I.V., De Farias, I.R., Conklin, R., Siri, C., Hunter, P. (2009)** "Patient Discharge Process Improvement Project: Phase One Final Report", Center for Engineering Logistics and Distribution Industrial Report for Odessa Medical Center Hospital, Texas Tech University, Department of Industrial Engineering, Technical Report 09M-02.
- (3) **Farris, J.A., Matis, T.I., Conklin, R., Siri, C. (2009)** "Patient Discharge Process Improvement Project Initial Report", Center for Engineering Logistics and Distribution Industrial Report for Odessa Medical Center, Texas Tech University, Department of Industrial Engineering, Technical Report 09M-01.
- (2) **Matis, T.I. (2007)** "Analysis of Best Practice in Forklift Operations", Expert Witness Report, Faddoul, Cluff, Hardy, and Valles Law Firm.

## Publications (continued)

- (1) **Matis, T.I. (2006)** “Analysis and Interval Estimation of the Attrition Rate for Universal Bread Baskets at Bimbo Bakeries USA”, Expert Witness Report, Packard, Packard and LaPray Law Firm

### *Software*

- (3) **Matis, T.I., Guardiola, I.G. and Timmer D. (2013)** “Stochastic Challenge”, Educational Materials Developed for NSF/CCLI Award, (<http://markov.ie.ttu.edu>).
- (2) **Matis, T.I. and Guardiola, I.G. (2012)** “CELDI Knowledge Management System”, Knowledge Management System for the NSF/IUCRC Center for Engineering Logistics and Distribution.
- (1) **Matis, T.I. and Guardiola, I.G. (2010)** “MomentClosure.m”, Moment Closure Package for Mathematica 7.0, (<http://www.mathematica-journal.com/data/uploads/2010/10/MomentClosure.m>).

### *Newspapers and Magazines*

- (4) **Staff Writer (2015)** “Interview: En Logistica la Gestion de Inventarios Consume Recursos Financieros y Esfuerzos Significativos”, Estrategia, July 2, 15.
- (3) **Askin, R. and Fowler, J. (2015)** “Healthcare Informatics for Inpatient Discharge Scheduling”, Industrial Engineer Magazine, April, 47(4), 52.
- (2) **Staff Writer (2013)** “Interview about Stochastic Challenge: A New Way to Learn About Stochastic Processes”, ORMS Tomorrow Magazine, Spring/Summer, 3-4.
- (1) **Staff Writer (2010)** “Texas Tech researchers to save more than \$250,000 each year for MCH”, Odessa American Newspaper, November 22, 2.

## Presentations

### *Invited and Sponsored Presentations*

- (102) **Matis, T.I. and Tolk J. (2018)**, “Cultivating and Sustaining a Culture of High Reliability”, National High Magnetic Lab, Tallahassee, Florida.
- (101) **Matis, T.I. (2018)**, “The HRO Paradigm”, Community Health Center of Lubbock, Lubbock, Texas.
- (100) **Matis, T.I. (2017)**, “Healthcare Systems Engineering”, Monterrey Institute of Technology and Higher Education, San Luis Potosi, Mexico.
- (99) **Kundu, A. and Matis, T.I. (2017)**, “Establishing Energy Efficient Paths for Delivery Drones in Direction Dependent Uniform Wind-fields”, Institute for Operations Research and Management Science Annual Conference, Houston, Texas.
- (98) **Arias, A., Canut-De-Bon, D., Pascual, J., Gatica, R., and Matis, T. (2017)**, “The Dynamic Shortest Covering Path Problem”, Institute for Operations Research and Management Science Annual Conference, Houston, Texas.
- (97) **Arias, A., Pascual, J., Matis, T.I., Gatica, R. (2017)**, “Decomposition Heuristics For The Last-mile Delivery Problem”, Institute for Operations Research and Management Science Annual Conference, Houston, Texas.
- (96) **Matis, T.I. (2017)**, “Research in Healthcare”, Monterrey Institute of Technology and Higher Education, Monterrey, Mexico.
- (95) **Matis, T.I. (2017)**, “Healthcare Analysis Data and Tools”, Monterrey Institute of Technology and Higher Education, Monterrey, Mexico.
- (94) **Matis, T.I. (2017)**, “High Reliability in Healthcare Systems”, High Reliability Summit, Washington D.C.
- (93) **Matis, T.I., Chaudhary, P., Islam, M., and Jian, C. (2016)**, “Measuring HROs through Text Mining”, Fundamentals of HRO Workshop, University of Tennessee Space Institute, Manchester, Tennessee.
- (92) **Matis, T.I. and Chen, B. (2015)**, “Two Terminal Reliability in a Mobile Ad-hoc Network”, Institute for Operations Research and Management Science Annual Conference, Philadelphia, Pennsylvania.
- (91) **Arias, A., Matis, T.I. and Pascual, J. (2015)**, “Models for Inventory Allocation of Erratic-demand Spare Parts in a Multi-echelon System”, Institute for Operations Research and Management Science Annual Conference, Philadelphia, Pennsylvania.

## Presentations (continued)

- (90) Ruegg, M., Ceroni, J., Matis, T.I., Miranda, P. and Smith, M. (2014), "Optimizing Capacity and Production in Copper Mining", Institute for Operations Research and Management Science Annual Conference, San Francisco, California.
- (89) Matis, T.I. (2014), "Assessing High Reliability Organizational Culture", Functional Leadership Team Meeting of Chevron, Houston, Texas.
- (88) Matis, T.I. (2014), "Finding the Most Reliable Route on a Probabilistic Graph", POLAR Research, Operations, and Infrastructure (ROI) Summit, Punta Arenas, Chile.
- (87) Matis, T.I., Ruegg, M., Ceroni, J. and Miranda, P. (2014), "Applications of Operations Research in Copper Mining", Second Colloquium of the Chilean Institute of Operational Investigations (ICHIRO), Valparaiso, Chile.
- (86) Matis, T.I. (2014), "Managing Service Processes with Variability", University of Talca Lecture Series, Curico, Chile.
- (85) Matis, T.I. (2014), "Collaborative Research: Stochastic Challenge", Fulbright Grantees Meeting, Santiago, Chile.
- (84) Matis, T.I., Guardiola, I. and Timmer, D. (2013), "Collaborative Research: Stochastic Challenge", American Society of Engineering Education Annual Conference, Atlanta, Georgia.
- (83) Matis, T.I., Guardiola, I. and Timmer, D. (2013), "Collaborative Research: Stochastic Challenge", Principal Investigators Conference of the National Science Foundations Transforming Undergraduate Education Program, Washington D.C.
- (82) Matis, T.I. (2013), "Collaborative Research: Stochastic Challenge", Institute for Operations Research and Management Science Annual Conference, Minneapolis, Minnesota.
- (81) Matis, T.I. (2013), "An Efficient Dynamic Dispatching Rule (WBMR) for Job Shop Scheduling", Distinguished Seminar Series, Departamento de Ingenieria Industrial y de Sistemas, Instituto Tecnologico y de Estudios Superiores de Monterrey, Monterrey, Mexico.
- (80) Matis, T.I., Schaefer, B., and Jabur, T. (2012), "Celdi Knowledge Management Workshop", Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.
- (79) Matis, T.I., Schaefer, B., and Jabur, T. (2012), "Celdi Knowledge Management", Center for Engineering Logistics and Distribution Spring Research Conference, Atlanta, Georgia.
- (78) Baty, A. Matis, T.I. (2012), "Quantifying Reliability in Surgical Teams", Fifth International High Reliability Organizing Conference, Chicago, Illinois.
- (77) Farris, J.A., Matis, T.I., Patterson, P., Crittendon, P., Johnson, J. (2012), "B&W Pantex Site-Wide Safety Culture Survey Information Session", Fifth International High Reliability Organizing Conference, Chicago, Illinois.
- (76) Farris, J.A., Matis, T.I. (2012), "Center for Excellence in High Reliability Organizations and Processes", Fifth International High Reliability Organizing Conference, Chicago, Illinois.
- (75) Chen, B. and Matis, T.I. (2011), "The Effect of Multipath Fading in Mobile Ad-hoc Networks" Institute for Operations Research and Management Science Annual Conference, Charlotte, North Carolina.
- (74) Farris, J.A., Matis, T.I., McCarty, M., Phillips, A., Ballan, M., Heinz, M., Tolk, J., Hartley, R. (2011), "Development of a Safety Culture Assessment Methodology for the Pantex Plant", Department of Energy Integrated Safety Management Champions Workshop, Kennewick, Washington.
- (73) Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2011), "Development of a Safety Culture Assessment Methodology for B&W Pantex", Center for Engineering Logistics and Distribution Fall Research Conference, Denver, Colorado.
- (72) Farris, J.A., Matis, T.I., Grissom, M., Siri, C. (2011), "CELDi Success Story: Patient Discharge Improvement Project", Center for Engineering Logistics and Distribution Spring Research Conference, Denver, Colorado.
- (71) Farris, J.A., Matis, T.I., Grissom, M., Siri, C. (2010), "Patient Discharge Process Improvement Project: Phase II", Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.
- (70) Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2010), "Development of a Safety Culture Assessment Methodology for B&W Pantex", Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.
- (69) Matis, T.I., De La O, G. (2010), "Connecting Ports to Plains to Mexico's West Coast", Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.

## Presentations (continued)

- (68) **Maharjan, B. and Matis, T.I. (2010)**, “Multicommodity Gate Flow Network Model Solving Flight-gate Assignment Problem for Hub-spoke Airline” Institute for Operations Research and Management Science Annual Conference, Austin, Texas.
- (67) **Matis, T.I. (2010)**, “A Fundamental Approach to Wireless Networks” Institute for Operations Research and Management Science Annual Conference, Austin, Texas.
- (66) **Chen, B., Phillips, A. and Matis, T.I. (2010)**, “Two-terminal Reliability under the Asymptotic Random Waypoint Model’s Spatial Distribution” Institute for Operations Research and Management Science Annual Conference, Austin, Texas.
- (65) **Matis, T.I. (2010)**, “The Effect of Multipath Fading in Mobile Ad-hoc Networks” Joint International Meeting of the Association of Latin-Iberoamerican Operational Research Societies and the Institute for Operations Research and the Management Sciences, Buenos Aires, Argentina.
- (64) **Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2010)**, “Design of Safety Culture Survey for Pantex Plant”, Technology Partnering Conference, Canyon, Texas.
- (63) **Matis, T.I. (2010)**, “Shop Level Scheduling within iTools”, Technology Partnering Conference, Canyon, Texas.
- (62) **Matis, T.I., De La O, G. (2010)**, “Connecting Ports to Plains to Mexico’s West Coast”, Center for Engineering Logistics and Distribution Spring Research Conference, Atlanta, Georgia.
- (61) **Farris, J.A., Matis, T.I., Grissom, M., Siri, C. (2010)**, “Patient Discharge Process Improvement Project: Phase II”, Center for Engineering Logistics and Distribution Spring Research Conference, Atlanta, Georgia.
- (60) **Farris, J.A., Matis, T.I., Patterson, P., Phillips, A., Ballan, M., Heinz, M. (2010)**, “Development of a Safety Culture Assessment Methodology for B&W Pantex”, Center for Engineering Logistics and Distribution Spring Research Conference, Atlanta, Georgia.
- (59) **De La O, G., Matis, T.I. (2010)**, “Connecting Ports to Plains to Mexico’s West Coast”, West Texas Trade Summit, San Angelo, Texas.
- (58) **Farris, J.A., Matis, T.I. (2009)**, “The Patient Discharge Process”, University of Arkansas, Department of Industrial Engineering and Center for Innovation in Healthcare Logistics, Fayetteville, Arkansas.
- (57) **Farris, J.A., Matis, T.I., Rivero, I.V., De Farias, I.R., Conklin, R., Siri, C., Hunter, P. (2009)**, “The Patient Discharge Improvement Project”, Odessa Medical Center Hospital, Odessa, Texas.
- (56) **Chen, B., Matis, T.I., Phillips, A. (2009)**, “Two-Terminal Reliability Under the Asymptotic Random Waypoint Spatial Distribution”, Institute for Operations Research and Management Science Annual Conference, San Diego, California
- (55) **Phillips, A., Matis, T.I. (2009)**, “GPS Link Exclusion Comparison In TCP and UDP Based MANETS”, Institute for Operations Research and Management Science Annual Conference, San Diego, California
- (54) **Matis, T.I. (2009)**, “Fundamentals of Wireless Network Research”, Institute for Operations Research and Management Science Annual Conference, San Diego, California
- (53) **Matis, T.I. (2009)** “Assessing Two-Terminal Reliability in Wireless Mesh Networks”, Networking and Electronic Research Conference, Riva del Garda, Italy.
- (52) **Matis, T.I. (2009)** “CELDi Success Story: Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Fall Research Conference, Chicago, Illinois.
- (51) **Matis, T.I., Rivero, I., Guardiola, I., Hunter, P., and Hart, J. (2009)** “Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Fall Research Conference, Chicago, Illinois.
- (50) **Matis, T.I., Guardiola, I. (2009)** “Development of the RIO Dispatching Rule for Large Scale Job Shops”, Briefing to the Industrial Advisory Board of the Center for Engineering Logistics and Distribution, Charlotte, North Carolina.
- (49) **Matis, T.I., Rivero, I., Guardiola, I., Hunter, P., and Hart, J. (2009)** “Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Spring Research Conference, Charlotte, North Carolina.
- (48) **Matis, T.I., Guardiola, I. (2009)** “Shop Level Scheduling Through the RIO Dispatching Rule”, Industrial Engineering Research Conference, Miami, Florida.
- (47) **Matis, T.I., Maharjan, B. (2009)** “Gate Reassignment at Continental Airlines”, Briefing to Operations Management Group of Continental Airlines, Houston, Texas.



## Presentations (continued)

- (46) **Matis, T.I. (2008)** “On the Development of Dynamic Ad-hoc Protocols”, Institute for Operations Research and Management Science Annual Conference, Washington, D.C.
- (45) **Phillips, A. and Matis, T.I. (2008)** “A MAC Layer Modification to Increase Ad-hoc Network Performance”, Institute for Operations Research and Management Science Annual Conference, Washington, D.C.
- (44) **Matis, T.I., Rivero, I., Guardiola, I., Hunter, P., and Hart, J. (2008)** “Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.
- (43) **Godeke, K., Matis, T.I., Simonton, J. (2008)** “Development of Ad-hoc Communication Strategies for Homeland Security Logistics Management”, Center for Engineering Logistics and Distribution Spring Research Conference, Chicago, Illinois.
- (42) **Matis, T.I., Rivero, I., and Guardiola, I. (2008)** “Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Spring Research Conference, Chicago, Illinois.
- (41) **Kenney, M., Matis, T.I., Simonton, J. (2008)** “Development of Effective Warehousing Strategies for Baled Cotton on the South Plains”, Center for Engineering Logistics and Distribution Spring Research Conference, Chicago, Illinois.
- (40) **Matis, T.I., Feldman, R.F., and Curry, G. (2008)** “An Approximation for Generally Distributed Queues with Nonexponential Failure Times”, Institute of Industrial Engineering Research Conference, Vancouver, Canada.
- (39) **Matis, T.I., Guardiola, I., and Phillips, A. (2008)** “On the Performance and Optimal Protocol Design of Mobile Ad-hoc Networks”, Institute of Industrial Engineering Research Conference, Vancouver, Canada.
- (38) **Perez, G., Kalashnikov, V. and Matis, T.I. (2008)** “Natural Gas Cash-Out Problem with Price Predictions”, Institute for Operations Research and Management Sciences Southwest Regional Conference, College Station, Texas.
- (37) **Matis, T.I., Guardiola, I., and Phillips, A. (2008)** “On the Development of Ad-hoc Network Protocols”, Institute for Operations Research and Management Sciences Southwest Regional Conference, College Station, Texas.
- (36) **Jayaraman, R. and Matis, T.I. (2008)** “Developing Effective Servicing Strategies for Product Warranties”, Institute for Operations Research and Management Sciences Southwest Regional Conference, College Station, Texas.
- (35) **Maharjan, B. and Matis, T.I. (2008)** “Moment Closure Approximation Procedure for Stochastic Fatigue Crack Growth”, Institute for Operations Research and Management Sciences Southwest Regional Conference, College Station, Texas.
- (34) **Phillips, A. and Matis, T.I. (2008)** “Optimizing Maintenance Activities in Ad-hoc Networks”, 9th Telecommunication Conference of the Institute for Operations Research and the Management Sciences”, College Park, Maryland.
- (33) **Matis, T.I. and Guardiola I.G. (2008)** “Current Research Directions in Moment Closure Methods”, Texas Tech University, Department of Mathematics Seminar Series, Lubbock, Texas.
- (32) **Matis, T.I. (2008)** “Process Reengineering at BWXT/PANTEX A CELDI/TTU Partnership”, Wichita State University, Planning Grant Meeting for the Center for Engineering Logistics and Distribution, Wichita, Kansas.
- (31) **Matis, J.H., Kiffe, T.R., Van der Werf, W., Costamagna, A.C., Matis, T.I., Grant, W.E. (2008)** “Two Symmetric Density Function Solutions of Population Growth Models”, Education Testing Service Summer Institute, College Station, Texas.
- (30) **Matis, J.H., Kiffe, T.R., Van der Werf, W., Costamagna, A.C., Matis, T.I., Grant, W.E. (2008)** “Two Symmetric Density Function Solutions of Population Growth Models”, Education Testing Service Statistics Reading, Louisville, Kentucky.
- (29) **Matis, J.H., Kiffe, T.R., Matis, T.I., and Michels, G. J. Jr. (2007)**, “A New Ecological Model for Insect Population Growth with Local Collapse”, Education Testing Service Statistics Reading, Louisville, Kentucky.
- (28) **Matis, T.I., Rivero, I., and Guardiola, I. (2007)** “Information-Based Reengineering of Tooling Operations at BWXT/Pantex”, Center for Engineering Logistics and Distribution Fall Research Conference, Atlanta, Georgia.

## Presentations (continued)

- (27) **Guardiola, I.G., and Matis, T.I. (2007)**, “On the Utility of Supplementary Control Overhead in Mobile Ad-hoc Network Protocols.” Networking and Electronic Commerce Research Conference, Riva Del Garda, Italy.
- (26) **Guardiola, I.G. and Matis, T.I. (2007)**, “Mitigating the Stochastic Effects of Fading in Mobile Wireless Ad-hoc Networks”, Institute of Industrial Engineering Research Conference, Nashville, Tennessee.
- (25) **Guardiola, I.G. and Matis, T.I. (2007)**, “Small Scale Fading Effects on the Control Overhead of Current Protocols”, Institute for Operations Research and Management Science Annual Conference, Seattle, Washington.
- (24) **Matis, J.H., Kiffe, T.R., and Matis, T. I. (2007)** “Fitting Cumulative Size Mechanistic Models to Insect Population Data: A Nonlinear Random Effects Model Analysis” The Diamond Jubilee Celebration of the Indian Agriculture Statistical Institute, International Conference on Statistics and Informatics in Agriculture, Delhi, India.
- (23) **Matis, T.I. (2006)**, “Conceptualizing Applied Probability Through Project-Based Learning”, 7th International Conference on Teaching Statistics, Salvador, Brazil.
- (22) **Matis, T.I. and Guardiola, I.G. (2006)**, “Estimating Rare Event Probabilities Using Truncated Saddlepoint Approximations”, Spring Simulation Multiconference of the Society for Modeling and Simulation International, Huntsville, Alabama.
- (21) **Matis, T.I. (2006)**, “Using WebCT in the Engineering Classroom”, Teaching Learning and Technology Center Jump Start Conference, Lubbock, Texas.
- (20) **Matis, T.I. and Guardiola I.G. (2006)** “A GPS-Enabled Reactive Protocol for Mobile Ad-hoc Networks”, The International Conference on Telecommunications Systems Modeling and Analysis, Reading, Pennsylvania.
- (19) **Matis, T.I. and Smith, M. (2006)** “Development of Resource Planning Algorithm”, Center for Engineering Logistics and Distribution Fall Research Conference, Dallas, Texas.
- (18) **Matis, T.I. and Smith, M. (2006)** “Optimizing Machine Scheduling Practice at BWTX/Pantex”, Center for Engineering Logistics and Distribution Fall Forum, Dallas, Texas.
- (17) **Matis, T.I. (2005)** “Moments, MANETS, Banks, and Bugs” Texas Tech University, Department of Industrial Engineering, Lubbock, Texas, Invited by Milton Smith.
- (16) **Matis, T.I. (2005)** “Industrial Engineering in the 21st Century” Northeastern University, Department of Industrial Engineering, Boston, Massachusetts.
- (15) **Matis, T.I. and Mullen, J.O. (2004)** “Stochastic Characterization of MANETs” Institute for Operations Research and the Management Sciences Annual Conference, Denver, Colorado.
- (14) **Matis, T.I., Jayaraman, R., and Guardiola, I.G. (2004)**, “Effect of Polynomial Intensity Functions on Cumulant Derivation Procedures”, Institute of Industrial Engineering Annual Research Conference, Houston, Texas.
- (13) **Matis, T.I. (2004)** “A Discrete Time Markov Model of the Loan Collection Process at Fort Bliss Credit Union”, Monterrey Technical Institute Stochastic Seminar Series, Monterrey, Mexico.
- (12) **Matis, T.I. and Riley L.A. (2004)** “Teaching Theoretical Stochastic Modeling Courses Using Industrial Partners and Their Applied Problems”, American Society for Engineering Education Annual Conference and Exposition, Salt Lake City, Utah.
- (11) **Matis, T.I. and Riley L.A. (2004)** “Teaching Theoretical Stochastic Modeling Courses Using Industrial Partners and Their Applied Problems”, Invention and Impact: Building Excellence in Undergraduate STEM Education, a National Science Foundation (NSF) Course, Curriculum, and Laboratory Improvement (CCLI) Program Conference, Washington, D.C.
- (10) **Matis, T.I. and Riley L.A. (2003)** “Integrating Technology and Industrial Applications into the Stochastic Processes Curriculum Venue: Institute for Industrial Engineering Annual Research Conference, Portland, Oregon.
- (9) **Matis, T.I. (2002)** “Incorporating International Industrial Applications into the Stochastic Processes Curriculum” Academic-Industry Interactions Panel: Matrix Analytic Methods Workshop, Cochin, India.
- (8) **Matis, T.I. (2002)** “On the Cumulant-Based Transient Analysis of State-Dependent Queueing Networks: Applied to Helicopter Repair Modeling”, International Conference on Stochastic Models and 5th International Conference on Retrieval Queues, Cochin, India.
- (7) **Matis, T.I. (2002)** “Transient Analysis of a Sortie Generation Process Using Cumulant Functions”, Institute for Operations Research and the Management Sciences Annual Conference, San Jose, California.

## Presentations (continued)

- (6) **Matis, T.I. (2002)** “On the Cumulant-Based Transient Analysis of a Helicopter Repair Facility” Instituto Tecnológico de Juarez Research Seminar, Juarez, Mexico.
- (5) **Matis, T.I. (2002)** “On the Use of Cumulant Functions in the Analysis of System Reliability” Sandia National Laboratories Research Seminar, Albuquerque, New Mexico.
- (4) **Matis, T.I. (2001)** “Using Common Probability Distributions in Cumulant Derivation Procedures”, Institute for Operations Research and the Management Sciences Annual Conference, Miami, Florida.
- (3) **Matis, T.I. (2001)** “On the Cumulant-Based Transient Analysis of a Helicopter Repair Facility” Physical Sciences Laboratory Research Seminar, Las Cruces, New Mexico.
- (2) **Matis, T.I. and Feldman R.M.(2001)** “Analysis of a State-Dependent Forking Queueing Network via Cumulant Functions” Institute for Operations Research and the Management Sciences 2001 International Conference, Maui, Hawaii.
- (1) **Matis, T.I. and Feldman R.M.(2000)** “Using Cumulant Functions to Obtain System Characteristics for Tandem Queues”, Institute for Operations Research and the Management Sciences Annual Conference, San Antonio, Texas.

### *Contributed Presentations*

- (53) **Arias, A., Gatica, R., and Matis, T. (2018)**, “Path Planning of Multiple USVs Under a Communication Constraint”, Institute of Industrial and Systems Engineering Annual Conference, Orlando, Florida.
- (52) **Islam, M. and Matis, T. (2017)**, “Path Planning of Multiple USVs Under a Communication Constraint”, Institute for Operations Research and Management Science Annual Conference, Houston, Texas.
- (51) **Arias, A., Gatica, R., and Matis, T. (2017)**, “A Decomposition-Based Approach for a Coordinated Vehicle Routing Problem”, International Federation of Operations Research Societies Annual Conference, Quebec City, Canada.
- (50) **Patterson, P. and Matis, T. (2017)**, “Use of Entropy to Determine the Effects of Distraction Types in Driving Simulators”, Second International Cross-Industry Safety Conference, Amsterdam, Netherlands.
- (49) **Kundu, A. and Matis, T. (2017)**, “A Heuristic-Based Approach for Last Mile Drone Delivery Time Reduction under Windy Conditions”, Institute of Industrial and Systems Engineering Annual Conference, Pittsburgh, Pennsylvania.
- (48) **Mejia, G., Angel-Diaz, M., and Matis, T. (2016)**, “A Stochastic Petri Net Model for the Mass Public Transportation System of Bogota, Colombia”, Congreso Latino-Iberoamericano de Invesigacion Operative, Santiago, Chile.
- (47) **Canut-De-Bon, D., Pascual, J., Gatica, R., and Matis, T. (2016)**, “USV Path Planning Algorithm for Surveying Operations”, Institute for Operations Research and Management Science Annual Conference, Nashville, Tennessee.
- (46) **Pascual, J., Gatica, R., Arias, A., Kundu, A., Canut-De-Bon, D. and Matis, T. (2016)**, “Optimal Routing of Unmanned Aerial Vehicles in Wind Fields”, Institute for Operations Research and Management Science Annual Conference, Nashville, Tennessee.
- (45) **Alvarado, C., Limon, J. and Matis, T.I. (2014)**, “On the Convenience of Pooling Three Heterogeneous Queues”, Institute Industrial Engineering Annual Conference, Montreal, Canada.
- (44) **De La O, G. and Matis. T.I. (2013)**, “Supply Chain Strategies for the International Interoceanic Mazatlan-Houston Logistic Corridor”, International Congress on Logistics and Supply Chains, Sanfandila, Queretaro, Mexico.
- (43) **Alvarado, C., Limon, J. and Matis, T.I. (2013)**, “On the Accuracy of an Approximation of the Waiting Time in a Queue to Evaluate the Benefits of Pooling”, Second National Conference of the Mexican Society of Operations Research, Acapulco, Mexico.
- (43) **Chen, B. and Matis, T.I.(2013)**, “Control Charting of Evidence-Based Bundle Composite Compliance Measures”, Institute Industrial Engineering Annual Conference, San Juan, Puerto Rico.
- (42) **Chen, B. and Matis, T.I.(2012)**, “A Flexible Dispatching Rule for Minimizing Tardiness in Job Shop Scheduling”, Institute for Operations Research and Management Science Annual Conference, Phoenix, Arizona.
- (41) **Jayaraman, R., Matis, T.I. and Pohl, E. (2011)** “Optimization of Pro-Rata Warranty Models with Burn-in Criteria”, Institute for Operations Research and Management Science Annual Conference, Charlotte, North Carolina.

## Presentations (continued)

- (40) **Jayaraman, R. and Matis, T.I. (2011)** “Optimization of Pricing Decisions for Extended Product Warranties”, Institute of Industrial Engineering Annual Research Conference, Reno, Nevada.
- (39) **Farris, J.A. and Matis, T.I. (2011)** “Improving the Hospital Patient Discharge Process”, Institute of Industrial Engineering Annual Research Conference, Reno, Nevada.
- (38) **Jayaraman, R. and Matis, T.I. (2010)** “On Pro-Rata Pricing Strategy for Extended Product Warranties”, Institute for Operations Research and Management Science Annual Conference, Austin, Texas.
- (37) **Farris, J.A., Matis, T.I., McAllister, M., Snider, A., Baker, B., Dunnavan, C. (2010)**, “Strategic Redesign of Patient Discharge for Improved Workforce and Care Delivery Outcomes”, American Association of Nurse Executives Annual Meeting, San Diego, California.
- (36) **Farris, J.A., Matis, T.I., McAllister, M., Snider, A. (2010)** “Perceived vs. Actual Causes of Patient Discharge Delay: Results from an Exploratory Field Study”, Institute of Industrial Engineering Annual Research Conference, Cancun, Mexico
- (35) **Farris, J.A., Matis, T.I., McAllister, M., Snider, A. (2010)** “Improving the Patient Discharge Through a Managed System”, Society for Health Systems of the American Society for Quality Conference and Expo, Atlanta, Georgia.
- (34) **De la O Serna, G. and Matis, T.I. (2009)**, “Linear Network Structured Airline Periodic Aircraft Scheduling”, Institute for Operations Research and Management Science Annual Conference, San Diego, California.
- (33) **Maharjan, B. and Matis, T.I. (2009)**, “Flight Gate Reassignment Optimization Algorithm for Hub-spoke Airports”, Institute for Operations Research and Management Science Annual Conference, San Diego, California.
- (32) **Jayaraman, R. and Matis, T.I. (2009)**, “Pricing Two-Dimensional Product Warranties”, Institute for Operations Research and Management Science Annual Conference, San Diego, California.
- (31) **Maharjan, B. and Matis, T.I. (2009)**, “Proactive Flight Gate Reassignment for Hub Airport Operations”, Annual Conference of the Airline Group of the International Federation of Operational Research Societies (AGIFORS) Airline Operations Study Group, Montreal, Canada.
- (30) **Jayaraman, R. and Matis, T.I. (2009)**, “New Two-Dimensional Warranty Policy with Two-Dimensional Costs”, Western Regional Conference of the Institute for Operations Research and Management Science, Tempe, Arizona.
- (29) **Perez, G., Kalashnikov, V., and Matis, T.I. (2009)**, “Inverse Demand Function Fit to the US Natural Gas Market”, 41st National Congress of the Mexican Mathematical Society, Valle de Bravo, Mexico.
- (28) **Maharjan, B. and Matis T.I. (2008)**, “Optimization of the Gate Assignment Problem (GAP) through the Minimization of Ground Delays”, Institute for Operations Research and Management Sciences Annual Conference, Washington, D.C.
- (27) **Phillips, A. and Matis T.I. (2008)**, “A MAC Layer Modification to Create Dynamic Retry Limits in a Mobile Ad-hoc Network”, Institute for Operations Research and Management Sciences Southwest Regional Conference, College Station, Texas.
- (26) **Matis, J.H., Kiffe, T.R., Matis, T.I., Van der Werf, W., Costamagna, A.C. and Michels, G.J.Jr (2008)** “Comparisons of Two Symmetric Density Function Solutions of Aphid Population Growth Models.” Conference on Applied Statistics in Agriculture, Manhattan, Kansas.
- (25) **Matis, J.H., Kiffe, T.R., Matis, T.I., an der Werf, W., Costamagna, A.C. and Michels, G.J.Jr (2008)**, “Probability Density Function Solutions of Population Size Models”, Joint Statistical Meetings of the American Statistical Association, Denver, Colorado.
- (24) **Matis, T. I., Matis, J.H., Michels, G.J., and Parajulee, M.N. (2007)**, “Using the Cumulative Size Mechanistic Model for Analyzing Insect Data”, Conference on Applied Statistics in Agriculture, Manhattan, Kansas.
- (23) **Matis, T.I., Parajulee, M.N., Matis, J.H., and Shrestha, R. B. (2007)**, “On Characterizing Cotton Aphid Population Dynamics Using a Cumulative Size Mechanistic Model”, Beltwide Cotton Conference, New Orleans, Louisiana.
- (22) **Matis, J.H., Kiffe, T.R., Matis, T.I., and Michels, G. J. Jr. (2007)**, “A New Ecological Model for Insect Population Growth with Local Collapse”, Joint Statistical Meetings of the American Statistical Association, Salt Lake City, Utah.
- (21) **Jayaraman, R. and Matis, T.I. (2007)**, “Servicing Strategies for Products Sold with Two Dimensional Warranty Policies”, Institute for Operations Research and Management Science Annual Conference, Seattle, Washington.

## **Presentations (continued)**

- (21) **Maharajan, B. and Matis, T.I. (2007)**, “Moment Closure Approximation to Stochastic Fatigue Crack Growth Model”, Institute for Operations Research and Management Science Annual Conference, Seattle, Washington.
- (19) **Matis, T.I. and Guardiola I. G. (2006)**, “On the Performance of MANET Routing Protocols in Various Fading Environments”, Institute for Operations Research and the Management Sciences 2006 Annual Conference, Pittsburgh, Pennsylvania.
- (18) **Guardiola, I.G. and Matis, T. I. (2006)**, “On the Stability of Moment Closure Methods under Various Closure Schemes”, Institute for Operations Research and the Management Sciences Annual Conference, Pittsburgh, Pennsylvania.
- (17) **Jayaraman, R. and Matis, T. I. (2006)**, “Optimization of Warranty Costs with Different Repair Options”, Institute for Operations Research and the Management Sciences Annual Conference, Pittsburgh, Pennsylvania.
- (16) **Matis, J.H., Kiffe, T.R., and Matis, T. I. (2006)**, “Statistical Analysis of Aphid Data: A Case Study for AP Statistics” Joint Statistical Meeting of the American Statistical Association, Seattle, Washington.
- (15) **Matis, J.H., Kiffe, T.R., and Matis, T. I. (2006)**, “Statistical Analysis of Aphid Data: A Case Study for AP Statistics” Education Testing Service Statistics Reading, Lincoln, Nebraska.
- (14) **Matis, J.H., Kiffe, T.R., and Matis, T. I. (2005)**, “Nonlinear Stochastic Modeling of Aphid Population Growth”, Joint Statistical Meetings of the American Statistical Association, Minneapolis, Minnesota.
- (13) **Matis, J.H., Kiffe, T.R., and Matis, T. I. (2005)**, “Nonlinear Stochastic Modeling of Aphid Population Growth” 20th International Workshop on Statistical Modeling, Sydney, Australia.
- (12) **Matis, T. I., and Mitra J. (2005)**, “Border and Infrastructure Security Research at New Mexico State University”, Oak Ridge Associated Universities Partners in Technology Forum, Oak Ridge, Tennessee.
- (11) **Matis, T.I. and Matis, J.H. (2005)**, “Integrating Probability Modeling Concepts in Secondary Education”, Gulf Southwest Regional Conference of the American Society of Engineering Education, Corpus Christi, Texas.
- (10) **Matis, T.I. Riley, L.A., and Matis, J.H. (2004)**, “Creating a Knowledge-Centered Learning Environment for the Instruction of Stochastic Processes”, Joint Statistical Meetings of the American Statistical Association, Toronto, Canada.
- (9) **Matis, T.I. Riley, L.A., and Matis, J.H. (2004)**, “Integrating Technologically-Based Laboratory Modules into the Stochastic Processes Curriculum”, International Association of Statistics Education Roundtable on Curricular Development in Statistics Education, Lund, Sweden.
- (8) **Mullen, J.O., Matis, T.I. and Rangan, S. (2004)**, “The Receiver’s Dilemma”, International Federation for Information Processing (IFIP) and Institute of Electrical and Electronics Engineers (IEEE) Mobile and Wireless Communication Network Conference, Paris, France.
- (7) **Guardiola, I.G. and Matis, T.I. (2004)**, “Stability Region Identification for Non-Linear Stochastic Systems Using Moment Closure Methods”, Institute for Operations Research and the Management Sciences Annual Conference, Denver, Colorado.
- (6) **Guardiola, I.G. and Matis, T.I. (2004)**, “Stability Region Identification of Moment Closure Methods”, Alliance for the Graduate and Professoriate Annual Conference, Las Cruces, New Mexico.
- (5) **Matis, T.I. and Kolloffel, M. (2004)**, “Reliability Systems Subject to Non-Fatal Shocks” Institute of Industrial Engineering Annual Research Conference, Houston, Texas.
- (4) **Mullen J.O. and Matis, T.I. (2004)**, “Achieving Robust Protocols for Mobile Ad-Hoc Networks”, Institute of Industrial Engineering Annual Research Conference”, Houston, Texas.
- (3) **Matis, T.I. and Riley, L.A. (2003)** “Integrating Application Based Modules into the Undergraduate Stochastic Processes Curriculum”, Institute for Operations Research and the Management Sciences Annual Conference, Atlanta, Georgia.
- (2) **Matis, T.I. and Riley, L.A. (2003)** “Integrating Industrial Applications into the Curriculum of Applied Stochastic Processes Courses Through the Collaborative Development of Technologically Based Instructional Modules”, Joint Statistical Meetings of the American Statistical Association, San Francisco, California.
- (1) **Matis, T.I. (2002)**, “Cumulant-Based Transient Analysis of State Dependent Queuing Networks” Joint Statistical Meetings of the American Statistical Association, New York City, New York.

## Presentations (continued)

### *Organized Conference Sessions*

- (13) **Arias, A. and Matis, T.I. (2018)**, “Drones in Logistics IV”, Institute for Operations Research and Management Science Annual Conference”, Phoenix, Arizona.
- (12) **Matis, T.I. and Voss, S. (2014)**, “Copper Mining Applications”, Institute for Operations Research and Management Science Annual Conference”, San Francisco, California.
- (11) **Matis, T.I. (2009)**, “Wireless Networks 1”, Institute for Operations Research and Management Science Annual Conference”, San Diego, California.
- (10) **Matis, T.I. (2008)**, “Wireless Networking”, Institute for Operations Research and Management Science Annual Conference”, Washington, D.C.
- (9) **Matis, T.I. (2008)**, “Production Optimization and Control”, Institute for Operations Research and Management Science Southwest Regional Conference”, College Station, Texas.
- (8) **Matis, T.I. (2007)**, “Ad-hoc Networking”, Institute for Operations Research and Management Science Annual Conference, Seattle, Washington.
- (7) **Bartolacci, M. and Matis, T.I. (2006)** “Ad-hoc Networking”, The International Conference on Telecommunications Systems Modeling and Analysis, Reading, Pennsylvania.
- (6) **Bartolacci, M. and Matis, T.I. (2006)** “Mobile and Wireless Network Security and Privacy”, IEEE Wireless and Telecommunications Systems Symposium, Pomona, California.
- (5) **Kharoufeh, J. and Matis, T.I. (2003)** “Stochastic Models for System Prognosis”, Institute for Operations Research and the Management Science Annual Conference, Atlanta, Georgia.
- (4) **Matis, T.I. (2003)**, “Engineering Education 2”, Institute for Industrial Engineering Annual Research Conference, Portland, Oregon
- (1-3) **Matis, T.I. (2003-2005)**, “Seminar Series (monthly)”, Center for Stochastic Modeling, New Mexico State University, Las Cruces, New Mexico

## Funded Research

- 2015-2018** **Pascual, J., Gatica, R., Matis, T.I. \$149,000**, “Development of a Cross-Layered Path Planning Algorithm for Surveying Operations by Unmanned Surface Vehicles”, Office of Naval Research Global, Program Manager: Bradley Goodrich
- 2014** **Matis, T.I. \$28,000**, “Fulbright U.S. Visiting Scholar”, Council for the International Exchange of Scholars, Program Manager: Katrin DeWindt.
- 2013** **Farris, J.A., Matis, T.I. \$19,946**, “Assessment of ED Lab Workflow”, Odessa Medical Center Hospital, Program Manager: Chad Dunavan.
- 2011 – 2013** **Matis, T.I. \$132,773**, “Collaborative Research: Stochastic Challenge”, Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics Program, National Science Foundation, Program Manager: Russell Pimmel.
- 2011 – 2012** **Farris, J.A., Matis, T.I., Patterson, P. \$192,013**, “B&W Pantex Site-Wide Safety Culture Survey”, Babcock and Wilcox Technical Services Pantex LLC, Program Manager: Richard Hartley.
- 2011 – 2012** **Matis, T.I. \$50,000**, “CELDi: Knowledge Management System”, Center Designated Project, Center for Engineering Logistics and Distribution, Program Manager: Russell Meller.
- 2011** **Farris, J.A., Matis, T.I. \$48,746**, “Impact of Computerized Physician Order Entry on Workflow and Employee Roles in Inpatient Units”, Odessa Medical Center Hospital, Program Manager: Marlene McAllister.
- 2010 – 2012** **Parajulee, M.N., Shrestha, R.B, Matis, T.I. \$55,483**, “Texas High Plains Lygus Bugs: Investigation of Predisposition Factors Causing Outbreaks in Order to Strengthen Cotton Pest Management”, United States Department of Agriculture Cooperative State Research, Education, and Extension Service, Program Manager: .
- 2010 – 2011** **Farris, J.A., Matis, T.I. \$37,558**, “ Patient Discharge Process Improvement Project Phase 3: Pathways to Target Discharge Time”, Odessa Medical Center Hospital, Program Manager: Marlene McAllister.
- 2010** **Farris, J.A., Matis, T.I., Patterson, P. \$103,360**, “Assessing and Improving the Safety Culture at the Pantex Plant”, Babcock and Wilcox Technical Services Pantex LLC, Program Manager: Janice Tolk.

## Funded Research (continued)

- 2010** **Matis, T.I. \$31,110**, “Plan of Commercial Development of San Pedro Coahuila as Logistics Center”, Municipal De San Pedro Coahuila, Program Manager: Jorge Abadala.
- 2010** **Farris, J.A., Matis, T.I., Rivero, I. \$19,011**, “Patient Discharge Process Improvement Project: Phase Two”, Odessa Medical Center Hospital, Program Manager: Marlene McAllister.
- 2007 – 2011** **Matis, T.I., Farris, J.A., Simonton, J., Woldstad, J., Burns, J. \$250,000**, “Center for Engineering Logistics and Distribution: An NSF I/UCRC at Texas Tech University”, National Science Foundation, Industry University Cooperative Research Center, Program Manager: Alex Schwartzkopf.
- 2009 – 2009** **Farris, J.A., Matis, T.I., DeFarias, I., Rivero, I. \$16,139**, “Patient Discharge Process Improvement Project: Phase One”, Odessa Medical Center Hospital, Program Manager: Marlene McAllister.
- 2008 – 2009** **Matis, T.I., Rivero, I. \$196,039**, “Information Based Reengineering of Tooling Operations at BWXT/Pantex”, Babcock and Wilcox Technical Services Pantex LLC, Program Manager: Robert McClary.
- 2007 – 2008** **Matis, T.I., Simonton, J. \$12,500**, “Center for Engineering Logistics and Distribution: An NSF I/UCRC at Texas Tech University Research Experience for Undergraduates Supplement”, National Science Foundation, Industry University Cooperative Research Center, Program Manager: Alex Schwartzkopf.
- 2005 – 2006** **Matis, T.I., Smith, M. \$50,000**, “Development of a Resource Planning Algorithm”, Babcock and Wilcox Technical Services Pantex LLC, Program Manager: Janice Tolk.
- 2002 – 2006** **Matis, T.I. \$60,000** “Investigations into the Application of Cumulant Functions in Operations Research and Stochastic Modeling”, Office of Naval Research, Program Manager: Laura Petonito.
- 2003 – 2005** **Matis, T.I., Riley, L.A. \$74,768**, “Teaching Theoretical Stochastic Modeling Courses Using Industrial Partners and Their Applied Problems”, National Science Foundation, Course Curriculum and Laboratory Improvement Program, Program Manager: Ibrahim Nisanci.
- 2003 – 2004** **Matis, T.I. \$93,327** “Development of Cumulant-Based Analysis Procedures for the Transient Analysis of Stochastic Systems” Air Force Office of Scientific Research, Program Managers: Koto White and Maj. Jaun Vasquez.
- 2003 – 2004** **Matis, T.I. \$10,000** “Investigations into the Transient Analysis of System Reliability/Availability via Cumulant Functions”, National Aeronautics and Space Administration, Program Manager: Richard P. Heydorn.
- 2004** **Matis, T.I. \$5,000** “Development of the Center for Stochastic Modeling as a Multidisciplinary” Engineering Research Center, New Mexico State University, Program Manger: Rudi Schoenmakers.
- 2002 – 2003** **Matis, T.I. \$27,000** “Excellence in Engineering Fellowship” Sandia National Labs, Program Manager: Laura P. Swiler.
- 2003** **Matis, T.I. \$22,000** “Equipment Grant for the Center for Stochastic Modeling”, Intel Corporation, Program Manager: Jacob Dominguez.
- 2003** **Matis, T.I. \$5,000** “Seed Money for the Multidisciplinary Center for Stochastic Modeling” Alumni and Friends of the Department of Industrial Engineering, New Mexico State University, Program Manager: Edward Pines.

## Graduate Student Advising

### *Ph.D. Committee Chair*

- 2016 – ...** **Prasanna Chaudhary**, Research Topic: “Modeling Financial Markets with Time Series Approaches”.
- 2015 – ...** **Abhishake Kundu**, Research Topic: “Optimal Path Planning for UAVs in Anisotropic Networks”.
- 2015 – 2017** **Erik Reynolds**, Research Topic: “Criteria for the Identification of a General System Resilience Metric”.
- 2015 – 2017** **MD Saiful Islam**, Research Topic: “Optimal Path Planning with Communication Constraints”.
- 2015 – 2016** **Jose Miguel Larenas**, Research Topic: “Systems Dynamic Modeling of Territorial Interests in Antarctica”.
- 2014 – 2018** **Andrea Arias**, Research Topic: “A Mathematical Programming-Based Algorithm for the Shortest Covering Path Problem with Arc Coverage”.

## Graduate Student Advising (continued)

- 2011 – 2012** Gnomia Cisse, Research Topic: “Large Scale Heuristic Job Shop Scheduling Methods”.
- 2011 – 2013** Laura Hevert Escobar, Dissertation: “Optimization of RFID Receiver Placement”.
- 2010 – 2017** Amanda Baty, Dissertation: “Quantification of Surgical Team Communication Patterns Related to High Reliability Organization Principles”.
- 2008 – 2013** Binchao Chen, Dissertation: “Development of Quality Control Methods in Healthcare Engineering”.
- 2008 – 2012** Aaron Phillips, Research Topic: “Creating Dynamic Protocols for Mobile Ad-hoc Networks”.
- 2007 – ...** Steve Malcolm, Research Topic: “Development of Sampling Plans Based on Richards Curves to Estimate Rare Event Probabilities”.
- 2007 – 2009** Gerardo Perez, Ph.D., Dissertation: “Natural Gas Imbalance System Optimization”.
- 2005 – 2010** Binod Maharjan, Dissertation: “Flight Gate Assignment and Proactive Flight Gate Reassignment Algorithms for Hub and Spoke Airlines Operations”.
- 2004 – 2009** Gerardo De La O Serna, Ph.D., Dissertation: “Flight Scheduling Balancing Passenger Demand and On-land Operational Cost”.
- 2005 – 2008** Keith Jones, Ph.D., Dissertation: “The Application of Mathematical Ecology and Spatial Clustering Analysis Techniques to Hailpad Measurements”.
- 2004 – 2008** Raja Jayaraman, Ph.D., Dissertation: “On Minimizing Expected Warranty Costs in One and Two Dimensions with Different Repair Options”.
- 2003 – 2007** Ivan Guardiola, Ph.D., Dissertation: “Mitigating The Stochastic Effects Of Fading In Mobile Wireless Ad-hoc Networks”.

### *Ph.D. Committee Member*

- 2013 – 2017** Manish Ranjit, Dissertation: “The Effects of Posture and Gender in Biomechanics of High Frequency Lifting of Light Loads”
- 2013 – 2017** Am Nanthawan, Dissertation: “Maximum Acceptable Frequency of Light Load Weight Lifting”
- 2014 – 2017** Kalpani Dissanayake, Dissertation: “Development of a Supply Chain Performance Measurement Model Integratable to Industry”
- 2014 – ...** Art Sedighi, Research Topic: “Fair Scheduling in High Performance Computing Environments”
- 2015 – 2016** Francisco Figueroa, Dissertation: “Comparative Analysis and State of Preparation for College and University Risk Management Systems”
- 2013 – ...** Copelia Alvarado, Research Topic: “Pooling of Heterogeneous Queues”
- 2009 – 2014** Steve Peterson, Dissertation: “Fundamental Relationships in Discrete Event Programming”
- 2012 – 2014** Young-Ji Chun, Dissertation: “Interface Design of an Internet-Based Telemedicine System for the Elderly”
- 2012 – 2014** Ernee Kozyareff Filho, Dissertation: “Valid Inequalities and Computational Results for SOS1, SOS2, and Cardinality Constrained Problems”
- 2009 – 2010** Cecilia Martinez, Dissertation: “Analytical Methodology for Designing and Evaluating Program Schedules”
- 2007 – 2012** Rajat Gupta, Dissertation: “Branch-and-Cut for Piecewise Linear Optimization”
- 2006 – 2010** Herakles Gong, Dissertation: “Asymmetric Full Velocity Difference Car-Following Models”
- 2004 – 2011** Kootak Kang, Dissertation: “On Detecting Anomalies in Cotton Fibers Using Statistical Based Methods”
- 2005 – 2010** Boonlert Wongcharoensangsiri, Dissertation: “Robust optimal location of staging area in wind farm logistics”.
- 2004 – 2007** Janice Tolk, Ph.D., Dissertation: “Predicting Required Maintenance and Repair Funding Based on Standard Facility Data Elements”.
- 2004 – 2007** Qing Xie, Ph.D., Dissertation: “Developing Three-Class Acceptance Sampling Plans Based on Process Capability Indices”.
- 2003 – 2007** Tosanwunmi Maku, Ph.D., Dissertation: “Identifying Business Knowledge Areas that are Critical to Attaining Supply Chain Performance”.
- ... – 2006** Bin Han, Ph.D., Dissertation: “Stochastic Demand Supply Chain Optimization through Neural Network Prediction and Simulation”.
- ... – 2006** Lisa Patvivastsiri, Ph.D., Dissertation: “A Simulation-Based Approach to Estimate the Population at Risk for Smallpox as Bioterrorist Attack”.



## Graduate Student Advising (continued)

- ... – 2004 **Jose Luis Minjares Lugo, Ph.D.**, Dissertation: “Sustainable Operation of the Yaqui River Multiple Reservoir System”.
- ... – 2003 **Joon-Yeoul Oh, Ph.D.**, Dissertation: “Heuristic Search Algorithm for Minimization of Cellular Telecommunication Network Connection Cost”.
- ... – 2003 **Jesus Jose Aguirre-Solis, Ph.D.** Dissertation: “A Tabu Search Algorithm for the Open Shop Scheduling Problem with Sequence Dependent Setup Times”.
- ... – 2003 **Jeffrey Smith, Ph.D.** Dissertation: “Survivability in Stochastic Duels”.
- ... – 2002 **Connie Phillips, Ph.D.**, Dissertation: “Validating a Simulation Model of a Large-Scale Operational Telecommunications System”.

### *M.S. Thesis Committee Chair*

- 2014 – 2015** **Nakul Padalkar** Thesis: “Cross-Entropy Methods Applied to a Random Graph”.
- 2007 – 2008** **Aaron Phillips** Thesis: “Optimizing Maintenance Activities in MAC Layer Protocols”.
- 2004 – 2006** **Sonal Jain** Thesis: “Statistical Analysis of the Performance of Learning Disabled Students”.

### *M.S. Thesis Committee Member*

- 2008 – 2010** **Lilia Camarena** Thesis: “Scholarship Allocation: an Optimization Model for Enrollment Management”.
- 2007 – 2009** **Manolo Meza** Thesis: “Comparisons of Visual Performance and Useful Field of View among Drivers in a Simulator”

## Course Instruction

### *Continuing Education at Texas Tech University - Costa Rica*

**CEU (1 cr)** **Engineering Reliability**

### *Graduate Courses at Texas Tech University*

- IE 5311** **Principles of Optimization**
- IE 5331** **Applied Stochastic Processes**
- IE 5331** **Theoretical Studies**
- IE 5344** **Statistical Data Analysis**
- IE 5342** **Design of Experiments**
- IE 5345** **Reliability Theory**
- IE 6000** **Masters Thesis Research**
- IE 7000** **Doctoral Research**
- IE 8000** **Doctoral Dissertation**

### *Graduate Courses at New Mexico State University*

- IE 505** **Directed Readings**
- IE 531** **Survey of Operations Research Techniques**
- IE 515** **Stochastic Processes and Modeling**
- IE 565** **Advanced Stochastic Processes and Modeling**
- IE 598** **Special Research Programs**
- IE 610** **Topics in Operations Research**

### *Undergraduate Courses at Texas Tech University*

- IE 3301** **Engineering Economics**
- IE 3341** **Engineering Statistics**

## Course Instruction (continued)

IE 3343 Quality Assurance/Engineering Statistics  
IE 4333 Senior Design

### *Undergraduate Courses at New Mexico State University*

IE 300 Undergraduate Research  
IE 310 Continuous Quality Improvement  
IE 311 Engineering Data Analysis  
IE 400 Undergraduate Research  
IE 515 Stochastic Processes and Modeling  
IE 460 Evaluation of Engineering Data  
IE 490 Design of Industrial Experiments

## Service Activities

### *Service to Profession*

2014 – 2016 **Faculty Advisor**, ORMS Tomorrow Magazine, Institute of Operations Research and Management Science.  
2014 – 2015 **Program Chair**, Telecommunication Section, Institute of Operations Research and Management Science.  
2009 – ... **Editorial Board Member**, International Journal of Interdisciplinary Telecommunications and Networking.  
2007 – ... **Vice-Chair**, Interdisciplinary Systems Modeling Technology and Business Council, Institute for Computer Sciences, Social-Informatics, and Telecommunications Engineering.  
2014 **Guest Editor**, Special Issue on “Bilevel Programming”, Mathematical Problems in Engineering.  
2008 – 2009 **Guest Editor**, Special Issue on “Mobile Ad-hoc Networking”, International Journal of Mobile Network Design and Innovation.  
2007 – 2011 **Program Chair**, Telecommunication Section, Institute of Operations Research and Management Science.  
2008 **Track Chair**, Signal Processing in Wireless Systems, QoS, and Wireless Network Reliability Track, IEEE Wireless Telecommunications Symposium  
2005 **President**, At-Large National Chapter, Institute of Industrial Engineering.  
2002 – 2005 **Secretary**, Chihuahuan Desert Chapter, American Statistical Association.  
**ad-hoc** **Journal Reviewer**  
Journal of Transportation Research Part C  
Computers and Industrial Engineering  
IEEE Transactions on Reliability  
European Journal of Operational Research  
Journal of Computers and Operations Research  
Journal of Mathematical and Computer Modeling  
Wireless Telecommunications Symposium Annual Conference  
Journal of Quality Technology and Quantitative Management  
Wireless Networks  
Journal of Statistics Education  
International Journal of Mobile Network Design and Innovation  
Institute of Industrial Engineering Annual Research Conference  
**ad-hoc** **Proposal Reviewer**  
National Science Foundation, Course Curriculum and Laboratory Improvement Program (5x)  
National Science Foundation, Service Systems Engineering Program (3x)

### *Service to University*

2013 – 2015 **Senator**, Faculty Senate, Texas Tech University.

## Service Activities (continued)

- 2010 – 2011** **Vice President Elect**, Faculty Senate, Texas Tech University.  
**2008 – 2011** **Senator**, Faculty Senate, Texas Tech University.  
**2007** **Member**, Ad-hoc Internal Proposal Review Committee, Vice President for Research, Texas Tech University.  
**2002 – 2005** **Member**, Admission Appeals Committee, University Appeals Board, New Mexico State University.  
**2002** **Senator**, Faculty Senate, New Mexico State University.  
**2002** **Member**, Scholastic Affairs Committee, Faculty Senate, New Mexico State University.  
**2003 – 2005** **Mentor**, Alliance for the Graduate and Professorship, New Mexico State University.  
**2001 – 2002** **Member**, Ad-hoc Design Committee Member, New Mexico MESA for Pre-College Youth, New Mexico State University.

### *Service to College*

- 2018 – ...** **Member**, Curriculum Revision (Common First Year) Committee, Whitacre College of Engineering, Texas Tech University  
**2015 – 2016** **Member**, Academic Programs Committee, Whitacre College of Engineering, Texas Tech University  
**2012 – 2015** **Member**, Promotion and Tenure Committee, Whitacre College of Engineering, Texas Tech University  
**2006 – 2012** **Member**, Research Committee, Whitacre College of Engineering, Texas Tech University  
**2006** **Member**, Ad-hoc Grade Appeals Committee, Whitacre College of Engineering, Texas Tech University

### *Service to Department*

- 2017 – ...** **Faculty Advisor**, Student Chapter of Alpha Pi Mu, Department of Industrial, Manufacturing, and Systems Engineering, Texas Tech University.  
**2015 – 2018** **Chair**, Undergraduate Committee, Department of Industrial, Manufacturing, and Systems Engineering, Texas Tech University.  
**2014 – ...** **Departmental Coordinator**, Accreditation Board for Engineering and Technology (ABET), Department of Industrial, Manufacturing, and Systems Engineering, Texas Tech University.  
**2011 – 2018** **Undergraduate Advisor**, Department of Industrial, Manufacturing, and Systems Engineering, Texas Tech University.  
**2013 – 2014** **Member**, Faculty Search Committee, Department of Industrial Engineering, Texas Tech University.  
**2010 – 2014** **Member**, Undergraduate Committee, Department of Industrial Engineering, Texas Tech University.  
**2006 – 2012** **Member**, Faculty Awards Committee, Department of Industrial Engineering, Texas Tech University.  
**2006 – 2010** **Faculty Co-Advisor**, Student Chapter of the Institute of Industrial Engineering, Texas Tech University.  
**2006 – 2007** **Member**, Curriculum Review and Assessment Committee, Department of Industrial Engineering, Texas Tech University.  
**2003 – 2005** **Faculty Co-Advisor**, Student Chapter of the Institute of Industrial Engineering, New Mexico State University.  
**2002 – 2005** **Chair**, Faculty Search Committee, Department of Industrial Engineering, New Mexico State University.  
**2004** **Member**, Space Allocation Committee, Department of Industrial Engineering, New Mexico State University.  
**2004 – 2005** **Member**, ABET Assessment Committee, Department of Industrial Engineering, New Mexico State University.  
**2001** **Member**, Qualifying Examination Committee, Department of Industrial Engineering, New Mexico State University.

## Professional Society Membership

- 1998 – ...** Institute for Operations Research and the Management Sciences (INFORMS)

## Professional Society Membership (continued)

- 2001 – ...** Institute of Industrial and Systems Engineering (IISE)  
**2007 – ...** Institute for Computer Sciences, Social-Informatics, and Telecommunications Engineering (ICST)  
**2012 – 2014** American Statistical Association (ASA)

## Awards and Other Activities

- 2107** **Academic Leader**, Monterrey Institute of Technology and Higher Education, San Luis Potosi, Mexico.  
**2104** **Fulbright Scholar**, Council for International Exchange of Scholars, US Department of State.  
**2009 – 2013** **Faculty-Led Study Abroad Professor**, Universidad Aldofo Ibanez, Vina Del Mar, Chile.  
**2011** **CELDi Success Story Award**, Improving Patient Flow at Medical Center Hospital  
**2009** **CELDi Success Story Award**, Reengineering of Tooling Operations at B&W Pantex  
**2009** **New Faculty Award**, Texas Tech Alumni Association.  
**2008 – 2009** **Professor of the Year**, Texas Tech Student Chapter of Institute for Industrial Engineering.  
**2005** **Who's Who Among America's Teachers**, nominated by Martijn Kolloffel.  
**2004** **Visiting Professor Sponsorship**, Alagar Rangan, Department of Mathematics, Indian Institute of Technology, Madras, India