

## MICHAEL ZABARANKIN

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### Employment

- 2010–present Associate Professor (tenured), *Department of Mathematical Sciences, Stevens Institute of Technology, Hoboken NJ*
- 2004–2010 Assistant Professor, *Department of Mathematical Sciences, Stevens Institute of Technology, Hoboken NJ*
- 2003–2004 Visiting Assistant Professor, *Graduate Engineering & Research Center, University of Florida*
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### Education

- Ph.D. 2003* Operations Research with concentration in Quantitative Finance, Department of Industrial and Systems Engineering, University of Florida
- Ph.D. 1999* Applied Mathematics with specialization in Mechanics of Deformable Solids, National Taras Shevchenko University of Kyiv, Kiev, Ukraine
- M.S. 2001* Department of Industrial and Systems Engineering, University of Florida
- M.S. 1996* Applied Mathematics, National Taras Shevchenko University of Kyiv, Kiev, Ukraine
- 1988–1991 Republican Physical-Mathematical Lyceum (Highest Honors), Kiev, Ukraine

*Dissertation 2003:* Optimization Approaches in Risk Management and Financial Engineering, advisor Prof. Stan Uryasev and co-advisor Prof. R. Tyrrell Rockafellar

*Dissertation 1999:* Exact Solutions to Displacement Boundary-value Problems for an Elastic Medium with a Spindle-shaped Inclusion, advisor Prof. Andrei F. Ulitko

**Research interests:** *optimal design, partial differential equations (PDEs), variational principles, risk analysis*

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### Books

- Zabaranin, M., Uryasev, S. (2014) *Statistical Decision Problems: Selected Concepts and Portfolio Safe-guard Case Studies*, Series: Springer Optimization and Its Applications, Vol. 85, Springer
- Kurdila, A., Pardalos, P., Zabaranin, M. (Eds.) (2006) *Robust Optimization-Directed Design*, Series: Nonconvex Optimization and Its Applications, Vol. 81, Springer Publishers
- Kurdila, A., Zabaranin, M. (2005) *Convex Functional Analysis*, Series: Systems & Control: Foundations & Applications, Birkhäuser, Switzerland

## Journal Publications

1. Tsyurmasto, P., Zabaranin, M., Uryasev, S. (2014) *Value-at-Risk Support Vector Machine: Stability to Outliers*, Journal of Combinatorial Optimization, to appear
2. Zabaranin, M. (2013) *Minimum-Resistance Shapes in Linear Continuum Mechanics*, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 469, No. 2160, to appear
3. Grechuk, B., Zabaranin, M. (2013) *Inverse Portfolio Problem with Mean-Deviation Model*, European Journal of Operational Research, to appear
4. Zabaranin, M., Pavlikov, K., Uryasev, S. (2013) *Capital Asset Pricing Model (CAPM) with Drawdown Measure*, European Journal of Operational Research, to appear
5. Zabaranin, M., Murphey, R., Murray, R. (2013) *Optimization of Convergence Rate and Stability Margin of Information Flow in Cooperative Systems*, Automatica, Vol. 49, pp. 2030–2038
6. Zabaranin, M., Smagin, I., Lavrenteva, O., Nir, A. (2013) *Viscous Drop in Compressional Stokes Flow*, Journal of Fluid Mechanics, Vol. 720, pp. 169–191
7. Zabaranin, M. (2013) *A Liquid Spheroidal Drop in A Viscous Incompressible Fluid under A Steady Electric Field*, SIAM Journal on Applied Mathematics, Vol. 73, No. 2, pp. 677–699
8. Grechuk, B., Molyboha, A., Zabaranin, M. (2013) *Cooperative Games with General Deviation Measures*, Mathematical Finance, Vol. 23, No. 2, pp. 339–365
9. Zabaranin, M. (2012) *Cauchy Integral Formula for Generalized Analytic Functions in Hydrodynamics*, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 468, No. 2148, pp. 3745–3764
10. Molyboha, A., Zabaranin, M. (2012) *Stochastic Optimization of Sensor Placement for Diver Detection*, Operations Research, Vol. 60, No. 2, pp. 292–312
11. Grechuk, B., Zabaranin, M. (2012) *Schur Convex Functionals: Fatou Property and Representation*, Mathematical Finance, Vol. 22, No. 2, pp. 411–418
12. Grechuk, B., Zabaranin, M. (2012) *Optimal Risk Sharing with General Deviation Measures*, Annals of Operations Research, Vol. 200, No. 1, pp. 9–21
13. Grechuk, B., Molyboha, A., Zabaranin, M. (2012) *Mean-Deviation Analysis in the Theory of Choice*, Risk Analysis: An International Journal, Vol. 32, No. 8, pp. 1277–1292
14. Zabaranin, M. (2011) *Shape Optimization in Magneto hydrodynamics*, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 467, No. 2136, pp. 3371–3392
15. Zabaranin, M. (2011) *Generalized Analytic Functions in Magneto hydrodynamics*, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 467, No. 2136, pp. 3343–3370
16. Molyboha, A., Zabaranin, M. (2011) *Optimization of Steerable Sensor Network for Threat Detection*, Naval Research Logistics, Vol. 58, No. 6, pp. 564–577
17. Zabaranin, M., Molyboha, A. (2011) *Shape Optimization in Viscous Incompressible Fluid under Oseen Approximation*, SIAM Journal on Control and Optimization, Vol. 49, No. 3, pp. 1358–1382
18. Zabaranin, M., Nir, A. (2011) *Generalized Analytic Functions in an Extensional Stokes Flow with a Deformable Drop*, SIAM Journal on Applied Mathematics, Vol. 71, No. 4, pp. 925–951

19. Krokhamal, P., Zabaranin, M., Uryasev S. (2011) *Modeling and Optimization of Risk*, Surveys in Operations Research and Management Sciences, Vol. 16, pp. 49–66
20. Zabaranin, M. (2010) *Generalized Analytic Functions in Axially Symmetric Oseen Flows*, SIAM Journal on Applied Mathematics, Vol. 70, No. 7, pp. 2473–2508
21. Zabaranin, M., Molyboha A. (2010) *Three-Dimensional Shape Optimization in Stokes Flow Problems*, SIAM Journal on Applied Mathematics, Vol. 70, No. 6, pp. 1788–1809
22. Grechuk, B., Molyboha, A., Zabaranin, M. (2010) *Chebyshev Inequalities with Law Invariant Deviation Measures*, Probability in the Engineering and Informational Sciences, Vol. 24, No. 1, pp. 145–170
23. Grechuk, B., Molyboha, A., Zabaranin, M. (2009) *Maximum Entropy Principle with General Deviation Measures*, Mathematics of Operations Research, Vol. 34, No. 2, pp. 445–467
24. Zabaranin, M. (2008) *The Framework of  $k$ -Harmonically Analytic Functions for Three-dimensional Stokes Flow Problems, Part II*, SIAM Journal on Applied Mathematics, Vol. 69, No. 3, pp. 881–907
25. Zabaranin, M. (2008) *The Framework of  $k$ -Harmonically Analytic Functions for Three-dimensional Stokes Flow Problems, Part I*, SIAM Journal on Applied Mathematics, Vol. 69, No. 3, pp. 845–880
26. Pashko, S., Molyboha, A., Zabaranin, M., Gorovyy, S. (2008) *Optimal Sensor Placement for Underwater Threat Detection*, Naval Research Logistics, Vol. 55, Issue 7, pp. 684–699
27. Rockafellar, R.T., Uryasev, S., Zabaranin, M. (2008) *Risk Tuning with Generalized Linear Regression*, Mathematics of Operations Research, Vol. 33, No. 3, pp. 712–729
28. Zabaranin, M. (2007) *Asymmetric 3D Stokes Flows about Two Fused Equal Spheres*, Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, Vol. 463, No. 2085, pp. 2329–2349
29. Zabaranin, M. (2007) *Asymmetric Creeping Motion of a Rigid Spindle-shaped Body in a Viscous Fluid*, SIAM Journal on Applied Mathematics, Vol. 68, Issue 2, pp. 461–485
30. Rockafellar, R.T., Uryasev, S., Zabaranin, M. (2007) *Equilibrium with Investors Using a Diversity of Deviation Measures*, The Journal of Banking and Finance, Vol. 31, Issue 11, pp. 3251–3268
31. Zabaranin, M., Krokhamal, P. (2007) *Generalized Analytic Functions in 3D Stokes Flows*, The Quarterly Journal of Mechanics and Applied Mathematics, Vol. 60, No. 2, pp. 99–123
32. Zabaranin, M., Ulitko, A.F. (2006) *Hilbert Formulas for  $r$ -Analytic Functions and the Stokes Flow about a Biconvex Lens*, Quarterly of Applied Mathematics, Vol. 64., No. 4, pp. 663–693
33. Zabaranin, M., Ulitko, A.F. (2006) *Hilbert Formulas for  $r$ -Analytic Functions in the Domain Exterior to Spindle*, SIAM Journal on Applied Mathematics, Vol. 66, No. 4, pp. 1270–1300
34. Rockafellar, R.T., Uryasev, S., Zabaranin, M. (2006) *Optimality Conditions in Portfolio Analysis with General Deviation Measures*, Mathematical Programming, Ser. B, Vol. 108, No. 2–3, pp. 515–540
35. Rockafellar, R.T., Uryasev, S., Zabaranin, M. (2006) *Generalized Deviations in Risk Analysis*, Finance & Stochastics, Vol. 10, No. 1, pp. 51–74
36. Zabaranin, M., Uryasev, S., Murphey, R. (2006) *Aircraft Routing under the Risk of Detection*, Naval Research Logistics, Vol. 53, Issue 8, pp. 728–747
37. Rockafellar, R.T., Uryasev, S., Zabaranin, M. (2006) *Master Funds in Portfolio Analysis with General Deviation Measures*, The Journal of Banking and Finance, Vol. 30, Issue 2, pp. 743–778

38. Chekhlov, A., Uryasev, S., Zabaranin, M. (2005) *Drawdown Measure in Portfolio Optimization*, International Journal of Theoretical and Applied Finance, Vol. 8, No. 1, pp. 1–46
39. Zabaranin M. (2000) Exact solution of the displacement boundary-value problem of elasticity for a spindle, *Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM)*, Vol. 80, No. S2, pp. 413–414
40. Zabaranin, M. (1999) *A Unified Approach to Solving the Generalized Cauchy-Riemann System*, Reports of the National Academy of Sciences of Ukraine, No. 5, pp. 30–33 [in Russian]
41. Zabaranin, M. (1999) *Classical Approach to Solving the Lamé Equation for a Spindle*, *Mashinostroyeniye*, No. 3, pp. 23–31 [in Ukrainian]
42. Zabaranin, M. (1999) *Classical Approach to Solving the Lamé Equation for a Spindle in Axially Symmetric Case*, *Bulletin of the University of Kiev, Series: Physics & Mathematics*, No. 1, pp. 14–18 [in Ukrainian]
43. Zabaranin, M. (1999) *The Second Fundamental Axisymmetrical Boundary-value Problem of Elasticity for a Spindle*, *Visnyk (bulletin) of Kiev National Taras Shevchenko University in the field of Mathematics and Mechanics*, Issue 3, pp. 66–75 [in Ukrainian]
44. Zabaranin, M., Ulitko, A.F. (1999) *The Stokes Flow about a Spindle in the Axially Symmetric Case*, *Visnyk (bulletin) of Kiev National Taras Shevchenko University in the field of Mathematics and Mechanics*, Issue 3, pp. 58–66 [in Ukrainian]

### Articles under Review

1. Grechuk, B., Zabaranin, M. *Cooperative Investment*, under review in *Finance & Stochastics*
2. Grechuk, B., Zabaranin, M., *Risk Averse Decision Making under Catastrophic Risk*, under review in *European Journal of Operational Research*

### Referred Book Chapters and Conference Proceedings

1. Murynets, I., Zabaranin, M., Piqueras Jover, R., Panagia, A. (2014) *Analysis and Detection of SIM-box Fraud in Mobility Networks*, *IEEE International Conference on Computer Communications 2014 (INFOCOM'14)*, accepted
2. Grechuk, B., Molyboha, A., Zabaranin, M. (2008) *Network Algorithms for the Dual of the Constrained Shortest Path Problem*, *Cooperative Networks: Control and Optimization* (P. Pardalos et al. Eds.), Edward Elgar Publishing, pp. 127–159
3. Zabaranin, M., Kurdila A., Prokopyev O., Goel A., Causey R., and Pardalos P. (2008) *Optimization Approaches to Vision-based Trajectory Planning for Autonomous Micro-air Vehicles*, *Cooperative Networks: Control and Optimization* (P. Pardalos et al. Eds.), Edward Elgar Publishing, pp. 325–356
4. Chekhlov, A., Uryasev, S., Zabaranin, M. (2003) *Portfolio Optimization with Drawdown Constraints, Asset and Liability Management Tools* (B. Scherer Ed.), *Risk Books*, London, pp. 263–278
5. Zabaranin, M., Uryasev, S., Pardalos, P. (2002) *Optimal Risk Path Algorithms*, *Cooperative Control and Optimization* (R. Murphey and P. Pardalos Eds.), *Kluwer Academic Publishers*, Dordrecht, pp. 271–303
6. Zabaranin, M. (1998) *Schwartz Formulas for  $r$ -Analytic Functions in the Bipolar Co-ordinates*, *Proceedings of IV International Conference “Modern Problems of Continuum Mechanics,”* Vol. 1, Rostov-Don, Russia, pp. 150–154 [in Russian]

## Published Reports and Abstracts

- Zabaranin, M. *Semi-Analytical Approach to Three-Dimensional Shape Optimization Problems*, Air Force Office of Scientific Research (AFOSR), April 2008, Report No. A690284
  - Zabaranin, M. *Exact Solution of the Displacement Boundary-valued Problem of Elasticity for a Spindle*, Gesellschaft für Angewandte Mathematik und Mechanik (GAMM) 99, Metz, France, April 1999 (Book of Abstracts, Metz, 1999, p. 165)
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## Awards

- Air Force Summer Faculty Fellowship Program (AF SFFP), Eglin Air Force base, FL, July–August 2009
  - Industrial and Systems Engineering Graduate Student Award for Excellence in Research, University of Florida, 2002
  - College of Engineering International Student Award for Outstanding Academic Achievement, University of Florida, 2002
  - Institute for Operations Research and the Management Sciences (INFORMS), Doctoral Colloquium Participant, 2001
  - Diploma of the National Academy of Sciences of Ukraine in the Competition of Young Scientists and Students for the Best Research Project, 1997
  - Scholarship of the National Academy of Sciences of Ukraine for Scientific and Academic Achievements, 1995
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## Ph.D. Students and Postdoctoral Associates

- Thesis advisor of graduated Ph.D. students (Stevens Institute of Technology):
    - Carlos Castillo, tentative thesis title “Optimal Design of Optical Waveguides”
    - Bogdan Grechuk, thesis “Deviation Measures: Theory and Application,” graduated in Spring 2009
    - Anton Molyboha, thesis “Optimization Approaches to Sensor Placement for Threat Detection,” graduated in Spring 2009
  - Postdoctoral associates (Stevens Institute of Technology):
    - Dr. Anton Molyboha, shape optimization in viscous incompressible fluid, June 2009 – August 2010
    - Dr. Sergei Pashko, optimal sensor placement for underwater threat detection, June 2005 – July 2006
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## Funding

- PI: *Three-dimensional Shape Optimization in Viscous Incompressible Fluid*, Air Force Office of Scientific Research (AFOSR), 2009–2010
- PI: *Mathematical Programming Techniques in Variational Problems*, Air Force Office of Scientific Research (AFOSR), 2007

- Co-PI: *Optimal Sensor Placement for Underwater Threat Detection* (Maritime Security Laboratory), Office of Naval Research (ONR), 2005–2008
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## Teaching

- Graduate-level courses (Stevens Institute of Technology)
  - MA 615, Numerical Analysis I
  - MA 629, Convex Analysis and Nonlinear Optimization
  - MA 630, Numerical Methods of Optimization
  - MA 632, Theory of Games
  - MA 650, Intermediate Partial Differential Equations
  - MA 681, Functions of Complex Variable I
  - MA 712, Mathematical Models of Risk
- Undergraduate-level courses (Stevens Institute of Technology)
  - MA 116, Mathematical Analysis II
  - MA 117, Calculus for Business and Liberal Arts
  - MA 118, Probability for Business and Liberal Arts
  - MA 119, Multivariable Calculus & Finite Mathematics
  - MA 182, Honors Mathematical Analysis II
  - MA 222, Probability and Statistics
  - MA 281, Honors Mathematical Analysis III
  - MA 282, Honors Mathematical Analysis IV
  - MA 346, Numerical Methods
  - MA 361, Intermediate Partial Differential Equations
- Undergraduate-level courses (University of Florida)
  - Engineering Economy, EIN 4354

## Developed courses (Stevens Institute of Technology):

- MA 631, *Calculus of Variations*
  - MA 632, *Theory of Games*
  - MA 712, *Mathematical Models of Risk*
- 

## Academic Service

- Associate Editor of *Optimization Letters*, Springer Publishers, 2006–present
- Proposal evaluation:
  - *Decision, Risk and Management Science Program*, National Science Foundation (NSF), December 2009
  - *Computational Mathematics Program*, Air Force Office of Scientific Research (AFOSR), August 2007

- *Operations Research Proposal Panel Review, Division of Design, Manufacture and Industrial Innovation*, National Science Foundation (NSF), Arlington, VA, May 2007
- *Service Enterprise Engineering Unsolicited Proposal Panel Review, Division of Design, Manufacture and Industrial Innovation*, National Science Foundation (NSF), Arlington, VA, April 2005
- Reviewer of books
  - *Partial Differential Equations and Boundary Value Problems with Maple 11* by George A. Articolo, Elsevier, October 2008
  - *Probability and Statistics for Engineers and Scientists (7th Edition)* by Ronald E. Walpole, Raymond H. Myers, Sharon L. Myers, Keying Ye, Prentice Hall Publishing, July 2005
- Reviewer for *Wiley Encyclopedia of Operations Research and Management Science*
- Reviewer for journals
  - Optimization: *SIAM Journal on Optimization, Mathematical Programming, Journal of Combinatorial Optimization, Optimization and Engineering, Journal of Global Optimization, Optimization Methods & Software, Optimization Letters*
  - Operations Research and Management Science: *Operations Research, Mathematics of Operations Research, Computers & Operations Research, Naval Research Logistics, The International Journal of Management Science*
  - Financial Mathematics: *Mathematical Finance, Quantitative Finance, Journal of Banking and Finance, Journal of Empirical Finance, Risk Analysis, IIE Transactions*
  - Applied Mathematics and Mechanics: *Fluid Mechanics, SIAM Journal on Applied Mathematics, Journal of Directed Energy*
- Co-organizer of conferences and workshops:
  - *Workshop in Mathematical Physics*, Stevens Institute of Technology, Hoboken, NJ, April 2006
  - *Robust Optimization-Directed Design Conference*, Graduate Engineering and Research Center, University of Florida, Shalimar, FL, April 2004
- Organizer of conference sessions:
  - *Modeling and Optimization of Risk*, INFORMS 2011 Annual Meeting, Charlotte, NC
  - INFORMS 2008 Annual Meeting, Washington, DC
    - \* *Optimization under Risk*
    - \* *Axiomatic Foundations of Risk Analysis*
    - \* *Continuous Optimization*
  - *Axiomatic Foundations of Risk Analysis*, INFORMS 2007 Annual Meeting, Seattle, WA
  - *Risk Analysis in Military Applications*, INFORMS 2006 Annual Meeting, Pittsburgh, PA
- Co-organizer of *Optimization of Stochastic Systems Seminar*, Stevens Institute of Technology, 2005–2006
- Committee member (Stevens Institute of Technology)
  - Graduate Curriculum Committee (GCC), 2013–present
  - Academic Standards Committee, 2010–2012
  - Undergraduate Promotions Committee, 2005–2007

- Dean Search Committee, Arthur E. Imperatore School of Sciences & Arts, 2007
  - Graduate Committee, Department of Mathematical Sciences, 2007–present
  - Member of the professional societies:
    - The Institute For Operations Research and The Management Sciences (INFORMS)
    - Society for Industrial and Applied Mathematics (SIAM)
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## Invited Talks

1. *Stochastic Optimization of Sensor Placement for Diver Detection*, INFORMS 2013 Annual Meeting, Minneapolis, MN, October 2013
2. *General Deviation Measures: Theory and Application*, INFORMS 2011 Annual Meeting, Charlotte, NC, November 2011
3. *Generalized Analytic Functions in 3D Problems of Applied Mathematic*, International Congress on Industrial and Applied Mathematics (ICIAM), Vancouver, Canada, July 2011
4. *Recent Progress in the Theory and Applications of Deviation Measures*, Fifth Rutgers-Stevens Workshop on Optimization of Stochastic Systems, Rutgers University, Piscataway, NJ, March 2009
5. *Sensor Network Optimization: Optimal Sensor Placement and Coverage Problems*, International Conference on Engineering Risk Control and Optimization, Gainesville, FL, February 22–23, 2009
6. *General Deviation Measures: Theory and Application*, The Fuqua School of Business, Duke University, Durham, NC, February 5, 2008
7. *Stochastic Optimization of Sensor Network for Underwater Threat Detection*, 8th International Conference on Cooperative Control and Optimization, Gainesville, FL, January 2008
8. *Stochastic Optimization of Sensor Network*, INFORMS 2007 Annual Meeting, Seattle, WA, November 2007
9. *Aircraft Routing under the Risk of Detection*, INFORMS 2007 Annual Meeting, Seattle, WA, November 2007
10. *Generalized Analytic Functions in 3D Axially Symmetric Stokes Flows*, Department of Mathematics, Louisiana State University, Baton Rouge, LA, October 22, 2007
11. *Optimal Security Inspection with a Single-server Queue*, Special Session on Risk-Averse Optimization at the AMS Sectional Meeting, Hoboken, NJ, April 2007
12. *Optimal Security Inspection with a Single-server Queue*, Fourth Rutgers-Stevens Workshop on Stochastic Systems, Hoboken, NJ, March 2007
13. *Quantile-based Deviation Measures*, International Conference on Financial Engineering, Gainesville, FL, March 2006
14. *Deviation Measures in Risk Analysis*, Third Rutgers-Stevens Workshop, Optimization of Stochastic Systems: Risk-Averse Optimization, Rutgers University, NJ, September 2005



15. *Deviation Measures and Asset Pricing*, International Conference on Risk Management and Quantitative Approaches in Finance, Gainesville, FL, April 2005
16. *Portfolio Optimization with Deviation Measures*, Columbia Mathematics of Finance Practitioners Seminar, Columbia University, New York, NY, March 22, 2005
17. *Portfolio Analysis with General Deviation Measures*, International Conference on Modeling, Optimization, and Risk Management in Finance, Gainesville, FL, March 2003
18. *Analytical and Discrete Optimization Approaches in Optimal Trajectory Generation*, Conference on Cooperative Control and Optimization, Gainesville, FL, December 2002
19. *Portfolio Optimization with Drawdown Constraints*, International Conference on Financial Engineering, e-Commerce and Supply Chain, and Strategies of Development, Athens, Greece, June 2002
20. *Analytical and Discrete Optimization Approaches in Optimal Trajectory Generation*, Invitational Workshop 2002: Design and Use of Flight Vehicles for a Cooperative Attack Testbed, Graduate Engineering and Research Center, Shalimar, FL, July 2002

### **Other Conference and Seminar Presentations**

1. *Three-dimensional Shape Optimization in Viscous Incompressible Fluid*
  - International Congress on Industrial and Applied Mathematics (ICIAM), Vancouver, Canada, July 2011
  - AFOSR Annual Review, Arlington, VA, June 2011
  - SIAM Conference on Computational Science and Engineering, Reno, NV, February 2011
  - 8th Euromech Fluid Mechanics Conference, Bad Reichenhall, Germany, September 2010
  - AFOSR Annual Review, Arlington, VA, July 2010
  - 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, Sydney, Australia, July 2010
2. *Generalized Analytic Functions in Axially Symmetric Oseen Flows*, SIAM Conference on Analysis of Partial Differential Equations, Miami, FL, December 2009
3. *Recent Progress in the Theory and Application of Deviation Measures*, INFORMS 2009 Annual Meeting, San Diego, CA, October 2009
4. *Sensor Network Optimization for Threat Detection*, University of Florida Research and Engineering Education Facility (UF REEF), Shalimar, FL, August 2009
5. *Sensor Network Optimization for Threat Detection*, Risk Analysis of Complex Systems for National Security Applications, Santa Fe, NM, April 2009
6. *Semi-analytical Approach to Three-dimensional Shape Optimization Problems*, INFORMS 2008 Annual Meeting, Washington, DC, October 2008
7. *The Framework of  $k$ -Harmonically Analytic Functions for Three-Dimensional Stokes Flow Problems*, 2008 SIAM Annual Meeting, San-Diego, CA, July 2008
8. *Quantile-based Deviation Measures*, SIAM Conference on Optimization, Boston, MA, May 2008

9. *Semi-analytical Approach to Three-Dimensional Shape Optimization Problems*, AFOSR Annual Review, Arlington, VA, April 2008
10. *Deviation Measures: Theory and Application*, INFORMS 2007 Annual Meeting, Seattle, WA, November 2007
11. *Generalized Analytic Functions in 3D Stokes Flows*, 6th International Congress on Industrial and Applied Mathematics, Zürich, July 2007
12. *Generalized Analytic Functions in 3D Stokes Flows*, SIAM Conference on Computational Science and Engineering, Costa Mesa, CA, March 2007
13. *Optimal Security Inspection with a Single-server Queue*, INFORMS 2006 Annual Meeting, Pittsburgh, PA, November 2006
14. *Generalized Analytic Functions in Axially Symmetric Stokes Flows*, Workshop in Mathematical Physics, Hoboken, NJ, April 2006
15. *Deviation Measures in Optimization and Risk Analysis*, INFORMS 2005 Annual Meeting, San-Francisco, CA, November 2005
16. *General Deviation Measures and Portfolio Analysis*, The Tenth International Conference on Stochastic Programming, University of Arizona, Tucson, AZ, October 2004
17. *Portfolio Analysis with General Deviation Measures*, INFORMS 2003 Annual Meeting, Atlanta, GA, October 2003
18. *Analytical and Discrete Optimization Approaches in Optimal Trajectory Generation*, Annual Review Meeting: Research Institute for Autonomous Precision Guided Systems, Graduate Engineering & Research Center, Shalimar, FL, December 2002
19. *Portfolio Optimization with Drawdown Constraints*,
  - SFA 2002 Annual Meeting, Key West, FL, November 2002
  - INFORMS 2002 Annual Meeting, San Jose, CA, November 2002
  - 982nd AMS Meeting, Orlando, FL, November 2002
  - SFA 2001 Annual Meeting, Destin, FL, December 2001
  - INFORMS 2001 Annual Meeting, Miami Beach, FL, November 2001
  - 2001 Annual FMA Meeting, Toronto, Canada, October 2001
  - Annual Research Conference in Financial Risk, Budapest, Hungary, July 2001
  - 17th International Symposium on Mathematical Programming, Atlanta, GA, August 2000
  - International Conference on Stochastic Optimization: Algorithms and Applications, Gainesville, FL, February 2000
20. *Optimal Risk Path Algorithms*, The Workshop for Cooperative Control and Optimization, Gainesville, FL, December 2000
21. *Classical Approach to Solving the Lamé Equation for a Spindle*, International Conference “Modern Problems of Mechanics and Mathematics,” Lviv, Ukraine, May 1999
22. *Axially Symmetric Problems of Elasticity*, International Conference “Modern Problems of Mechanics and Mathematics,” Lviv, Ukraine, May 1998