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I EDUCATION AND DEGREES

M.S. in Mathematics, University of Warsaw, Warsaw (Poland), 1972
Ph.D. in Mathematics, University of Warsaw, Warsaw (Poland), 1975

II EMPLOYMENT

Polish Academy of Sciences, Warsaw, Poland, Control Theory Institute, Assistant Professor, 1975–1980

University of California, Los Angeles, CA, Postdoctoral Fellow 1977–1980

University of Florida, Gainesville, FL, Mathematics Department, Assistant Professor, 1980–1981; Associate Professor, 1981–1984 (tenured); Professor, 1984–1987.

University of Virginia, Charlottesville, VA, Department of Applied Mathematics, Professor (tenured), 1987–1998; Department of Mathematics, Professor (tenured) 1998-2011;
Commonwealth Professor of Mathematics, 2011

University of Memphis, Memphis,TN, Department of Mathematical Sciences, Chair
Distinguished University Professor, September 2013 -

Visiting Appointments and Long-Stay Visits

1976 January–March , Department of Mathematics, Liege University, Belgium, Visiting Assistant Professor

1984, 1991 Summer, Scuola Normale Superiore, Pisa, Italy, CNR Fellow and Visiting Professor

1986, 1991 August, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, Visiting Professor

1984, 1990, 1991, 1992 July, Department of Mathematics, University of Bologna, Bologna, Italy, Visiting Professor

1992 October–December (sabbatical leave), Department of Mathematics, University of Trento, Italy, Visiting Professor

1992 November (sabbatical leave), NSF IMA Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, IMA Fellow

1994 June–July, Instituto di Calcolo Scientifico (IAC) "Al Picone" Rome, Italy, CNR Fellow

1995 March, NSF IMA Institute of Mathematics and its Applications, University of Minnesota, Minneapolis, IMA Fellow

1997, 1998, Summer, Scuola Normale Superiore, Pisa, Italy, Visiting Professor

2001 June–July NSF IMA Institute of Mathematics and its Applications, University of Minnesota, Minneapolis, IMA Fellow

2002 Spring Semester, Scuola Normale Superiore, Pisa, Italy, Visiting Professor

2003 January, Mittag Leffler Institute, Stokholm (Drujholm), Sweden

2005 May, Universite of Nice and INRIA -Sophie Antipolis. France

2007 October, University of California, Los Angeles.

2010 Summer, Department of Mathematics, University of Warsaw, Poland

2011 October, University of Graz, Austria.

2011, July, Polish Academy of Sciences, Systems Research Institute, Warsaw.

2012, August, University of Rio de Janeiro and University of Maringa, Brazil.

2013, May, Polish Academy of Sciences, Systems Research Institute, Warsaw.

2016-Spring, IMA (Institute of Mathematics and Applications), University of Minnesota.

2021-Spring. MSRI University of California, Berkeley.

III HONORS AND AWARDS

- Awarded **William R. Sparks Eminent Faculty Award** -2020,
- Awarded **Eisenbud Research Professor at MSRI -Berkeley** [Mathematical Sciences Research Institute] at the University of Ca, Berkeley. Spring- 2021.
- Awarded by the AACC-IFAC [American Automatic Control Council] the **2019 Richard E. Bellman Control Heritage Award** with the citation *for contribution to boundary control theory of distributed parameter systems*
- Awarded **SIAM Fellow** -2019 with the citation *For fundamental contributions to control theory of partial differential equations and their dissemination through numerous invited talks, administrative positions in professional societies, and the mentoring of many PhD students and postdoctoral associates.*
- Series of Lectures at the Institute of Mathematics, Technical University of Warsaw, Poland, June 2019.
- Dr Karen Ames Memorial Lecture- University of Alabama, Huntsville, April 19, 2019.
- Plenary Speaker at ETAMM 2018 [Emerging Trends in Applied Mathematics and Mechanics] , Cracov, Poland, June 18, 2018.
- Plenary Lecture at the Conference "Paths in Mathematical Control Theory", Torino, Italy, February 27,2018.
- One of the 4 main speakers at the Oberwolfach Lectures Seminar *Mathematical Theory of Flow-Fluid Structure Interacations* , Oberwolfach, Germany, November 21-26,2016.
- Invited one hour address at the AMS Conference, Stony Brook, March 2016.
- Plenary Speaker at IMACS Conference on Nonlinear Evolution Equations and Wave Phenomena, Georgia Center, University of Georgia, April 01-04, 2015.
- Induced to the **2015 Class of AMS Fellows** . *for contribution to control theory of PDE's, mentorship and service to professional societies.*
- Awarded the Kosciuszko Foundation Distinguished Fellow of the Collegium of Eminent Scientists-2014
- Plenary Speaker at SIAM-SEAS, University of Alabama, Birmingham, March 20-25, 2015.
- Plenary Speaker at HYP-RIO 2014, IMPA, Rio de Janeiro, July 26-August 1, 2014.
- Ellis B. Stouffer Distinguished Lecture, Department of Mathematics, University of Kansas . December 3, 2013.
- Bold Aspiration Lecture Series -sponsored by the Provost Office , 2013-2014 Series. December 2013,University of Kansas.
- SIAM Reid Prize Lecture, Hyatt Regency, Baltimore, July 2011.
- Listed by StatStats.org in Top 26 Women Professors in Virginia, May 9, 2013. Top 26 Women Professors in Virginia onlineschoolsvirginia.com/top-college-professors-in-virginia/women/
- **Commonwealth Professor of Mathematics**, August 2011 (Endowed Chair), University of Virginia.
- Awarded **2011 Reid's Award: SIAM 2011 W.T. Idalia Reid Prize** for contribution to *Differential Equations and Control Theory* July 27, 2011.
- *ISI's Highly Cited Researcher*, http://isihighlycited.com (one of the 250 most highly cited mathematicians worldwide for the period 1981–1999).
  "*These individuals are the most highly cited within each category for the period 1981–1999, and comprise less than one-half of one percent of all publishing researchers.*"
  As of January 2020, MathSciNet shows 7010 citations by 1750 authors (see http://www.ams.org/mathscinet/).
  Google Scholar citation: 15592 with h-index 61

- Eminent Scientist -The Kosciuszko Foundation Collegium List: http://www.thekf.org.programs/eminentscientists.
- Recipient of the **Presidential Professorship in Sciences,** Warsaw, Presidential Palace, October 9, 2012.
- Featured review by *Math Reviews* in 2001, Research monograph: *Control Theory for Partial Differential Equations: Continuous and Approximation Theories,* Vol. 1, *Abstract Parabolic Systems*, Cambridge University Press, Encyklopedia of Mathematics and its Applications, 680 pp., January 2000 (with R. Triggiani).
- Featured review by *Math Reviews* in 2001, Research monograph: *Control Theory for Partial Differential Equations: Continuous and Approximation Theories*, Vol. 2, *Abstract Hyperbolic-Like Systems with a Finite Time Horizon*, Cambridge University Press, Encyklopedia of Mathematics and its Applications, 422 pp., January 2000 (with R. Triggiani).
- **Polish Academy of Sciences Award** , overall scientific contributions, 1979.
- **Creativity Extension Award, National Science Foundation,** 1987-1989 .
- **IFIP Silver Core Award,** International Federation for Information Processing (IFIP), 1989.
- University Research Initiative Award, AFOSR, 1989–1992.
- Barrett Lectures: Principal Lecturer, Univ. of Tennessee, March 1997.
- IEEE Distinguished Lecturer, 1999–2003.
- **Main Lecturer CMBS-NSF** Conference: *Mathematical Control Theory of Coupled PDE's*, (10 lectures), Univ. of Nebraska, Aug. 4–9, 1999.
- Distinguished Visiting Scholar: Texas Tech. University, March 2000.
- Principal Lecturer, Control Theory Series, 10 Lectures, Univ. of Jyvaskula, Finland, August 15–28, 1993.
- Principal Lecturer: Autumn School on Evolutions and Applications (5 lectures), Trento, Italy, Nov. 2001.
- 2005 J. Barrett Memorial Lectures: Main Speaker, University of Tennessee, April 2005.
- One of the three Principal Lecturers Summer School: SISSA : Nonlinear Hyperbolic Equations , Trieste, May 2012.
- One of the three Main Lecturers Summer School on Nonlinear Evolutions in PDE's, Koc University, Istambul, July 2012.
- One of the four Principal Lecturers in The Summer School: Recent Advances in PDE's with Applications, University of Milano, Milano, June 17-21, 2013.
- **2004 IEEE Fellow** with the citation: *For Contribution to Boundary Control Systems*, 2004.
- Appointed (January 2006-2010) to The International Advisory Board of the Polish Academy of Sciences.
- Nominating Committee for Nomination of Candidates for the 2008 (24^{th}), 2010 (26-th), 2011 (27-th) , 2013 (29-th), 2015 (31-st), 2016 (32-nd) JAPAN Prize in Science and Technology https://jpns.japanprize.jp/
- Nominating Committee for the *Kyoto Prize* . Innamori Foundation, Japan.
- Nominating Committee for the SIAM 2014 W.T. Idalia Reid's Prize
- .Awarded Honorary European Union Visiting Professorship at the Department of Mathematics, University of Warsaw, 2010 Poland.
- The *Technical Achievement Award* by ICNPAA, *International Congress Nonlinear Analysis and Applications*, with the citation: *For Outstanding Contribution to Nonlinear Mathematical Analysis*, June 22, 2006, Budapest, Hungary.

- Elected Research Member of the Polish Academy of Sciences-2009-2012.
- Plenary (one-hour) lectures delivered at various national and international meetings, including AMS, SEARCDE, IEEE, IFIP, AIMS, CNRS, and SIAM meetings (see section "Plenary Speaker at Conferences"). Recent Plenary speaker (one of the three-four speakers) at the 29th Annual Southeastern–Atlantic Conference on Differential Equations (SEARCDE-29), Mercer University, GA, October 16–17, 2009, MTNS (Mathematical Theory of Networks and Systems, Fez, Maroco, May 25-28, 2009; ICNPAA 2010 World Congress, Mathematical Problems in Engineering Aerospace and Sciences, Sao Jose dos Campos, Brazil, June 30-July 4, 2010, W.T. Reid Lecture at SIAM 2011 Control Conference, Hyatt Regency, Baltimore, July 24-27, 2011, International School on Recent Advances in PDE;s- Milano, June 17-22, 2013, HYP2014-XV International Conference on Hyperbolic Problems, IMPA. Rio de Janeiro, July 28-August 1, 2014, SIAM - SEAS Conference Birmingham, 2015. IMACS Conference Univ of Georgia, May 2015, AMS Conference in Stony Brooke, March 2016, 7-th GPCO Conference, Bedlewo, Polsh Academy of Sciences, August 27-30, 2017; Paths in Mathematical Control Theory, Torino, Italy, March 23-25, 2018; Workshop on Fluid Structure interactions, Milano, March 16-20, 2019; NSF-AFOSR Workshop on Control of PDE's, San Juan, December 5-8, 2018; IFAC 3-rd Workshop on Control of Distributed Parameter Systems, May 20-24, 2019, Oaxaca, Mexico
- Frequently invited to contribute original research papers for special volumes. Recently, in honor of Jacque Luis Lions, A.V. Balakrishnan, Herbert Amann, Giuseppe DaPrato, Gunther Lumer, Peter Lax, Jan Pruss.

IV RESEARCH INTERESTS: Control Theory of Partial Differential Equations, Applicable Analysis

1. *Partial Differential Equations and Related Control Theory*
   Mixed problems for parabolic and hyperbolic partial differential equations, and related optimization theory. Differential and algebraic Riccati operator equations for optimal control problems with boundary controls. H_∞ theory for PDE's. "Sharp" regularity theory of solutions in the interior and of their traces on the boundary. Boundary stabilization, controllability problems for linear and nonlinear parabolic and hyperbolic PDE's, as well as coupled systems of PDE's (parabolic-hyperbolic, or hyperbolic-hyperbolic coupling). Mathematical control of systems arising in nonlinear elasticity. Flutter suppression, noise control, structural acoustic problems, thermoelastic systems and more generally interactive structures. Mathematical control theory of coupled partial differential equations. Theory of dissipative PDE systems and compact finite-dimensional attractors.

2. *Numerical Analysis*
   Finite element and spectral methods for partial differential equations and related control problems. Includes rates of convergence of numerical approximations to mixed problems for partial differential equation, with particular emphasis on non-smooth boundary and initial data. Numerical approximations of differential and algebraic operator Riccati equations arising in boundary optimal control problems. Compensation, estimation theory for PDE's including numerical aspects. Analysis of compensator design and partially observed PDE's.

3. *Optimization Theory*
   Applications of abstract optimization theory in the context of general dynamics, including partial differential equations and functional differential equations. Optimal control problems including minimal time, minimal cost problems governed by coupled systems of PDE's.

4. *Nonlinear Dynamical PDE Systems*
   Long-time behavior, attractors, inertial manifolds in hyperbolic-like systems including von Karman full systems in mechanics. Optimization, control and long-time behavior of coupled/hybrid PDE systems. Stability and controllability of PDE interactive systems with control on the interface between the two media: (1) structural acoustic interactions - coupling between acoustic wave equation and nonlinear plate equation, (2) fluid structure interactions - coupling between Navier Stokes equation and dynamic system of elasticity or Navier Stokes equation and a thermal equation [Boussinesq system]. PDE problems of potential interest in non-invasisve treatments in fluids [blood] and High Intensity Focused Ultrasound [HIFU] in medicine: (i) uniform stabilization of Navier Stokes equations by tangential finite dimensional boundary feedback; (2) analysis and control of the third order 9n time PDE arising in HIFU.

V GRANTS (Principal Investigator)

V(a) Research grants

1. **National Science Foundation. (NSF)**, Applied Mathematics, with R. Triggiani, 1981–1984

   National Science Foundation, Applied Mathematics, with R. Triggiani, 1984–1987

   National Science Foundation grant to sponsor International Conference on Control of PDE's at the University of Florida, Feb. 3–6, 1986

   National Science Foundation, 1987–1989 (Creativity Extension Award with R. Triggiani)

   National Science Foundation, Applied Mathematics, with R. Triggiani, 1989–1992

   Research Group Award, National Science Foundation, with R. Triggiani, 1989–1992

   National Science Foundation, Applied Mathematics, with R. Triggiani, 1992–1995

   National Science Foundation, International Exchange Program with France, with R. Triggiani and J. Zolesio (Univ. of Nice), 1993–1996

   NSF-American Mathematical Society grant to organize AMS Summer Research Conference on Optimization and PDE's, July 1996

   National Science Foundation, Applied Mathematics, with R. Triggiani, 1995–1998

   National Science Foundation, Applied Mathematics, with R. Triggiani, 1998–2001

   National Science Foundation and NRC, International Grant (Russia) (joint with I. Chueshov), 2001

   National Science Foundation, Applied Mathematics, with R. Triggiani, 2001–2006

   National Science Foundation, International Grant with INRIA (France), 2003–2006

   National Science Foundation, Applied Mathematics, with R. Triggiani, 2006–2011

   National Science Foundation, Applied Mathematics, with R. Triggiani, 2011-2016.

   National Center for Science, Applied Mathematics, with K. Szulc and A. Zochowski, 2015-2018

   National Science Foundation, Applied Mathematics, with R. Triggiani , 2017-2020.

   National Science Foundation, (NSF-DMS) , DUE IUSE Research , co-Pi with J, Haddock PI. 2018-2022.

2. **Air Force Office of Scientific Research (AFOSR)**, with R. Triggiani, 1984–1985

   Air Force Office of Scientific Research, with R. Triggiani, 1985–1986

   Air Force Office of Scientific Research, with R. Triggiani, 1986–1987

   Air Force Office of Scientific Research to sponsor International Conference at the University of Florida, Feb. 3–6, 1986

   Air Force Office of Scientific Research, with R. Triggiani, 1987–1989

   University Research Initiative (jointly with A. Manitius [G. Mason University], and R. Triggiani), Air Force Office of Scientific Research, 1989–1992

   Air Force Office of Scientific Research, with R. Triggiani, 2009–2012

   Air Force Office of Scientific Research , with R. Triggiani, 2012-2015.

3. **NATO** Grant (joint with L. Pandolfi, Univ. of Torino, Italy and R. Triggiani), 1993–1997

4. **NASA** Grant, Virginia Consortium, support of graduate students, 1992–2000

   NASA Grant, VGRC, support of graduate students, 2005–2008

   NASA Grant, VGRC, support of graduate students, 2009–2013.

5. **Army Research Office (ARO)**, with R. Triggiani, 1996–1999

   Army Research Office (ARO), with R. Triggiani, 1999–2003

   Army Research Office (ARO), with R. Triggiani, 2003–2006

V(b) Conference grants

1. IFIP Grant to sponsor International Conference on Control of PDE's, at the University of Florida, Feb. 3–6, 1986

2. NSF Grant (with G. Chen, Texas A&M Univ.) to sponsor Symposium on Control of PDE's (in honor of D. Russell), Texas A&M, College Station, October 21, 1993

3. SIAM Grant (with S. Cox, Rice Univ.), Symposium on Industrial Problems in Control, San Diego, CA, July 22–23, 1994

4. IFIP Grant (with M. Malanowski, Polish Academy of Sciences) to sponsor IFIP Conference on Modeling and Optimization with Applications to Engineering, Warsaw, Poland, July 17–21, 1995

5. AMS-NSF Grant (with S. Cox, Rice Univ. Houston) for AMS Summer Research Conference on Optimization and PDE's, Mt. Holyoke, June 16–20, 1996

6. NSF–IMA Grant (with G. Uhlman, Univ. Washington, C. Crook, Univ. of Pennsylvania) to sponsor IMA Workshop on Geometric Methods in Inverse Problems and Control, Univ. of Minnesota, Minneapolis, July 6–27, 2001

7. IFIP and CNRS Grant (with J. P. Zolesio INRIA, Nice, France) to sponsor 21st IFIP Conference on System Modeling and Optimization, Sophia Antipolis, France, July 21–23, 2003

8. IFIP and CNR Grant (with L. Pandolfi, Univ. of Torino) to sponsor 22nd IFIP Conference on Modeling and Optimization, Torino, Italy, July 2005

9. NSF–AMS Grant (with R. Triggiani, F. Ancona, Univ. of Bologna, W. Littman, Univ. of Minnesota) to sponsor AMS Summer Research Conference on Control of Nonlinear PDE Systems, Snowbird, Utah, July 3–8, 2005

10. IFIP Grant (with W. Mitkowski, Jagiellonski Univ. Krakow) to sponsor 23rd IFIP Conference on Modeling and Optimization, Krakow, Poland, July 23–27, 2007, Chair of IPC

11. NSF Grant (with M. Krstic, Univ. of San Diego) to sponsor NSF Workshop Horizons in Infinite Dimensional Deterministic and Stochastic Systems with Applications to Engineering, Univ. of California, Los Angeles, UCLA, January 30–February 2, 2009

12. SEARCDE 2013- South Eastern Regional Conference on Differential Equations [co-Pi with G. Goldstein, R. Triggiani].

13. NSF-BIRS Grant (with L. DeTeresa and K.Morris) for Conference on New Trends in Infinite Dimensional Control Theory, Banff International Research Center, July 16-21, 2017, Banff, Canada.

VI Ph.D. THESES DIRECTED (first employment noted in parenthesis)

1. Sung Chang (Assistant Professor, Mathematics Department, Dang University, Busan-Korea), "Riccati Equations for Nonsymmetric and Nondissipative Hyperbolic Systems," University of Florida, Dec. 1985.

2. Gilbert Choudoury (Assistant Professor Mathematics Department, University of Cincinnati). "Fully discrete Galerkin approximations of parabolic boundary value problems with non-smooth boundary data," University of Florida, Sept. 1987.

3. Elisabeth Bradley (Assistant Professor, Department of Mathematics, University of Louisville, KY). "Local and global exponential stabilization results for nonlinearly perturbed plates models where nonlinearities appear on the boundary," University of Virginia, May 1991.

4. Mary Ann Horn (NSF and IMA Postdoctoral Fellowship in the Department of Mathematics, University of Minnesota, Minneapolis, Professor University of Vanderbilt, Program Director NSF.). "Exact controllability and uniform stabilization of the Euler Bernoulli and Kirchoff plate equations with boundary feedback acting via bending moments," University of Virginia, May 1992.

5. Daniel Tataru (Assistant Professor, Department of Mathematics, Northwestern University, Evanston, Professor at UC Berkeley, Recipient of Sloan Fellowship, 1995, Bocher Prize 2002, Member of Academy of Sciences.). Co-advised with R. Triggiani. "A priori pseudoconvexity energy estimates in domains with boundary and exact boundary controllability for conservative P.D.E.," University of Virginia, May 1992.

6. Erik Hendrickson (Assistant Professor, Dept. of Mathematics, University of Arkansas and NRC Fellowship at Wright Patterson AFOSR Lab, Dayton, Ohio, NSA Washington DC.). "Approximation theory for compensator design for partially observed hyperbolic systems," University of Virginia, May 1995.

7. George Avalos (Assistant Professor, Dept. of Mathematics, Texas Tech University and NSF–IMA Postdoc at the IMA Institute at the University of Minnesota, Prof University of Nebraska, Lincoln.). "An analysis and regulator theory for the active control of a system of PDE's arising in smart structures and materials," University of Virginia, May 1995.

8. Richard Marchand (NRC Postdoctoral Fellowship at the Army Research Laboratory, AMSRL-WT-PD, Aberdeen, MD). "Approximations of control problems arising in dynamics of shells," University of Virginia, 1996.

9. John Ong (Assistant Professor, Mary Baldwin College). "Global existence, uniqueness and stability of a quasilinear hyperbolic equation with boundary dissipation," University of Virginia, Dec. 1997.

10. Guancgao Ji (Postdoc Fellow at Mittag Leffler Institut, Stockholm and Assistant Professor, Mathematics Department, Texas Tech. Univ., Lubbock). "Boundary stabilizations of PDE's—theory and algorithms," University of Virginia, 1998.

11. James Masters (Cycorp, Artificial Intelligence Software Development Company, Austin, Texas, Credit Suisse, NY, Data Scientist Q.A.). "Exact boundary controllability and uniform stabilization of selenoidal electromagnetic fields in a bounded region without geometric conditions," University of Virginia, Dec. 1999.

12. William Heyman (Lockheed-Martin Research Corp., Philadelphia, PA). "Finite-dimensional attractors in nonlinear elasticity," University of Virginia, 1998.

13. Catherine Lebiedzik (NSF Posdoctoral Fellowship followed by tenure-track Assistant Professorship at Mathematics Department, Wayne State University, Detroit, MI), "Stability properties of structural acoustic models with thermoelastic effects," University of Virginia, May 2001.

14. Cavit Hafizoglu (Enterprise Risk Management, SunTrust, Atlanta, Georgia, Well Fargo, Charlotte) "Linear quadratic boundary/point control of stochastic PDE's with unbounded coefficients," University of Virginia, August 2006.

15. Daniel Toundykov (3-year Postdoctoral Fellow at the Mathematics Department, University of Nebraska, Lincoln, Associate Professor TT University of Nebraska Lincoln.). "Long-term dynamics of semilinear wave equation with localized nonlinear dissipation, critical source term and mixed boundary conditions," University of Virginia, May 2007.

16. Amjad Tuffaha (3-year Postdoctoral Fellow at the Mathematics Department, University of Southern California (USC), Los Angeles, CA) "Wellposedness, solvability and optimal control of coupled partial differential equations with an interface," University of Virginia, May 2007.

17. Inger Daniels (Postgraduate fellowship at Tepper School of Business, CMU, Carnegie Mellon, Pittsburgh, V-President Citi Investment Research and Analysis, NY, 2014- present Director of Academic Excellence, Wake Forest University- Business School.), "Wellposedness of a nonlinear structural acoustic model with a Boussinesq plate equation," University of Virginia, May 2008.

18. Lorena Bociu (NSF International Research Fellowship with Institute Analyse Nonlineaire-CNRS, Univ. of Nice-Sophie Antipolis, France (2 years) folllowed by TT Assistant Prof and Assoc Prof.. in the Department pf Mathematics, North Carolina State-Raleigh, NC), Receipient of 2019 PECASE [Presidential Early Career Award Stem] Award, "Existence, uniqueness and blow-up of solutions to wave equations with supercritical boundary interior sources and damping," University of Virginia, May 2008.

19. Turker Ozsari, (Postdoctoral Fellow at Institute Henri Poincare, Paris, France, Assoc Professor Ismir Inst of Technology, Turkey.). "Stabilization of nonlinear Schrodinger equations" , University of Virginia, August 2010.

20. Yongjin Lu, (Tenure track Assistant Professorship at Virginia State University (VSU)). "Asymptotic stability of Solutions to Coupled PDEs with Interface ", University of Virginia, December, 2011.

21. Jameson Graber, (Postdoctoral Fellow at INRIA, Paris, TT Assistant Prof Baylor University.) , "The wave equation with generalized nonlinear acoustic boundary conditions", University of Virginia, August, 2012.

22. Justin Webster, (Postdoctoral Fellow , Mathematics Department, Oregon State University followed by Postdoc at NCState and TT at University of Maryland Baltimore), "Analysis of Flow-Plate Interactions: Semigroup Well-Posedness and Long Tome Behavior", University of Virginia, August 2012.

23. Nicolas Fourrier, (Research Analyst at CGG (Companie Generale de Geophysique) , Paris, France, Data Scientist at Soul Machines, Auckland, Australia.), "Analysis of existence, regularity and stability of solutions to wave equations with dynamic boundary conditions" , University of Virginia, May 2013.

24. Christpher Lefler, (Research Analyst at Northrop Grumman Corporation, Washington, DC), "Wellposedness and Stability of Nonlinear Schrodinger Equations with Dynamic/Wentzell Boundary Conditions". University of Virginia, May 2014.

25. Jason Knapp,: (Chief Science Officer- Riverain Technologies, Philadelphia). "Stability and Convergence of Approximate Solutions to the Moore-Gibson-Thomson Equation", University of Virginia, May 2014.

26. Rodrigo Monteiro (Postdoc at UFRJ (University Federal Rio de Janeiro, Brasil) "Long time dynamics of two classes of beam and plate equations.", University of Sao Paolo, Sao Paolo, Brasil, April 2016.

27. Arthur Caixeta, (Postdoc at Univ. of Maringa, Brasil and Assist. Professor University of Londrina, Brasil.) " Long time behavior for an equation of MGT type". University of Maringa, Brasil, May 2016.

28. Xiang Wan, (Postdoc Wayne State University) ,"Global Well-Posedness and Exponential Stability for a Nonlinear Thermoelastic Kirchhoff- Love Plate System", University of Virginia, July, 2017.

29. Buddhika Priyasad (ERC Postdoc University of Graz, Austria), "Uniform Stabilization of Navier Stokes Equations in l_q based Sobolev and Besov spaces", Co-advised with R. Triggiani, University of Memphis, May, 2019.

30. Sutthirut Charnoephon, (Assistant Professor DePauw University), "Vanishing relaxation time dynamics of the JMGT equation arising in high frequency ultrasound" , University of Memphis, May 2020.

VII POSTDOCTORAL FELLOWS

1. Josef Korbicz (Poland, University of Wroclaw), 1991
2. Sung Kang Chang (Korea, Donsang University), 1996
3. Shuping Chen (China, Zhangdou University), 1988
4. Peng. F. Yao (China, Univ. of Beijing), 1996–1998
5. John Cagnol (Univ de Nice, France), 1999–2000
6. Francesca. Bucci (Italy, Univ. of Firenze), 2001
7. Anastasia Ruzmaikina (Princeton Univ.), 1999–2002
8. Catherine Lebiedzik, [Universite de Nice, France] 2002–2003
9. John Cagnol (Univ. of Nice, France), 2001–2003
10. Il Hyo Jung (Pusan University, Korea), 2005–2006

11. Xangjin Xu (John Hopkins, Baltimore, MD) , 2004-2007
12. Pelin Geredeli, HCTPE, Ankara, Turkey, 2011. Now Asoc Prof Iowa State University, Ames.
13. Turker Ozsari, Koc University, Istanbul, Turkey, 2012.
14. Zhifei Zhang, Academia Sinica, Bejing,. 2013.
15. Xiaojun Wang, PennState University, 2014.
16. Michael Pokojovy, University Karlsruhe, 2012, 2013, 2016.
17. Jose Rodriquez, Sao Paolo University, Brasil, 2019- 2021.

V III PUBLICATIONS

VIII(a) Books. Research monographs

1. *Differential and Algebraic Riccati Equations with IR. Triggiani, Applications to Boundary/Point Control Problems: Continuous Theory and Approximation Theory* , Springer Verlag, Lecture Notes 164 (1991), 160 pp.
2. I. Lasiecka and R. Triggiani. : Control Theory for Partial Differential Equations: Continuous and Approximation Theories; Vol 1: Abstract Parabolic Systems (680 pp.) , *Encyclopedia of Mathematics and Its Applications Series*, Cambridge University Press, January 2000
3. Control Theory for Partial Differential Equations: Continuous and Approximation Theories; Vol 2: Abstract Hyperbolic-like Systems over a Finite Time Horizon (422 pp.) (with R. Triggiani), *Encyclopedia of Mathematics and Its Applications Series*, Cambridge University Press, January 2000.
4. *Stabilization and Controllability of Nonlinear Control Systems Governed by Partial Differential Equations* (with R. Triggiani), in preparation under contract from Springer Verlag. First draft of 500 pages available.
5. NSF-CBMS Lecture Notes: *Mathematical Control Theory of Coupled PDE's*, SIAM, Philadelphia, 242 pages, 2002.
6. *Functional Analytic Methods for Evolution Equations* (co-authored with G. Da Prato, A. Lunardi, L. Weis, R. Schnaubelt), Springer Verlag Lecture Notes in Mathematics, 254 pages, 2004.
7. Tangential Boundary Stabilization of Navier Stokes Equations (with V. Barbu and R. Triggiani), *Memoires of American Mathematical Society*, Vol. 181, pp. 1–125, 2006.
8. Long-Time Behavior of Second-Order Evolution Equations with Nonlinear Damping (with I. Chueshov), *Memoires of American Mathematical Society*, Vol. 195, AMS, 180 pages, 2008.
9. Von Karman Evolutions (with I. Chueshov), Monograph Series, *Springer Verlag.* 2010.
10. I. Chueshov and I. Lasiecka, Well-posedness and long time behavior in nonlinear dissipative hyperbolic-like evolutions with critical exponents. *Applied Mathematics, Vol. 6, HCDTE Lecture Notes. Part I. Nonlinear Hyperbolic PDEs, Dispersive and Transport Equations, AIMS,* 2013.
11. Mathematical Theory of Evolutionary Fluid-Flow Structure Interactions,[with B. Kaltenbacher, I. Kukawica, I. Lasiecka, R. Triggiani, A. Tuffaha, J. Webster], Oberwolfach Seminars, vol 48, 307 pages, *Birkhauser* 2018.
12. Stabilization of Navier-Stokes equations from the boundary [with B. Priyasad and R. Triggiani] -under contract with London Mathematical Society, Lecture Notes.

VIII(b) Books edited

1. *Control Problems for Systems Described by Partial Differential Equations and Applications* (with R. Triggiani), Springer Verlag Lecture Notes 97, 1987.

2. *Modelling and Inverse Problems of Control for Distributed Parameter Systems* (with A. Kurzhanski), Springer Verlag Lecture Notes in Control and Information Sciences 154, 1991.

3. *Control Problems in Industry* (with B. Morton), Birkhäuser, Progress in Systems and Control Theory 21, 1995.

4. *Optimization Methods in PDE's* (with S. Cox), AMS, Contemporary Mathematics, 1997.

5. *System Modeling and Optimization* (with A. Dontchev, P. Kall, A. Olbrot, and M. Polis), Chapman and Hall, Research Notes in Mathematics Series, 1999.

6. *Control of Nonlinear Distributed Systems* (with G. Chen and J. Zhou), Marcel Dekker, Lecture Notes in Pure and Applied Mathematics, Vol. 218, 2001.

7. Optimal Control of Complex Structures (with K-H. Hoffman, G. Leugering, J. Sprekels, F. Troltzsch), Birkhäuser, Vol. 139, 2002.

8. Analysis and Optimization of Differential Systems (with V. Barbu, D. Tiba and C. Varasan), Kluwer AP, 2003.

9. Geometric Methods in Inverse Problems and Control Theory, (with C. Cooke, G. Uhlmann and M. Vogelious), Springer Verlag, 2003.

10. Special Issue of Control and Cybernetics (with Jan Sokolowski), dedicated to Prof. K. Malanowski, Vol. 32, No. 3, 2003.

11. Control Methods in PDE-Dynamical Systems (with F. Ancona, W. Littman and R. Triggiani), AMS-SIAM Joint Summer Research Conference, *Contemporary Mathematics, AMS*, vol. 426. 2007

12. Control Theory of PDE's, guest editor (with L. Pandolfi) for the Special Issue in memory of J.L.Lions, of the journal *Applied Mathematics and Optimization*, Springer Verlag, Vol. 55, No. 2, 2007.

13. Special two volumes for *Applicationae Mathematicae*, Vol. 35(3) and 35(4), 2008. Journal of Polish Academy of Sciences, Institute of Mathematics, funded in 1953 by H. Steinhaus.

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17. Special Issue In Memory of A.V. Balakrishnan. Coedited with: A. Bensoussan, I. Kukavica, S. Mitter, R. Triggiani *Applied Mathematics and Optimization*, vol 73 (2016), no. 3,

18. Special Issue on Control, Optimization and PDE dedicated to Professor Viorel Barbu on the occasion of his 75th birthday. Coedited with Boris Mordukhovich, Simeon Reich and Alexander J. Zaslavski, *PAFA* 2018.

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2. Algebraic Riccati equations arising in boundary/point control: A review of theoretical and numerical results, Part I: continuous theory, Part II: Approximation theory (with R. Triggiani), *Perspectives in Control Theory,* Birkhäuser, pp. 175–235 (1990).

3. Recent advances in regularity of second-order hyperbolic mixed problems and applications (with R. Triggiani) for the series, *Dynamics Reported*, Springer Verlag, Vol. 3, pp. 104–162 (1994).

4. Riccati equations arising from boundary and point control problems, invited review paper for INRIA, *Conference Analysis and Optimization of Systems, LNCIS,* Springer Verlag, Vol. 185, pp. 23–46 (1993).

5. Control of systems governed by PDE's—A historical perspective, *34-th IEEE-CDC Conference*, p. 2792 (1995).

6. The case of differential geometry in the control of single and coupled PDE's, the structural acoustic chamber (with R. Gulliver, W. Littman and R. Triggiani), *The IMA Volumes in Mathematics and its Applications*, Springer Verlag, Vol. 137, pp. 73–183 (2003).

VIII(d) Refereed journal articles

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2. Finite difference approximation of optimal control for systems described by nonlinear differential equations with delay, *Control and Cybernetics*, Vol. 5, No. 1, pp. 35–67 (1976).

3. On regularity of solutions to convex optimal control problems with control constraints for parabolic systems (with K. Malanowski), *Control and Cybernetics*, Vol. 6, No. 3–4, pp. 57–74 (1977).

4. Generalizations of Dubovitsky-Mulutyn conditions, *Journal of Optimization Theory and Applications*, Vol. 24, No. 3, pp. 421–436 (1978).

5. On discrete-time Ritz-Galerkin approximation of optimal control problems with control constraints for parabolic systems (with K. Malanowski), *Control and Cybernetics*, Vol. 7, No. 1, pp. 20–37 (1978).

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7. State constrained control problems for parabolic systems: Regularity of optimal solutions, *Applied Mathematics and Optimization*, Vol. 6, pp. 1–29 (1980).

8. Boundary control for parabolic systems: Finite element approximation, *Applied Mathematics and Optimization*, Vol. 6, pp. 31–62 (1980).

9. A unified theory for abstract parabolic boundary problems: A semi-group approach, *Applied Mathematics and Optimization*, Vol. 6, pp. 287–333 (1980).

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14. Structural assignment of Neumann boundary feedback parabolic equations (with R. Triggiani), *Annali Mat. Pura e Appl. (IV)*, Vol. XXXII, pp. 131–175 (1982).

15. Stabilization and structural assignment of Dirichlet boundary feedback parabolic equations (with R. Triggiani), *SIAM Journal on Control*, Vol. 21, No. 5, pp. 766–803 (1983).

16. Feedback semigroups and cosine operators for boundary feedback parabolic and hyperbolic equations (with R. Triggiani), *Journal Diff. Equations*, Vol. 47, No. 2, pp. 246–272 (1983).

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24. Convergence estimates for semidiscrete approximations of non-selfadjoint parabolic equations, *SIAM Journal on Numerical Analysis*, Vol. 21, No. 5, pp. 894–908 (1984).

25. Finite dimensional boundary feedback control problems for linear infinite dimensional systems (with W. Schappacher and W. Desch), *Israel Journal of Mathematics*, Vol. 51, No. 3, pp. 177–207 (1985).

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33. A direct study of Riccati equations arising in hyperbolic boundary control problems (with G. DaPrato and R. Triggiani), *Journal of Differential Equations*, Vol. 64, No. 1, pp. 26–47 (1986).

34. Regulator problems for parabolic equations with Dirichlet boundary control; Riccati's feedback synthesis, regularity, Galerkin approximations, Part I (with R. Triggiani), *Journal of Applied Mathematics and Optimization*, Vol. 16, pp. 147–168 (1987).

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VIII(e) Refereed proceedings papers

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81. Long time dynamics and control of subsonic flow-structure interaction. Proceedings of *American Control Conference* (ACC) , Montreal, CA, June 27-29, 2012.

82. Controlling flutter in nonlinear panels in subsonic flows via structural velocity feedback. (with J. Webster) *Proceedings CDC- IEEE* , December, Los Angeles, 2014.

IX PROFESSIONAL ACTIVITIES

IX(a) Editorships

Editor in Chief

- *Applied Mathematics and Optimization* [AMO] , Publisher Springer Verlag, EIC with Paul Dupuis and Roger Temam, - 2013-2015 and with Huyen Pham and Roger Temam-2015- present.
  2018 Impact Factor: 1.895

  http://www.springer.com/mathematics/journal/245

- *Evolution Equations and Control Theory*, [EECT] , Publisher Aims, EIC with Alain Haraux, 2012 -present.
  2018 Impact Factor: 1.048.

  https://aimsciences.org/journals/home.jsp?journalID=25

Editorial Boards

1. *SIAM Journal on Control and Optimization*, 1982–1994

2. *Applied Mathematics and Optimization*, Springer Verlag, 1984-2013. *Editor in Chief -EIC* [with P. Dupuis and R. Temam] - 2013

3. *International Journal of Mathematics and Mathematical Sciences*, (Hindawi) since 1985

4. *Computational Optimization and Applications* (Springer), since 1991
5. *Archives of Control Sciences* (DeGruyter) , since 1992
6. *Applied Mathematics and Computer Science*, 1992 -2009
7. *Discrete and Continuous Dynamic Systems*, AIMS, since 1994
8. *Dynamics of Continuous, Discrete and Impulsive Systems*, Univ. of Waterloo, since 1994
9. *Abstract and Applied Analysis*, Hindawi, since 1995
10. *Transactions on Automatic Control, IEEE*, Associate Editor, 1993-2001, and Editor at Large, 2001–2010
11. *Journal Mathematical Analysis and Applications*, Elsevier, 1998–2008
12. *Systems and Control Letters*, Elsevier, 1998 -2011
13. *Automatica*, Elsevier, 2000–2005
14. *Nonlinear Analysis*, Elsevier, since 2001
15. *Applicable Analysis*, Taylor and Francis, since 2002
16. *Nonlinear Studies*, IFNA, 2002-2008.
17. *Control and Cybernetics*, Polish Academy of Sciences, since 2005
18. *International Journal of Comput. Sciences and Mathematics*, 2006 -2010
19. *The Open Applied Mathematics Journal*, De Gruter, since 2007
20. *Set Valued and Variational Analysis*, Springer Verlag, 2008 -2013
21. *Applicationae Mathematicae*, Funded by H. Steinhaus, Polish Academy of Sciences, since 2008.
22. *Communications in Mathematical Analysis*, Math-Res.-Publishers, *Coordinating Area Editor*, 2010-2014
23. Journal Of Optimization Theory and Applications (JOTA) , Springer Verlag, since 2012.
24. Central European Journal of Mathematics, On the Advisory Board , De Gruyter, since 2014
25. Editor, Conference Proceedings Series, *Computational Techniques in Distributed Systems*, IFIP WG7.2, Springer Verlag, 1987–1992
26. Editorial Board of Book Series: *Modern Mechanics and Mathematics*, Springer Verlag, since 2006
27. Advances in Nonlinear Analysis, De Gruyter, since 2013.
28. Pure and Applied Functional Analysis, Yokohama Publishers, since 2015. http://www.ybook.co.jp/pafa.html
29. Editor in Chief (with A. Haraux and E. Zuazua) : Journal of Abstract Differential Equations (JADEA) , (Math-Res-Publishers) since 2010.
30. Editorial Advisory Board, De Gruyter-Versita. Since 2010.
31. Guest editor for several volumes: recently : in memory of A. Balakrishnan *AMO*,
32. 70 Birthday of Viorel Barbu *Pure and Applied Functional Analysis*,
33. In memory of I. Chueshov *DCDS - B* .

IX(b) Offices and functions held

1. IFIP, the International Federation for Information Processing, with headquarters based in Laxenburg, Austria (previously Geneva, Switzerland). URL: http://www.ifip.org About IFIP. IFIP, the International Federation for Information Processing, is the global professional federation of societies and associations for people working in Information and Communications Technologies and Sciences. Established under the auspices of UNESCO in 1960 and recognised by the United Nations, IFIP represents ICT professional associations from more than 50 countries and regions with a total membership of over half a million. It also brings together more than 3,500 scientists from industry and academia, organising them into over 100 Working Groups and 13 Technical Committees to conduct research, develop standards and promote information sharing. Based in Austria, IFIP organises and supports over 100 conferences each year, fostering the distribution of research and knowledge to academics and industry practitioners alike.

   IFIP was founded in 1960 as the very first major international federation of the main computer societies under the auspices of UNESCO. Today IFIP has 52 organizations as full members representing research activities in the area of information technology and computing worldwide. It is organized into 13 technical committees (TC) representing various areas of activities. A General Assembly (GA) of all its members and TC chairs have overall responsibility for all of IFIP's strategies.

   IFIP's Mission Statement: *to be the leading, truly international organization which encourages and assists in the development, exploitation and application of Information Technology.* IFIP's Aims: *to foster international cooperation, to stimulate research, development and applications, and to encourage education and the dissemination and exchange of information in all aspects of computing and communication.*

   Since 1989 I have been directly involved in activities and in a leadership role within the Technical Committee 7: TC7 (System Modeling and Optimization). These include coordinating activities of research groups in the area of Control and Optimization of Dynamical Systems and in running biannual General TC7 Conferences.

   - Chair, the Working Group WG.7.2, TC7 IFIP: Computational Techniques in Distributed Systems, 1989–2002
   - Vice-Chair, TC7 Committee on Modelling and Optimization: 1995–2001
   - Chair, IFIP TC7 Committee on Modeling and Optimization, 2001–2008
   - V-Chair of IFIP Technical Commiitte 7: TC7 on Modeling and Optimization, 2008 -present http://www.ifip.org and http://www.math.virginia.edu/ ifip
2. Member, Nominating Committee for the *Kyoto Prize*, the Inamori Foundation, 1996, 1999, 2003, 2006 -2013
3. US Representative in IFIP, since 1996
4. IFIP Representative to FOCUS (Federation on Computing in the United States), 1996–1999
5. Board of Directors, ISAAC (International Society of Applied Analysis and Computations), since 1998
6. AMS Southeastern Section Program Committee, 1999–2001
7. ACM's TC7 IFIP Representative, 2000–present
8. International Advisory Board, Polish Academy of Sciences, since 2006
9. Nominating Committee for *Japan Prize*, Science and Technology Foundation of Japan (JSTF), 2001-2013
10. Nominating Committee *Kyoto Prize* founded by *Inamori Foundation*, 199-2014.
11. Member of CBMS-SIAM Panels and NSF Panels, 2001, 2003, 2005, 2006, 2007, 2008, 2009 ,2010, 2011,2012
12. Member of SIAM-NSF-AFOSR Panel on Perspectives and Trends in Control Theory, 1988
13. SIAM-PDE, Panel on Future Directions in Partial Differential Equations, Phoenix, AZ, December 13, 2007
14. SEARCDE, Southwestern Regional Conference Differential Equations, Steering Committee-member, 2010-2013.
15. Nominating Committee for the 2014 SIAM W.T. Idalia Reid's Prize.

16. AMS-Simons Travel Grants Committee for a term of three years, effective February 1, 2017 through January 31, 2020.

17. AMS-RCW [Research Collaborations] Committee. 2017-2020.

IX (c) Service to National Science Foundation and CBMS-NSF-SIAM

- National Science Foundation: Member of PYI Panels (Principal Young Investigator's Program),
- Member of Special Panel on Perspectives and Trends in Control Theory, 1988;
- IGERT Panels, 2001,2003.
- DMS-PDE (Partial Differential Equations) Panels,
- DMS- Applied Analysis Panels,
- Control Theory and Optimization Panels,
- CBMS (Conference Board Mathematical Sciences) Panels, 2003- 2018

IX(d) International scientific program committees (IPC)

1. International Conference on Boundary Control and Boundary Variations, IFIP sponsored conference, Université de Nice, Nice, France, June 10–13, 1986
2. Conference on Control Problems for Systems Described by PDE's, University of Florida, Gainesville, FL, Feb. 3–6, 1986 (Chair)
3. International Conference on Control of Partial Differential Equations, IFIP sponsored conference, Santiago de Campostella, Spain, July 6–9, 1987
4. IIASA Conference on Modelling and Inverse Problems, Laxenburg, Austria, July 24–29, 1989 (Co-Chair)
5. IFIP Conference on Control and Stabilization, Clermont Ferrand, France, June 20–23, 1988
6. IFIP Conference on Optimal Control of Partial Differential Equations, Irsee, Germany, April 9–12, 1990
7. IFIP-TC7 Conference on Control Theory of Distributed Parameter Systems and Applications, Fudan University, Shanghai, China, May 6–9, 1990
8. International Conference on Boundary Control and Boundary Variations, organized by CNRS and École des Mines de Paris, Sophia-Antipolis, France, Oct. 15–17, 1990
9. 15th IFIP Conference on System Modelling and Optimization, Zurich, Switzerland, Sept. 2–6, 1991
10. 16th IFIP Conference on System Modelling and Optimization, Compiegne, France, July 5–9, 1993
11. International Conference on Boundary Control and Boundary Variations, Sophia Antipolis, France, June 8–12, 1992
12. IFIP Conference on Numerical Analysis and Optimization, Rabat (Morocco), Dec. 15–17, 1993
13. IFIP Workshop on Control of PDE's Santander (Spain), Sept. 5–9, 1994 (Chair)
14. IFIP Conference on Control of PDE's, Trento (Italy), Jan. 4–9, 1993
15. IFIP Conference on Modelling and Optimization of DPS with Applications to Engineering, Warsaw (Poland), July 17–21, 1995 (Chair)
16. 17th IFIP General Conference on Modeling and Optimization, Prague, July 10–14, 1995
17. SIAM Conference on Control and Systems Theory St. Louis, Missouri, April 27–29, 1995

18. First International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, May 9–11, 1996
19. 18th IFIP General Conference on Modelling and Optimization, July 1997, Detroit (Co-Chair)
20. Conference on Control of PDE's, organized by CIRM, Luminy, France, June 16–21, 1997
21. IFIP Conference on Optimal Control: Theory and Algorithms, Gainesville, FL, March 1–4, 1997
22. International Symposium on Methods and Models in Automation and Robotics, MMAR Miedzyzdroje, Poland, Aug. 24–29, 1997
23. 19th IFIP General Conference on Modelling and Optimization, Cambridge, England, July 1999
24. International Conference honoring 90th birthday of L. S. Pontryagin, Moscow, Russia, Sept. 1–6, 1998
25. IFIP Conference on Distributed Parameter and Stochastic Systems, Huangzhou, China, June 19–22, 1998
26. IFIP Conference on Optimal Control of Partial Differential Equations, Chemnitz, Germany, April 20–24, 1998
27. International Symposium on Methods and Models in Automation and Robotics, MMAR Miedzyzdroje, Poland, Aug. 21–27, 1998
28. An International Conference on Distributed Systems: Optimization and Economic-Environmental Applications, sponsored by IIASA and IFIP, Ekaterinburg, Russia, May 23–26, 2000 (Co-Chair)
29. Advances in Control of Nonlinear Distributed Parameter Systems, Texas A&M University, Oct. 22–24, 1999
30. Optimal Control of Dynamical Systems, Oberwolfach, June 4–10, 2000
31. Third International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, May 10–12, 2000
32. SIAM Control Conference, San Diego, July 2001
33. 20th IFIP General Conference on Modelling and Optimization, Trier, Germany, July 2001
34. 3rd ISAAC Congress, Berlin, Germany, Aug. 20–25, 2001
35. IMA–NSF Workshop on Geometric Methods in Inverse Problems and Control, Univ. of Minnesota, Minneapolis, July 2001 (Co-organized with C. Crooke, G. Uhlmann, and M. Vogelious)
36. IFIP Conference on Control Problems in PDE's, Constanza, Romania, September, 2002
37. 21st IFIP General Conference on Modeling and Optimization, Sophie Antipolis, France, July 21–25, 2003, Chair of IPC
38. ECCOMAS 2004, 4th European Congress on Computational Methods in Applied Sciences, Jyvakyla, Finland, July 24–28, 2004, Co-Chair of IPC Committee on Optimization and Control
39. Conference on Evolution Equations, Venezuela, January 7–14, 2003, Co-Chair with P. Lumer
40. International Conference on Distributed parameter Systems and Ecology, IAASA, Laxenburg, Austria, May 21–25, 2003
41. 9th IEEE-MMAR International Conference, Miedzyzdroje, Poland, August 30–September 1, 2003
42. ISAAC Congress, Toronto, August 11–16, 2003
43. WCNAA 2004 Congress on Nonlinear Analysis, Orlando, June 30–July 5, 2004
44. 10th IEEE-MMAR International Conference, Miedzyzdroje, Poland, August 24–30, 2004

45. 22nd IFIP General Conference on Modeling and Optimization, Torino, Italy, July 2005, Chair of IPC
46. International Conference on Dynamical Systems and Differential Equations, June 16–19, 2004, Los Angeles, CA, member of IPC
47. 18th IFIP World Computer Congress, August, 22–27, 2004, Toulouse, France, member of IPC
48. Conference on Free and Moving Boundaries, Houston, December 2–4, 2004
49. The 7th IASTED International Conference on Control and Applications, CA 2005, May 18–20, 2005 Cancun, Mexico, member of IPC
50. Conference on Differential Equations and Dynamical Systems, Guelph, Canada, July 29–31, 2005
51. 11th IEEE-MMAR International Conference, Miedzyzdroje, Poland, August 27–September 2, 2005
52. International Congress on Applications of Mathematics (ICAM), Santiago de Chile, Chile, March 13–17, 2006, member of the IPC Committee for Control System Theory
53. ICNPAA 2006, Mathematical Problems in Aerospace Sciences, Budapest, Hungary, June 21–23, 2006
54. The First International Conference on Complex Systems and Applications. Hukhot, Mongolia, June 15–18, 2006
55. 12th IEEE-MMAR International Conference, Miedzyzdroje, Poland, August 27–September 2, 2006, member of IPC
56. The IASTED International Conference on Control and Applications, CA 2007, Montreal, Canada from May 30–June 1, 2007, member of IPC
57. 13th IEEE-MMAR International Conference, Miedzyzdroje, Poland, August 27–September 2, 2007, member of IPC
58. The 5th International Cconference on Differential Equations and Dynamical Systems, December 16–18, 2006, Edinburg, TX, member of IPC
59. 23rd IFIP Conference on Modeling and Optimization, Krakow, Poland, July 23–27, 2007, Chair of IPC URL: http://ifip2007.agh.edu.pl
60. IASTED (International Conference on Control and Applications), Quebec, Canada, May 26–28, 2008, member of IPC
61. 24th IFIP Conference on Modeling and Optimization, Buenos-Aires, Argentina, July 2009, Chair of IPC
62. 7th AIMS (American Institute of Mathematical Sciences), Conference on Dynamical Systems and Differential Equations, May 18–21, 2008, Arlington. TX, member of the IPC
63. International Symposium on System Theory, Morocco, May 25–28, 2009, member of IPC
64. IASTED (International Conference on Control and Applications), ICA-2009, August 17–19, 2009, Honolulu, Hawaii, member of IPC
65. International Conference on Mathematical Control Theory, May 15-17, 2009, Chinese Academy of Sciences, Beijing, China
66. ICNPAA 2009, Mathematical Problems in Aerospace and Robotics, Rio de Janeiro, 2010 -member of IPC.
67. IASTED (International Conference on Control and Applications), ACIT0CDA-2010 , June 15-18, 2010, Novosybirsk, Russia , member of IPC
68. 25 IFIP Conference on Modeling and Optimization, Berlin, 2011. Co-Chair of IPC. http://www.ifip2011.de/

69. IASTED International Conference on Control and Applications (CA 2011), Vancouver, BC, Canada from June 01, 2011 to June 03, 2011.

70. IASTED http://www.iasted.org/conferences/home-729.html, (CA 2012), Crete, Greece, June 18-20, 2012. link:http://www.iasted.org/conferences/home-781.html

71. 26 IFIP Tc7 Conference on Modeling and Optimization, Klagenfurt, Austria, September 9-13, 2013.

72. IFAC Workshop on Control of Systems modeled by PDE's (CPDE13), Institute Henri Poincare, Paris, Sept. 25-27,2013.

73. IASTED International Conference on Control and Applications (CA 2013), Honolulu, August 26-28, 2013.

74. Conference on Recent Advances in Mathematical Sciences-in honor of Prof. Lakshmikantham, Institute for Advanced Studies, Viskapatnam, India, Dec 19-22, 2013.

75. ICNPAA 2014-Mathematical Problems in Engineering, Aerospace and Science, Narvik University, Norway, July 15-18, 2014.

76. International Congress in Honor Of Ravi Agarval, Bursa, Turkey, June 323-26,2014

77. 27 IFIP TC7 Conference on Modeling and Optimization, Sophie Antipolis, France, 2015.

78. 13-th Workshop on PDE's, UFRJ, Rio de Janeiro, September 9-12, 2014.

79. SiAM Conference on Control and Its Applications, SIAM-CT15, Paris, July 8-10, 2015.

80. 16-th IASTED International Conference on Control and Applications (CA 2014),

81. MMAR-IEEE International Conference on Methods and Models in Automation and Robotics, Miedzyzdroje, August 24-27, 2015.

82. ICNPAA Congress 2016. 5-8 July, 2016. University de la Rochelle. La Rochelle, France.

83. XIV Workshopon Partial Differential Equations, LNCC, Petropolis-Rio de Janeiro, September 22-25, 2015.

84. IFAC Workshop on Control of Systems Governed by PDE's. June 13-15, 2016. Bartinoro Italy.

85. System Analysis:modeling and Control . Russian Academy of Sciences, Ekaterinburg, October 3-8, 2016 http://www.cpde2016.org

86. 14;th EUROPT Workshop on Advances in Continuous Optimization, Warsaw, Poland, July 1-2, 2016.

87. Conference on Dynamical Systems and Applications, Institute of Mathematics, Lodz University of Technology, June 16-18, 2016.

88. XV WPDE RIO-2016-Workshop on Partial Differential Equations- LNCC Rio de Janeiro, September 13-16, 2016

89. GPCO 2017-7th German-Polish Conference on Optimization, Polish Academy of Sciences, Bedlewo. 27 August-1 September , 2017.

90. 28 IFIP Conference on Modeling and Optimization, Essen, July 2018,

91. MAO 2017-International Conference on Mathematical Analysis and Optimization, Sept 24-26, 2017, Suzou, China,

92. MMAR-IEEE 2018 . 23rd Intern. Conference on Methods and Models in Automatica and Robotics. Miedzyzdroje, Poland, August 23-30, 2018.

93. DEA -2019 "Dynamics, Equations and Applications". 16-20-September, 2019. AGH, Cracov, Poland

94. 3-rd IFAC Workshop on Control of Systems Governed by PDEÕs (CMPDE),May 20-24, 2019, Oaxaca, Mexico.
95. Conference on Evolution Equations:Applied and Abstract Perspectives. CIRM [Centre International de Reserche Mathematique] , Luminy, Oct 28-Nov1, France,2019.
96. MMAR-IEEE Conference. International program Committee , August 24-27, 2021.
97. 100 Years of PTM, Krakow, 3-7 September, 2019.
98. ICNPAA World Congress 2020-Mathematical Problems in Engineering, Aerospace and Science, Czech Technical University of Prague. Prague June 22-25, 2021. .
99. 29 IFIP TC7 Conference on Modeling and Optimization, Quito, Equador, Sept 1-4, 2021
100. MSRI-Univ of California, Berkeley, , Semester on Mathematical Problems in Fluid Dynamics, Spring 2021.

IX(e) Organizer of special sessions/minisymposia/conferences

A. Conferences

1. IFIP Conference on Control Problems for Systems Described by Partial Differential Equations and Applications, University of Florida, Gainesville, Feb. 3–6, 1986
2. IFIP-IAASA Conference on Modeling and Inverse Problems, Laxenburg, Austria, July 14–29, 1989
3. IFIP Conference on Numerical Analysis and Optimization, Rabat, Morocco, Dec. 15–17, 1993
4. SIAM Symposium on Industrial Problems in Control, San Diego, CA, July 22–23, 1994
5. IFIP Conference on Modeling and Optimization with Applications to Engineering, Warsaw, Poland, July 17–21, 1995
6. 18th IFIP General Conference on Modelling and Optimization, Detroit, MI, July 22–25, 1997
7. AMS Summer Research Conference on Optimization and PDE's, Mt. Holyoke, June 16–20, 1996
8. IMA Workshop on Geometric Methods in Inverse Problems and Control, July 16–27, 2001
9. 21st IFIP Conference on System Modeling and Optimization, Sophia Antipolis, France, July 21-23, 2003
10. 22nd IFIP Conference on Modeling and Optimization, Torino, Italy, July 2005
11. AMS Summer Research Conference on Control of Nonlinear PDE Systems, Snowbird, Utah, July 3–8, 2005
12. 23rd IFIP Conference on Modeling and Optimization, Krakow, Poland, July 23–27, 2007, Chair of IPC
13. 24rd IFIP Conference on Modeling and Optimization, Buenos Aires, Argentina, July 25–29, 2009, V-Chair of the Conference
14. NSF Workshop Horizons in Infinite Dimensional Deterministic and Stochastic Systems with Applications to Engineering , Univ. of California, Los Angeles, UCLA, January 30–February 2, 2009
15. NSF-UCLA Workshop on Axial Flow and Flutter, UCLA, Nov. 19-22, 2012.
16. First IFAC Workshop CPDE , Institute Henri Poincare, Paris, France, Sept 25-27, 2013.
17. SEARCDE Conference 2013, University of Memphis. October 11-12, 2013.
18. AMS Sectional Conference, University of Memphis, October 17-18, 2015.
19. Banff International Research Station: Women in control: new trends in infinite dimensions (with K. Morris and L. De Teresa) -July 16-21, 2017.

B. Minisymposia, special sessions

1. 26th CDC Conference, Special Session on Control of PDE's, Los Angeles, CA, 1987
2. 24th CDC Conference, Special Session on Control of PDE's, Fort Lauderdale, FL, Dec. 1985
3. 12th IFIP Conference, Special Session on Control of PDE's, Budapest, Sept. 1985
4. 23rd CDC Conference, Special Session on Control of PDE's, Las Vegas, NV, Dec. 1984
5. 21st CDC Conference, Special Session on Control of PDE's, Orlando, FL, Dec. 1982
6. 13th IFIP Conference on System Modellings and Optimization, Special Session on Distributed Parameters System, Tokyo, August–September 1987
7. 14th IFIP Conference on System Modelling and Optimization, Special Session on New Trends in Control Theory, Leipzig, Germany, July 3–7, 1989
8. 15th IFIP Conference on System Modelling and Optimization, Special Session on Numerical Techniques for Control Problems, Zürich, Switzerland, Sept. 2–6, 1991
9. 13th IMACS World Congress on Computation and Applied Mathematics, Special Session on Computational Techniques in Distributed Systems, Trinity College, Dublin, Ireland, July 22–26, 1991
10. ICIAM 91 International Conference on Industrial and Applied Mathematics, Minisymposium on Boundary Control Theory for Partial Differential Equations, Washington, DC, July 8–12, 1991
11. 15th IFIP Conference on System Modelling and Optimization, Special Sessions on Optimization and Stability Methods for Distributed Parameter Systems, and Numerical Techniques in DPS, Zürich, Switzerland, Sept. 2–6, 1991
12. 13th IMACS World Congress on Computation and Applied Mathematics, Special Session on Control of Distributed Parameter Systems, Dublin, Ireland, July 22–26, 1991
13. The Ulam Mathematics Conference, Special Session on Control Theory, Palm Beach, April 3–5, 1991
14. IFIP Workshop on Control of PDE's, Trento, Italy, Jan. 4–9, 1993
15. IFIP Workshop on Control of PDE's, Laredo, Spain, Sept. 5–9, 1994
16. Minisymposium on Nonlinear Problems in Control Theory, at the SIAM Conference on Control and Systems Theory, St. Louis, MO, April 27–29, 1995
17. ICIAM 95 Third International Congress on Industrial and Applied Mathematics, Minisymposium on Control Problems for PDE's, Hamburg, Germany, July 3–7, 1995
18. SIAM Minisymposium on Control of Large Scale Sytems, Charlotte, NC, Oct. 23–26, 1995
19. IFIP Conference on Modeling and Optimization, Warsaw, Poland, Session on Control of PDE's, July 17–21, 1995
20. 18th IFIP Conference on Modeling and Optimization, Detroit, MI, Minisymposium on Nonlinear Control Problems in PDE's, July 21–24, 1997
21. 37th IEEE CDC Conference, Special Session on Control of Interactive Structures, Tampa, FL, Dec. 16–18, 1998
22. 19th IFIP Conference, Special Sessions (3) on Control of PDE systems, Cambridge, July 16–19, 1999
23. International Conference on Dynamical Systems and Differential Equations, Minisymposium on Optimization of Interactive PDE Structures, Atlanta, GA, May 18–21, 2000

24. Conference on Nonlinear Problems in Aviation, Special Session on Control of Distributed Parameter Systems, Daytona Beach, FL, May 9–12, 2000

25. IMACS Congress, Minisymposium on Wellposedness and Asymptotic Behavior of Nonlinear Dynamics Arising in Shell Theory, Lausanne, Switzerland, Aug. 2000, co-organized with I. Chueskov

26. ISAAC Congress, Special Session on Nonlinear Waves, Berlin, Germany, Aug. 21–25, 2001, co-organized with H. Koch, Univ. of Heidelberg

27. Annual SIAM Conference on Control, Minisymposium on Control Theory for Interactive PDE's, San Diego, CA, July 11–14, 2001, co-organized with G. Avalos and J. Cagnol

28. Minisymposium on Nonlinear Waves, SIAM Annual Conference, Philadelphia, July 8–12, 2002

29. Workshop on Nonlinear waves, University of Virginia, December 6-9, 2002

30. Minisymposium on Control of PDE's within 21-st IFIP Conference on Modeling and Optimization, Sophia Antipolis, France, July 21-25, 2003

31. Minisymposium on Control of Nonlinear PDE Systems, co-organized with G. Avalos and F. Bucci, within 22nd IFIP Conference on Modeling and Optimization, Torino, Italy, July 17–21, 2005

32. Special session on Asymptotic stability and long time behavior of nonlinear PDE dynamics, 5th ISAAC Congress, Catania, Italy, July 24–29, 2005

33. Minisymposium (5 invited sessions) on New Developments in Nonlinear PDE's, organized with G. Todorova at the AIMS Conference on Dynamical Systems and Differential Equations, Poitiers, France, June 25–28, 2006

34. Special Session on Nonlinear Evolutionary PDE Systems and their Control, organized with G. Avalos at the AMS Conference, Johnson City, TN, Oct 15–16, 2005

35. Minisymposium on Control of Partial Differential Equations, organized with G. Avalos and J. Cagnol, within the 23rd IFIP Conference on Modeling and Optimization, Kracow, Poland, July 23–27, 2007

36. Joint AMS-PTM Meeting, Warsaw, Poland, July 27–August 3, 2007, organizer (jointly with J. Sokolowski) of Special Session on Control and Optimization of Nonlinear PDE Systems

37. Special Session organized within AIMS 10th Conference on Dynamical Systems, Arlington, Texas, May 18–21, 2008

38. World Congress of Nonlinear Analysis, Orlando, FL, July 1–5, 2008, organizer (jointly with L. Tebou) of Special Session on Control of Nonlinear PDE's

39. Conference in honor of L. Pontryagin, Moscow, Russia, June 17–20, 2008, organizer of Special Session on Control Theory and Differential Games (with M. Zelikov)

40. 7th ISAAC Congress, Imperial College, London, GB, July 13–18, 2009 Organizer (with F. Bucci) of a special session Society for Analysis, its Applications and Computation
http://www.isaac2009.org/Congress/Welcome.html

41. 24th IFIP TC7 Conference on System Modelling and Optimization, July 27–31, 2009, Buenos Aires, Argentina, minisymposium organized with G. Avalos, J. Cagnol, and M. Delfour on Control Problems for Evolutionary PDE's http://www.ifip2009.org/

42. SIAM -PDE Conference, December 7-11, 2009, Miami, Fla. Minisymposium on Analysis and Control of Evolutionary Nonlinear PDE-Interactive Systems (with G. Avalos) .

43. 8-th AIMS Conference on Dynamical Systems and Differential Equations, May 25-29, 2010, Dresden, Germany. Special session (with G. Todorova) on New Developments in Qualitative Behavior of Nonlinear Evolutionary Equations, url: http://www.aimsciences.org/AIMS-Conferences/conf-reg2010

44. SIAM Conference on PDE-s, San Diego, Nov. 14-17, 2011, Special Invited session "Fluid Structure and Flow Structure Interactions-Modeling and Control", organized with G. Avalos and L. Bociu .

45. 9-th AIMS Conference on Dynamical Systems, Orlando, July 1-5, 2012. Special Invited Session " Nonlinear PDE's and Control Theory with Applications." Organized with L. Bociu, B. Kaltenbacher and P. Radu.

46. SIAM Annual Meeting, Minneapolis, July 9-13, 2012, Minisymposium on "Control Problems for partial Differential Equations", in honor of Walter Littman, organized with Steve Taylor and R. Triggiani.

47. Festschrift for Bob Gilbert. Mathematical Analysis with Applications to Biology. University of Delaware, August 809, 2012.

48. ISAACS Conference on Analysis and Applications. Minisymposium on Control and Optimization of Nonlinear Systems. (with J. Webster and G.Avalos), Krakov, Poland, August 5-9, 2013.

49. SIAM Conference, San Diego, July 7-10, 2013. Minisymposium (with B. Mordukovitch) Control and Stabilization of Nonlinear PDE's.

50. SEARCDE Conference, University of Memphis, October 11-12, 2014.

51. Banff International Research Station: Women in control: new trends in infinite dimensions (with K. Morris and L. De Teresa) -July 16-21, 2017.

52. SIAM PDE, Special Session on Fluid Structure Interactions (with M. Disconizi), Baltimore, December 9-11, 2017.

53. IFIP 28-th TC7 Conference on Modeling and Optimization, Essen, Memorial session: In Memory of Igor Chueshov, (with J. Webster)Jully 2018.

54. ICNPAA Congress 2018-Mathematical Problems in Engineering, Aerospace and Science. Yerevan Armenia, July 3-6, 2018.

55. Special Session on Control in Infinite Dimensional Systems at the AWM Research Symposium, Rice University, April 6 - 7, 2019 (https://sites.google.com/site/awmmath/home/RS17/RS19)

56. Differential Equations and Applications, DEA, Krakow AGH, September 3-8, 2019

57. 3-rd IFAC Workshop on Control of Systems Governed by PDE Os (CMPDE),May 20-24, 2019, Oaxaca, Mexico.

58. Conference on Evolution Equations:Applied and Abstract Perspectives. CIRM [Centre International de Recherche Mathematique] , Luminy, Oct 28-Nov1, France,2019.

59. MMAR-IEEE Conference International Program Committe , September, 2019

60. 100 Years of PTM, Krakow, 3-7 September, 2019.

61. The 29-th IFIP General Conference on Modeling and Optimization, August 31-September 4, 2020.. Quito, Ecuador.

62. AIMS Conference on Differential Equations -June 5-9, 2020, Atlanta, GA.

63. MSRI -Univ of Berkeley Semester on Mathematical Theory of Fluid Dynamics. Spring 2021.

IX(f) Service to UVa (major committees; samples since 2000)

1. Mathematics Department Search Committee (2000–01, 2001–02, 2007–08)

2. P&T (Promotion and Tenure) Committee, College of Arts and Sciences (2002–04)

3. Committee on Restructuring Graduate Program, Department of Mathematics (2002–03)

4. Graduate Committee, Department of Mathematics (since 2002)
5. Director of Graduate Studies, Department of Mathematics (2004–09)
6. Graduate Advisor, Department of Mathematics (2007–09)
7. Graduate Admissions (Chair), Department of Mathematics (2008–09)
8. Steering Committee, Department of Mathematics (2007–10)
9. GAANN (Graduate Assistance in the Areas of National Needs) from the Department of Education, $750,000 (2009-12), Co-PI with K. McCrimmon, L. Thomas, B. MacCluer (PI: J. Imbrie)
10. Dept. Search Committee for Departmental External Chair 2011.
11. Co-PI of GAANN (Graduate Assistance in the Areas of National Needs) Proposal, 2012.
12. Director of Graduate Studies, 2012

X INVITED PRESENTATIONS (1985–present)

X(a) Plenary speaker (keynote lecturer) at the conferences

1. 12th IFIP Conference on System Modelling and Optimization, Budapest, Hungary, Sept. 2–6, 1985
2. SEARCDE Southeastern AMS Atlantic Conference on Differential Equations, Georgia Institute of Technology, Atlanta, Oct. 25–26, 1985
3. IFIP Conference on Boundary Control and Boundary Variations, Nice, France, June 10–13, 1986
4. NSF–AFOSR Conference on Control of Systems Governed by PDE's, Montreal, CA, Oct. 5–9, 1986
5. International Conference on Control Problems for PDE's, Santiago de Compostela, Spain, July 6–9, 1987
6. Modelling, Information Processing and Control, MIPAC Conference; University of Wisconsin, Madison, May 15–18, 1988
7. Perspectives in Control Theory, Polish Academy of Sciences, Sielpia, Sept. 19–24, 1988
8. SIAM Annual Meeting, Chicago, IL, July 15–20, 1990
9. 10th INRIA International Conference on Analysis and Optimization, Nice, France, June 9-12, 1992
10. 2nd International SIAM Conference on Mathematical and Numerical Aspects of Wave Propagation, Univ. of Delaware, June 7–10, 1993
11. 8th Annual Three Rivers Applied Mathematics Colloquium, University of Pittsburgh, April 1–2, 1995
12. IFIP Conference on Control of PDE's, Laredo, Spain, Sept. 4–9, 1994
13. 34th CDC–IEEE Conference, New Orleans, Louisiana, Dec. 13–16, 1995
14. MTNS Conference, St. Louis, MO, June 24–28, 1996
15. 2nd Congress on Nonlinear Analysis, Athens, Greece, June 10–17, 1996
16. Principal Lecturer, Barrett Lectures, University of Tennessee, Knoxville April 1997
17. International Conference on Applied Analysis, Samos, Greece, July 4–9, 1996
18. ISAAC Congress 97, Delaware, MD, June 3–7, 1997
19. Conference on Stochastic and Deterministic Control, Scuola Normale Superiore, Pisa, Italy, July 3–7, 1997

20. 98- IEEE-MMAR Conference, Miedzyzdroje, Poland, Aug. 24–27, 1998
21. First International Conference on Semigroups, in honor of R. Phillips, Newport Beach, CA, Dec. 14–16, 1998
22. Control of Systems Governed by PDE's, Univ. of Nancy, France, March 8–12, 1999
23. Principal Lecturer at the NSF–CMBS Conference on Mathematical Control Theory of Coupled PDE's, Univ. of Nebraska, Lincoln, Aug. 4–10, 1999
24. Control of Nonlinear Distributed Parameter Systems, Conference in honor of 60th birthday of D. Russell, Texas A&M University, Oct. 22–24, 1999
25. German–Polish Conference on Optimization-Methods and Applications, Zagan, Poland, Sept. 14–18, 1999
26. AMS Conference on Differential Geometric Methods of PDE's, Boulder, Colorado, June 27–July 1, 1999
27. AIMS International Conference on Dynamical Systems and Differential Equations, Atlanta, GA, May 18–21, 2000
28. 29th Conference on Applied Mathematics (IEEE Distinguished Lecturer), Zakopane, Poland, Sept. 19–26, 2000
29. Second Meeting on Inverse Problems, Gargnano, Italy, April 1–7, 2001
30. International Conference on Dynamics of Continuous Systems, London, Canada, July 27–31, 2001
31. SIAM Annual Meeting and Control Conference, San Diego, July 9–13, 2001
32. Autumn School on Semigroups and Evolutions, CNRS, Trento, Italy, Novemeber 1–5, 2001
33. French-German Conference on Optimization, Cottbus, Germany, September 9–13, 2002
34. Symposium on Partial Differential Equations: Iguacu, Brazil, December 17–19, 2003
35. Barett Lectures, University of Tennessee, April 28–30, 2005
36. Differential Equations and Dynamical Systems, Guelph, Canada, July 29–31, 2005
37. Conference on Differential and Difference Equations with Applications, Melbourne, FL, August 1–5, 2005
38. ICNPAA 2006 Mathematical Problems in Engineering, Budapest, Hungary, June 21–23, 2006
39. The International Conference of Hybrid Systems and Applications, Lafayette, LA, May 22–26, 2006
40. Advances in Control theory of Partial Differential Equations, Univ. of Maryland, Oct. 28–29, 2006
41. Congres of Applied Mathematics, Lima, Peru, January 9-12, 2007
42. Functional Analysis and Optimization, in honor of S. Rolewicz, Bedlewo, Poland, Septebmber 17–21, 2007
43. WCNA 2008 Fifth World Congress of Nonlinear Analysis, July 2–9, Orlando, FL, 2008
44. 6th International Conference on Differential Equations and Dynamical Systems, Baltimore, May 22–25, 2008
45. 50 Years of Control Theory, Polish Academy of Sciences, Bedlewo, September 15–22, 2008
46. International Conference on Differential Equations and Topology, dedicated to 100th birthday of L. S. Pontryagin. Moscow State Univ., June 18–25, 2008
47. Systems Theory, Modelling, Analysis and Control, Fes, Morocco, May 25–28, 2009
48. SEARCDE-29 , Southestern Regional Conference on Differential Equations , , Macon. Georgia, October, 16-17, 2009

49. ICNPAA 2010: Mathematical Problems in Engineering, Aerospace and Sciences, INPE, San Jose dos Campos, Brazil, June 30–July 3, 2010

50. Analysis Days, King Fahd University of Petrolium and Minerals (KFUPM) , Dhaharan. Dec 21-23, 2010.

51. Summer School: Nonlinear Hyperbolic PDE's, Dispersive and Transport Equations: Analysis and Control. Sissa, Trieste , Italy, May 16-July 26, 2011 (7 lectures)

52. Summer School on Linear and Nonlinear Evolutions. Istambul, July 1-30, 2011. (4 lectures)

53. 2011 SIAM Reid Prize Lecture, Hyatt Regency, Baltimore, July 27, 2011

54. ICNPAA 2012 Congress: Mathematical Problems in Engineering, Aerospace and Sciences. Vienna University of Technology, Vienna, Austria, July 10-14, 2012

55. ANCNA -Conference on Communications in Nonlinear Analysis, Bolu, Turkey, July 3-6, 2013.

56. Conference on Theory , Methods and Applications of Differential Equations, Kingsville, TX, Dec 17-21, 2012.

57. One of the Four Main Lecturers at the **Course on Recent Advances in Partial Differential Equations ,** University of Milano, Italy, June 17-22, 2013 (6 lectures)

58. EQUADIFF 13, Prague, Czech Republic, August 26-30, 2013.

59. Ellis B. Stouffer's Distinguished Lecture, University of Kansas, December 3, 2013.

60. PDE Conference COPDE ,Novacella, Italy, May 28 -June 1, 2014.

61. International Conference on Hyperbolic Problems, IMPA, Rio de Janeiro, Brazil, July 280th-August 1, 2014.

62. Workshop on Shape Optimization and Topology Optimization with PDE Constraints- in honor of J. Sokolowski-LNCC, Petropolis-Rio de Janeiro , August 11-15, 2014.

63. Recent Trends in Nonlinear PDE's -NPDE 2014 , 28-30 May, 2014, Trieste, Italy.

64. Shanks Workshop on Mathematical Aspects of Fluid Dynamics, Vanderbilt University, February 28-March 1, 2015.

65. Plenary Speaker (one of four) at SIAM-SEAS 2015. March 20-25, 2015. University of Alabama.

66. Plenary speaker (one of three) at the Ninth IMACS Conference on Nonlinear Evolution Equations and Wave Phenomena. Georgia Center, University of Georgia, April 01-04, 2015

67. 7-th International Conference on Dynamic Systems and Applications. Atlanta, May 27-30, 2015.

68. Mathematical Fluid Mechanics:Old Problems, New Trends. Banach Center, Bedlewo, 30 August-5 September, 2015

69. AMS Conference at Stony Brook, March 19-20, 2016. One of the three Plenary speakers.

70. International Conference on Evolution Equations and Shanks Lecture, Vanderbilt University, Nashville, May 16-20, 2016.

71. Nonlinear PDE's in Applied Mathematics, Izmir Institute of Technology, Turkey, August 28-30, 2016. One of the four plenary speakers.

72. Oberwolfach Seminar 2016, Nov 20-26, 2016. Plenary lecturer.

73. Banff International Research Station. Workshop on Control Theory of Infinite dimensional Control Systems, July 16-21, 2017. Main Speaker.

74. Conference on Automatic 2017. One of the four plenary speakers. Cracov, June 16, 2017,

75. GPCO 2017-7th German-Polish Conference on Optimization, one of the 6 plenary speakers. 27-08-01-09, 2017, Bedlewo-Polish Academy of Sciences, Poland.

76. Conference on Recent Advances in Mathematical Sciences and Applications (RAMSA-17), at GVP College of Engineering, Visakhapatnam, India.19th to 22nd December, 2017

77. Paths in Mathematical Control Theory, Torino, March 25-27, 2018. One of the three plenary speakers.

78. The Third International Conference on the Dynamics of Differential Equations-Fundamentals and Developments, In Memory of Professor Jack. K. Hale, Hiroshima, March 14-March 18, 2018.

79. Emerging Trends in Applied Mathematics and Mechanics, Jagiellonian University, Ktracov, Poland June 18-22, 2018. One of the four plenary speakers.

80. SMACS 2018-Special Materials and Complex Systems. Palazzo Feltrinelli, Garganano, Italy, June 18-22, 2018.

81. Workshop on Dynamics, Control and Numerics for Fractional PDE's, [one of the 5 Plenary Lectures], Embassy Suites, San Juan, Dec 4-8, 2018.

82. Workshop on Fluid Structure Interactions, University of Milano, March 19-24, 2019.

83. IFAC Workshop on Distruibuted Parameter Systems, CMPDE, May 20-24, 2019, ,Oaxaca, Mexico

84. Romanian Congres of Mathematcs, Galati, Romania , July 28-August 1, 2019.

X(b) Invited conference speaker

1985

1. 2nd International Conference on Control Theory for Distributed Parameter Systems and Applications, Vorau, Austria, July 9–14, 1985

2. International Conference on Theory and Applications of Differential Equations, Edinburg, TX, May 20–23, 1985

3. International Conference on Differential Equations in Banach Spaces, University of Bologna, Bologna, Italy, July 1–5, 1985

4. 24th IEEE Conference on Decision and Control (SIAM-invited paper), Ft. Lauderdale, Dec. 11–13, 1985

5. NSF–AFSOR–NASA Workshop on Control Systems Governed by Partial Differential Equations with Applications to Large Flexible Structures (invited panel leader), Tampa, FL, March 4–8, 1985

6. NASA–UCLA Workshop on Computational Techniques in Identification and Control of Flexible Flight Structures, Lake Arrowhead, CA, Nov. 2–4, 1985

1986

7. Operator Methods of Optimal Control Problems (Special Session), Annual Meeting of the American Mathematical Society, New Orleans, LA, Jan. 7–11, 1986

8. Conference on Optimal Control with Partial Differential Equations, Oberwolfach, May 18–24, 1986

9. Conference on Control and Identification of Distributed Systems, Vorau, Austria, July 6–12, 1986

10. AMS Conference on Semilinear Parabolic and Hyperbolic Equations, Charlotte, NC, Oct. 17–18, 1986

1987

11. International Conference on Evolution Equations, Scuola Normale Superiore, Pisa, Italy, Feb. 1987

12. Conference in Honor of A. V. Balakrishnan's Sixtieth Birthday, Washington, DC, June 16–19, 1987

13. Trends in Semigroups and Applications, International Conference, Trieste, Italy, Sept. 28–Oct. 3, 1987
14. Combined Midwest-Southeast Differential Equations Conference, Vanderbilt University, Oct. 23–24, 1987
15. 26th IEEE Conference on Decision and Control, Los Angeles, CA, Dec. 9–11, 1987
16. COMCON Workshop on Stabilization of Flexible Structures, Montpellier, France, Dec. 11–15, 1987

1988

17. 8th International Conference Analysis and Optimization of Systems, INRIA, Antibes, June 8–10, 1988
18. 4th International Conference on Control at Distributed Parameter Systems, Vorau, Austria, organized by the University of Graz, July 10–16, 1988
19. IFIP Conference on Control Boundaries and Stabilization, Clermont-Fernoud, France, June 20–23, 1988
20. AMS Special Session on Control Theory, University of Kansas, Lawrence, Oct. 28–29, 1988
21. 27th IEEE Conference on Decision and Control, Austin, Texas, Dec. 7–9, 1988
22. Mathematical Science Institute Conference on Applications of Microlocal Analysis, Cornell University, Ithaca, NY, Nov. 28–Dec. 3, 1988

1989

23. SIAM Conference on Control in the 90's, San Francisco, May 17–18, 1989
24. General IFIP Conference on Modelling and Optimization, Leipzig, E. Germany, July 3–7, 1989
25. IIASA–IFIP Conference on Modelling and Inverse Problems, Laxenburg, Austria, July 24–29, 1989
26. International Conference on Differential Equations, Colorado Springs, June 7–10, 1989
27. 28th IEEE–CDC Conference, Tampa, Dec. 13–16, 1989
28. Workshop on Control Theory, Pisa, July 16–18, 1989

1990

29. AMS Annual Meeting, Louisville, KY, Jan. 17–18, 1990
30. 2nd Symposium on Optimal Design and Control of Structures, Jablonne, Poland, June 4–9 1990
31. International Conference on Optimal Control of Partial Differential Equations, organized by Univ. of Augsburg, Irsee, Germany, April 9–12, 1990
32. 4th NASA Workshop on Computational Control of Flexible Aerospace Systems, Williamsburg, VA, July 11–13, 1990
33. NSF Conference on Mathematical Control Theory, IIT, Bombay, Dec. 10–15, 1990
34. The 29th IEEE Conference on Decision and Control, Honolulu, Hawaii, Dec. 5–7, 1990

1991

35. NSF–CBMS Regional Conference on Nonlinear Dispersive Wave Systems, Orlando, FL, March 11–15, 1991
36. AMS Special Session, Operator Methods in Control Theory Tampa, FL, March 22–23, 1991
37. SIAM Conference ICIAM 91, Washington, DC, July 8–12, 1991
38. Meeting on Differential Equations in Banach Spaces, Bologna, Italy, July 1–5, 1991

39. International Workshop-Conference on Evolution Equations, Control Theory and Biomathematics, Hans-sur-Lesse, Belgium, Oct. 20–26, 1991

40. NSF Workshop on Stochastic Theory and Adaptive Control, Lawrence, KS, Sept. 26–28, 1991

1992

41. IMA Workshop on Control, Univ. of Minnesota, Nov. 9–13, 1992

42. IFIP Conference of Boundary Control and Boundary Variations, Nice, France, June 3–5, 1992

43. First World Congress of Nonlinear Analysis, Tampa, FL, Aug. 19–26, 1992

44. SIAM Conference on Control, Minneapolis, Minnesota, Sept. 17–18, 1992

45. AMS Annual 1992 Meeting, Baltimore, MD, Jan. 8–11, 1992

1993

46. AMS Annual 1993 Meeting, San Antonio, Texas, Jan. 13–16, 1993

47. IFIP Workshop, Univ. of Trento, Italy, Jan. 4–9, 1993

48. AMS Annual Meeting, Special Session on Control and Stability, San Antonio, TX, Jan. 13–16, 1993

49. Conference on Optimal Control of Differential Equations, Ohio Univ., Athens, Ohio, March 25–27, 1993

50. Conference on Control and Estimation of Distributed Parameter System, Univ. of Graz, Vorau, Austria, July 18–24, 1993

51. First International Conference on Dynamic Systems and Applications, Atlanta, Georgia, May 26–29, 1993

52. Minisymposium on Control of PDE's, Texas A&M Univ., College Station, Oct. 21, 1993

53. AMS Meeting/Special Session, College Station, TX, Oct. 22–23, 1993

54. 32nd IEEE Conference on Decision and Control, San Antonio, TX, Dec. 15–17, 1993

1994

55. SIAM Annual Meetings, San Diego, CA, 1994

56. AFOSR Workshop on Optimal Design, ICIAM Blacksburg, VA, April 8–9, 1994

57. IAC Workshop on Control and Applications, Rome, Italy, July 11–13, 1994

58. ICCAM 94th International Conference on Computational and Applied Mathematics, Leuven, Belgium, July 25–30, 1994

59. IFIP Conference on Control of Partial Differencial Equations, Loredo, Spain, Sept. 4–9, 1994

60. 4th International Conference on Evolution Equations, Pisa, Italy, Sept. 26–30, 1994

1995

61. AMS Meetings, Orlando, FL, March 17–18, 1995

62. ICIAM 95, Hamburg, Germany, July 3–7, 1995

63. 17-th IFIP Conference on Modeling and Optimization, Prague, July 10–14, 1995

64. IFIP Conference, Warsaw, Poland, July 17–21, 1995

65. SIAM Annual Meeting, Charlotte, NC, Oct. 23–26, 1995

1996

66. SIAM Annual Meeting, Kansas City, KS, June 21–25, 1996
67. Conference on Nonlinear Problems in Aerospace, Daytona Beach, FL, May 9–11, 1996
68. SPIE's 1996 Symposium, San Diego, CA, Feb 25–29, 1996
69. MMAR-96 Conference, Miedzyzdroje, Poland, Sept. 10–13, 1996
70. AMS Conference on Mathematical Aspects of Wave Propagation, Chattanooga, TN, Oct. 11–12, 1996

1997

71. SPIE Conference on Smart Structures and Materials, San Diego, CA, Feb. 4–7, 1997
72. ISSAC Congress, Invited Session on Mathematical Methods in Wave Propagation, June 6, 1997
73. IFIP Conference on Optimal Control, Gainesville, FL, Feb. 27–Mar. 1, 1997
74. CIRM Conference on Control of PDE's, Luminy, Marseille, France, June 16–21, 1997
75. 18th IFIP General Conference on Modeling and Optimization, Detroit, MI, July 21–24, 1997
76. International Conference on Dynamics and Control of PDE's, Guanajuato, Mexico, Nov 29–31,1997

1998

77. Semester on Control Theory of PDE's, Institut Henri Poincare; Paris, France, March 9–13, 1998
78. Workshop on Thermoelasticity, Nat. Lab. Scientific Comp., Rio de Janerio, Brazil, March 16–20, 1998
79. International Conference on Control of PDE's, Chemnitz University, Germany, April 20–25, 1998
80. 4th SIAM Conference on Control and its Applications, Jacksonville, FL, May 7–9, 1998
81. Conference on Control of Distributed Parameter and Stochastic Systems, Hangzhou, China, June 19–22, 1998
82. Conference on Semigroups of Operators, Newport Beach, CA, Dec. 14–18, 1998
83. Invited SIAM lecture at 37th IEEE CDC Conference, Tampa, FL, Dec. 16–18, 1998

1999

84. AMS Meeting, Invited Session on Control and Dynamics of PDE's, Las Vegas, NV, April 10–11, 1999
85. ICIAM 99, Invited Session on Control of Shells, Edinburgh, Scotland, July 5–9, 1999
86. 19th IFIP Conference, Invited Session on Control of DPS Systems, Cambridge, England, July 12–16, 1999
87. AMS Southestern Meeting, Invited Session on Optimal Control and Computational Optimization, Charlotte, NC, Oct. 15–17, 1999
88. 38th IEEE CDC Conference, Invited Session on Control of Distributed Systems, Phoenix, AZ, Dec. 7–10, 1999

2000

89. AMS Annual Meeting, Invited Session on Differential Geometric Methods in Control Theory, Washington, DC, Jan. 19–21, 2000
90. 3rd International Conference on Nonlinear Problems in Aviation and Aerospace, Daytona Beach, FL, May 10–12, 2000
91. International Conference on Distributed Systems, Ekaterinburg, Russia, May 30–June 2, 2000

92. International Workshop on Differential Equations and Optimal Control, Ohio University, May 12–14, 2000
93. Conference on Optimal Control of Dynamical Systems, Oberwolfach, June 4–10, 2000
94. Workshop on PDE's, Thermo-Visco Elasticity, University of Konstanz, Germany, July 31–Aug. 4, 2000
95. IMACS World Congress, Invited Session on Wellposedness and Qualitative Behaviour of Solutions to Nonlinear Shell Theory, Lausanne, Switzerland, Aug. 21–25, 2000
96. Third World Congress of Nonlinear Analysis, Catania, Sicily, July 19–26, 2000
97. PDE Conference, Virginia Tech. University, Blacksburg, VA, Oct. 15–16, 2000

2001

98. AMS Conference, Invited Session on Calculus of Variations and Nonsmooth Analysis, Lawrence, KS, March 30–April 1, 2001
99. Workshop on Wellposedness in Optimization and Nonsmooth Analysis, Banach Center, Warsaw, Poland, Sept. 10–15, 2001
100. ISAAC Congress, Invited Session on Geometric Methods and PDE's, Berlin, Germany, Aug. 20–25, 2001
101. AMS Conference, Invited Session on Wave Propagation, Chattanooga, TN, Oct. 5–7, 2001

2002

102. AMS Annual Conference, Invited Session on Nonlinear PDE's, Jan. 7–11, 2002
103. Conference on Evolution Equations and Semigroups, INDAM Palazzone in Cortona, Italy, April 8–12, 2002
104. First Joint International Meeting AMS-Unione Matematica Italiana, Pisa, Italy, June 12–16, 2002
105. Conference on Differential Equations and Nonlinear Dynamics. University of Alberta, Edmonton, Alberta, Canada, July 7–12, 2002
106. SIAM Annual Conference, Invited Session on Shape Optimization, Philadelphia, July 8–12, 2002
107. Conference on PDE's and Optimization, Romanian Academy of Sciences, Constanza, Romania, September 10–14, 2002

2003

108. Institut Mittag-Leffler, Semester on Mathematical Control Theory, Jan. 2003
109. Conference on Semigroups and Evolutions, Gargnano, Italy, March 31–April 4, 2003
110. 3rd International Conference on Engineering, Applications and Computational Algorithms, Guelph, Ontario, Canada, May 15–18, 2003
111. IIASA Workshop on Control of Distributed Systems and Environmental Applications, Laxenburg, Austria, May 26–18, 2003
112. Conference in honor of J. Lagnese, Washington, DC, May 29–June 3, 2003
113. 21st IFIP Conference on System Modeling and Optimization, invited session, Sophia Antipolis, France, July 21–25, 2003
114. 9th IEEE International Conference on Methods and Models in Automation and Robotics, Invited Session on Optimization of Infinite-Dimensional Systems, Miedzyzdroje, Poland, August 25–28, 2003
115. 4th ISAAC Congress (International Society for Analysis, Applications and Computations), Special Session on Inverse Problems, Toronto, Canada, August 11–16, 2003

116. 5th Congress of Romanian Mathematics, Pitesti, Romania, June 22–28, 2003

2004

117. Workshop on Boundary Control and Optimization, Pisa, February 26–28, 2004
118. AIMS Conferene on Differential Equations and Dynamical Systems, Los Angeles, CA, June 15–19, 2004
119. SIAM Conference on Nonlinear Waves and Coherent Structures, invited session, Orlando, Oct. 2–5, 2004
120. Workshop on Optimal Control of ODEs Conference, dedicated to Czeslaw Olech. Banach Center, Warsaw, Poland, September 1–5, 2004
121. IFIP Conference on Free an Moving Boundaries, Houston, Dec 2–4, 2004

2005

122. AMS Conference, Southeastern Section, invited session, Bowling Green, KY, March 2005
123. AMS Conference, Eastern Section, invited session, Newark, DE, April 2–3, 2005
124. Oberwolfach Conference on Optimal Control of Coupled Systems of PDE's, Oberwolfach, April 17–23, 2005
125. Workshop on Inverse Problems, Charlotte, NC, May 27–30, 2005
126. 5th ISAAC Congress, Catania, Italy, July 25–30, 2005
127. 22nd IFIP Conference on Modeling Optimization, Torino, Italy, July 17–21, 2005
128. AMS Summer Research Conference on Control Methods in PDE Dynamical Systems, Snowbird, Utah, July 3–7, 2005
129. Workshop on Boundary Value Problems, Computation and Control, UCLA, Los Angeles, CA, September 19–23, 2005
130. Conference on Evolution Equations, Applications to Physics and Engineering, Luminy, France, October 24–28, 2005
131. MMAR 2005–IEEE Conference, Miedzyzdroje, Poland, August 29–September 1, 2005

2006

132. AIMS Conference on Dynamical Systems and Differential Equations, Special Session Infinite-Dimensional Dynamical Systems, Poitiers, France, June 25–28, 2006
133. AMS Conference, Special Session Harmonic Analysis and PDE's, Miami, FL, April 1–2, 2006
134. Fluids and Waves-Recent Trends in Applied Analysis, Memphis, TN, May 11–13, 2006
135. SIAM Conference on Analysis of PDE's, Invited Session on Structure Interactions with Fluid Gas Flows and Acoustical Waves, Boston, MA, July 10–12, 2006
136. IEEE–MMAR 2006, Miedzyzdroje, Poland, August 28–31, 2006
137. Evolutions Equations 2006, in memory of G. Lumer, Univ. of Mons, Mons, Belgium, August 28–September 1, 2006
138. International Conference on Differential Equations, dedicated to Y. Lopatinsky, Lviv, Ukraine, September 12–17, 2006
139. Workshop on PDE's, Rio de Janeiro, Brazil, September 12–15, 2006

140. Advances in Control of PDE's, in honor of the 70th birthday of T. Seidman, Univ. of Maryland, October 28–29, 2006

2007

141. Workshop on Direct, Inverse and Control Problems for PDE's (DICOP), Rome, Italy, June 25–28, 2007

142. International Conference on Theoretical and Numerical Fluid Mechanical, in honor of P. Galdi, Vancouver, Canada, August 11–17, 2007

143. Conference on Functional Analysis and Optimization, Center of the Institute of Mathematics of the Polish Academy of Sciences, Bedlewo, Poland, September 17–21, 2007

144. Int. Conference on Inverse and Ill-Posed Problems of Mathematical Physics, dedicated to M. M. Lavrentev, Novosybirsk, Russia, August 20–25, 2007

145. Special Session at the SIAM-PDE Conference, Arizona, December 2007

146. AMS-NZM First Joint Meeting, Session on New Trends in Spectral Analysis and PDE, Wellington, New Zealand, Dec. 12–15, 2007

147. Workshop on PDE's, Rio de Janeiro, Brazil, September 1–7, 2007

148. Workshop on PDE's, University of Maringa, Maringa, Brazil, September 10–17, 2007

2008

149. MFO, Workshop on Optimal Control of Coupled PDE's, Oberwolfach, Germany, March 2–8, 2008

150. AMS Session on Harmonic Analysis and Fluids, Bloomimgton, April 5–8, 2008

151. 7th AIMS Conference on Dynamical Systems and Differential Equations, Arlington, TX, May 18–21, 2008

152. Int. Conference in Inverse Problems, Modeling and Simulations, Mugla, Turkey, May 28–30, 2008

153. Differential Equations and Topology, dedicated to L. S. Pontryagin, Moscow State Univ., June 17–22, 2008

154. Direct, Inverse and Control Problems in PDE's, Cortona, Italy, September 22–27, 2008

155. Workshop on Partial Differential Equations, organized by LNPC and UFRJ, Rio de Janeiro, Brazil, August 22–26, 2008

156. MTNS (Mathematical Networks and Systems) 2008, Workshop on Classical PDE Control Studies, Blacksburg, VA, July 28–August 1, 2008

157. AMS Central Sectional Meeting, Special Session on Optimization and Variational Analysis, Kalamazoo, Michigan, October 17–19, 2008

158. 47th IEEE-CDC Conference, Invited Session Distributed Parameter Systems, Cancun, Mexico, December 9–11, 2008

2009

159. International Conference on Nonlinear Parabolic Problems, in honor of H. Amann, Banach Center, Bedlewo, Poland, May 10–16, 2009

160. AMS Conference, Special Session on Nonlinear PDE's, San Francisco, May 25–27, 2009

161. 6th IMACS Intl. Conference on Nonlinear Evolution Equations and Wave Phenomena, Athens, Georgia, March 23–26, 2009

162. Review of AFOSR, Dynamics and Control Program, Washington, DC, July 15–18, 2009

163. 24th IFIP Conference, Invited Session on Stability and Error Analysis for Optimal Control Problems, Buenos Aires, Argentina, July 27–31, 2009

164. International Conference on Mathematical Control Theory, in honor of D. Russell. Chinese Academy of Sciences, Beijing, China, May 15–17, 2009

165. 7-th ISACS Congres, Invited Session on Nonlinear Evolutionary PDE's. Imperial College, London, July 13-17, 2009.

166. Summer School on Nonlinear Analysis, Federal University of Rio de Janeiro, August 2–8, 2009

167. SIAM PDE Conference, Miami, December 7-10, 2009

168. Conference in Honor of V. Lakshmikantham, Recent Advances in Mathematical Sciences and Applications, December 18-22, 2009, Mandurawada, India.

2010

169. AMS Annual Meeting, Jan. 10-15,2010. Invited session *Nonlinear Hyperbolic Equations and Control Systems in Physics and Engineering.*

170. Winter School on Nonlinear Analysis and Control, , March 1-6, 2010, University of Maringa, Brazil.

171. Conference on Harmonic Analysis and PDE's, University of Nebraska, April 17-18, 2010.

172. 5th International Conference "Inverse Problems: Modeling and Simulation", Antalya, Turkey, May 24-29, 2010

173. 2010 American Control Conference (ACC) , June 30-July 2, 2010, Baltimore, Maryland, Invited Session "Estimation and Control of DPS ".

174. AIMS Conference on Dynamical Systems and Differential Equations, May 25-31, Dresden, Germany. Special Session Qualitative Behavior of Dissipative Dynamical Systems.

175. Conference on Evolution Equations, October 11-15, 2010, Schmitten-Frankfurt, Germany

176. Workshop on Dynamical Systems, September 18-22, 2010, Edinburgh, Scottland.

177. Conference on Semigroups, Evolution Equations, and Boundary Conditions, University of Taubigen, Germany, July 1-3, 2010

178. Conference on PDE-s , Semigroup Theory and Inverse Problems, University of Bologna, Italy September 1 - 4, 2010

179. 1065-th AMS Meeting, (Invited Session: Differential Equations and Applications), University of Richmond, November 6-7, 2010

180. 49-th IEEE-CDC Conference, (Invited Session on Nonlinear Control) , Atlanta, GA, Dec 15-17, 2010

181. Analysis Days , KFUPM, Dhahran, SA, Dec 21-23, 2010

2011

182. 2011 AMS Annual Meeting, Invited Session on Fluid Structure Interactions , New Orleans, Luisiana, Jan 6-9, 2011

183. INDAM Workshop "Modeling and Control of Nonlinear Evolutions". Sissa, Trieste, May 24-27, 2011.

184. SIAM Conference on Control, Special session Optimal Control and Applications, Baltimore, MD, July 25-27, 2011.

185. Summer School: Linear and Nonlinear Evolutions, (Principal Lecturer),Koc University, Istambul, Turkey, June 27-July 31, 2011.

186. PDE-Belem. X Workshop on Partial Differential Equations and Applications, August 29-September 01, 2011.

187. 25-th IFIP TC7 Conference on Modeling and Control, *Invited Session*: Analysis and Control of Composite Systems , Berlin, Germany, Sept 12-16, 2011.

188. 25-th IFIP TC7 Conference on Modeling and Control,*Invited Session*:Evolution Problems and Optimal Control Berlin, Germany, , Sept 12-16, 2011

189. Workshop on Control and Optimization of PDE's, University of Graz, Austria, Oct 10-14, 2011,

190. Evolution Equations and Randomness, Bad Harrenhalb, Germany, October 10-14, 2011

191. SIAM Conference on Analysis of PDE's. Invited Session " Dissipative Systems and Attractors", San Diego, Nov 14-17, 2011.

192. Workshop on Optimal Control of PDE;s, Invited speaker In honor of F. Troltsch. Nov 27-Dec 03, Klaffenbach, Germany, 2011.

193. International Conference on Numerical Analysis and Optimization Theory, Plenary speaker. KFUPM, Dhahran, SA, December 17-22, 2011.

2012

194. 2012 AMS Annual Meeting, Invited Session on Control of Biological Systems. Jan 4-7, 2012. Boston.

195. INDAM Workshop on Mathematical Models and Analytical problems in Special Materials. In honor of Mauro Fabritzio. Rome, April 16-20, 2012.

196. Conference on Variational Analysis and Applications, Erice, Sicily, May 14-22. 2012.

197. The Fifth International Conference on Inverse Problems, Golf Antalya, Turkey, May 24-29,2012.

198. AIMS Conference on Differential Equations and Dynamical Systems, *Invited Session on Mathematical Theory of Commpresible and Incompressibls Fluids*. Orlando, Fla, July 4-5, 2012

199. AIMS Conference on Differential Equations and Dynamical Systems, *Invited Session on Nonlinear Evolutions with Interfaces* . Orlando, Fla, July 1-3, 2012

200. ICNPAA 2012 Congress on Mathematical problems in Engineering. (Plenary speaker), Vienna, July 9-14,2012.

201. Workshop on Inverse Problems, University of Bologna, Bologna, Italy, July 16-20, 2012.

202. Conference on Applied Analysis and Mathematical Biology (Plenary speaker), University of Delaware , NE August 8-9, 2012.

203. AFOSR Review Meeting, Washington DC, Hyatt Regency, August 6-9, 2012.

204. XI Workshop on PDE's, LNCC and UFRJ, Rio de Janeiro, August 28-31, 2012.

205. Workshop: Model Reduction in Continuoum Thermodynamics, *BIRS*, Canada, Sept 16-21, 2012.

206. Workshop on Aeroelasticity: Axial Air Flow. UCLA, November 20-21, 2012.

207. International Conference on the Theory, Methods and Applications of Nonlinear Equations, Kingsville, TX. Dec 17-21, 2012. (Plenary Speaker)

2013

208. The 8-IMACS Conference on Nonlinear Evolution Equations and Wave Phenomena. Athens, GA March 25-28, 2013.

209. Workshop on Inverse Problems, Palazzo Cortona, Italy, June 17-21, 2013

210. Recent Advances in Partial Differential Equations and Applications , June 17-21, University of Milano, Italy, 2013 (Main Lecturer -series of 6 lectures).

211. Joint International Meeting of the **AMS and the Romanian Mathematical Society** in partnership with the Simion Stoilow Institute of Mathematics of the Romanian Academy, Alba Iulia, Romania, June 27-30, 2013

212. ANCNA Anatolian Communications in Nonlinear Analysis. Bolu, Turkey, July 306, 2013. (Main Speaker).

213. SIAM Conference on Control and Its Applications (CT13) July 8-10, 2013, in Town and Country Resort & Convention Center, San Diego, California, USA

214. ISAACS Congres, Special Session: Nonlinear Evolutions, Krakov, Poland, August 5-9, 2013.

215. AMS Mathematical Congress of the Americas, Guanajuato, August 5-9, 2013. Special Session "Control and Stabilization for Partial Differential Equations"

216. EQUADIFF 13, Prague, Czech Republic, August 26-30, 2013.

217. The 26th IFIP TC 7 Conference 2013 on System Modeling and Optimization Klagenfurt, Austria, September 9-13, 2013

218. - 1st IFAC Workshop CPDE - 25-27 September 2013, Institut Henri Poincarï¿œ Paris - France

219. XII Workshop on PDE's. LNCCP Petropolis, Rio de Janeiro, Brazil, Sept 10-14, 2013.

220. Semigroups of Operators: Theory and Applications, Institute of Mathematics, Polish Academy of Sciences, Oct 6-11, 2013.

221. SIAM -PDE Conference, Invited Session- Fluid Structure Interactions. Orlando, December 7-11, 2013.

2014

222. AMS Annual Meeting 2014- Invited SIAM Minisymposium on Recent Advances in Partial Differential Equations Modeling Physical Systems. Convention Center, Baltimore MD. January 15., 2014. -

223. AMS Conference, Invited Session on Nonlinear PDE's, , Knoxville , March 21-23, 2014.

224. Oberwolfach Workshop on Nonlinear Evolution Equations: Analysis and Numerics. March 16-March 22, 2014.

225. International Conference on Hyperbolic Problems, IMPA, Rio de Janeiro, July 28-August 1, 2014.

226. Workshop on Shape and Topology Optimization, LNCC MCT1, Petropolis-Rio de Janeiro, August 11-15, 2014.

227. Recent Trends in Nonlinear PDE's, NPDE 2014, Trieste, 28-30 May, 2014.

228. Conference on PDE, Novacella, Italy, May 29-June 1, 2014.

229. 10-th AIMS Conference on Dynamical Systems, Differential Equations. Special Invited Session: Nonlinear Evolutions PDE's and Interfaces. Madrid, Spain, July 7-July 11, 2014.

230. ICNPAA 2014 Congress, Narvik University, Norway, July 15-18, 2014.

231. Inverse Problems and Control Theory, Conference in Memory of Alfredo Lorenzi, University of Bologna, September 15-19, 2014

232. IWH Symposium in Heidelberg on Simulation and Optimization of Extreme Fluids, November 10-12, 2014, Heidelberg, Germany

2015

233. Shanks Workshop on Mathematical Aspects of Fluid Dynamics, Vanderbilt University, February 28-March 1, 2015.

234. Plenary Speaker (one of four) at SIAM-SEAS 2015. March 20-25, 2015. University of Alabama.

235. Plenary speaker (one of three) at the Ninth IMACS Conference on Nonlinear Evolution Equations and Wave Phenomena. Georgia Center, University of Georgia, April 01-04, 2015

236. 7-th International Conference on Dynamic Systems and Applications. Atlanta, May 27-30, 2015.

237. From Open to Closed Loop Control , Mariatrost, Austria, June 22-26, 2015

238. New Advances in PDE's and Inverse Problems and Control Theory, Parma, July 6-10, 2015.

239. Invited Session at the IFIP TC7 Conference, Sophie Antipolis, FR, June 29-July 3, 2015

240. Conference on Bio-Fluids, University of Warsaw and Banach Center, April 27-29, 2015

241. Mathematical Fluid Mechanics:Old Problems, New Trends. Banach Center, Bedlewo, 30 August-5 September, 2015

242. XiV PDE Workshop-Rio. Workshop on PDE's. September 21-15, 2105. Petropolois, LNCC , Rio de Janeiro, Brasil.

243. SIAM-PDE Conference, December 7-11,2015, Scotsdale, Arizona,

2016

244. IMA (Institute of Mathematics and Applications) Workshop Computational Methods for Control of Infinite-Dimensonal Systems , March 14-18,2016, University of Minnesota in Minneapolis

245. AMS Sectional Meeting, Stony Brook, March 18-19, 2016, Invited one hour address

246. International Conference on Evolution Equations, May 16-May 20, 2016, University of Vanderbilt, Nashville.

247. Conference on Dynamical Systems and Applications, Institute of Mathematics, Lodz, June 16-18, 2016

248. OCERTO 2016- Optimal Control for Evolutionary PDE's, Cortona, June 20-24, 2016.

249. Conference on "Nonlinear PDE's " in Applied Mathematics, Ismir Institute of Technology, Turkey, August 28-30, 2016.

250. Oberwolfach Seminar: Mathematics of Fluid-Flow Structure Interaction Problems, Oberwolfach, Germany, November 20-26, 2016. One of the 4 plenary speakers.

2017

251. 2017 AMS Annual Meeting, Atlanta, January 4-7, 2017. Invited session .

252. 2017 Conference on Automatica, June 18-21, Cracow, Poland. One of four plenary speakers.

253. Banff International Research Station, Control: New Trends in Infinite Dimensions, Banff, July 16-21. 2017. Organizer.

254. GPCO 2017-7-th German-Polish Conference on Optimization, Bedlewo, August 27-September 1m 2017, One of seven plenary speakers.

255. Workshop on Nonlinear PDE's, Ismir Institute of technology, August 8-11, 2017.

256. AMS Conference, Sept. 23-24, 2017, Orlando 2017. Invited Session.

257. Workshop on Dynamics, Control and Numerics for Fractional PDE's, Hilton, San Juan, Puerto Rico, October 23-25, 2017. Keynote lecture [one of seven]

258. SIAM PDE Conference, Baltimore, December 9-11, 2017. Invited session.

259. Conference on Recent Advances in Mathematical Sciences and Applications (RAMSA-17), at GVP College of Engineering, Visakhapatnam, India.19th to 22nd December, 2017 .One of the Three Plenary Speakers.

2018

260. Paths in Mathematical Control Theory, Torino, March 25-27, 2018. One of the Three Main Lecturers.

261. The Third International Conference on the Dynamics of Differential Equations-Fundamentals and Developments, In Memory of Professor Jack. K. Hale, Hiroshima, March 14-March 18, 2018. One of 40 min long lectures.

262. Emerging Trends in Applied Mathematics and Mechanics, Jagiellonian University, Kracov, Poland June 18-22, 2018. One of the four plenary speakers.

263. SMACS 2018-Special Materials and Complex Systems. Palazzo Feltrinelli, Garganano, Italy, June 18-22, 2018.

264. AMS Meeting -invited special session Nonsmooth Optimization and Applications, Portland State University, May 14-18, 2018.

265. Invited session on Control of PDE's, IFIP 28 Conference on Modeling and Optimization. Qualitative analysis and control theoretic properties of evolutionary partial differential equations. Essen Germany, July 24-27, 2018.

266. Semigroups of Operators, Theory and Applications -SOTA. Banach Center, Kazimierz Dolny, September 9-October 5, 2018.

267. Plenary speaker Dynamics of Dissipative PDE's Workshop, University of Surrey, Sept 10-14, 2018.

268. XVII Workshop on PDEÕs [invited 40 min long talk], LNCC, Petropolis-Rio de Janeiro, Brasil, September 11-14, 2018.

269. Invited speaker Oberwolfach Workshop: Numerical Analysis for Non-Smooth PDE Constrained Optimal Control Problems, Dec 16-Dec 22, 2018, Oberwolfach, Germany.

270. Workshop on Dynamics, Control and Numerics for Fractional PDE's, San Juan, Puerto Rico, Dec 4-8. 2018. Keynote lecture [one of six]

2019

271. Invited talk " Flow Structure interactions", University of Vanderbilt, Department of Mathematics. February 28

272. AMS Invited Session on Control of Coupled PDE's systems, Auburn University, March 16-17, 2019.

273. Workshop on Fluid Structure Interactions, Milano, Italy March 19-224 [Key Note Lecture].

274. Workshop on Infinite Dimensional Control Theory, Rice University, April 6-7, Houston

275. PDE Workshop in honor of Prof. Racke, University of Constant, April 9-11, 2019.

276. Karen Ames Memorial Lecture, University of Alabama, Huntesville, April 19.

277. Conference on Evolution Equations, May 6-10, Bad Herrenbald, Germany.

278. Workshop on Control Theory of PDE systems, NCState, Raleigh, May 13-15, 2019.

279. IFAC CPDE Conference, Oaxaca, Mexico, May 20-24 [Key note lecture].

280. Control Theory for Fluids- Technical University of Warsaw,. Series of 4 lectures, June 18-26, 2019.

281. Romanian Congress of Mathematics, July 28-August 3 , 2019.[Plenary talk]

282. Conference on Differential Equations and Applications DEA -Krakov, Poland, September 16-20, 2019

283. XVIII Workshop in PDE, Rio de Janeiro [Petropolis-LNC], September 10-13, 2019.

284. Conference in Honor of Matthias Hieber, CNR Center, Luminy Oct 28-Nov 1, 2019, France.

285. Conference in honor of Jaime Rivera, Maringa, Brasil, October 16-18.

286. SIAM Conference,Talk in the Invited Session, Iowa State University, Ames, October 20, 2019.

287. SIAM PDE Conference, Invited talk, La Quinta, December 11-14, 2019.

2020

288. AUS-ICMS 20-Conference on Mathematics and Statistics, Session on PDE's, Sharjah, UE, February 6-9, 2020. **Main Speaker**.

289. AppliedMath2020, Brijuni Islands, Croatia, September 14-18, 2021. **Plenary Speaker.**

290. Conference on 'New Challenges in Operator Semigroups' August 3–7, 2020, in Oxford (UK). In honor Of Charles Batty's retirement. Postponed till 2021.**Plenary Speaker**.

291. 13-th AIMS Conference on Dynamical Systems, Differential Equations and Applications. Atlanta, June 5-9, 2021. **Invited speaker** of Special Session: Interactive PDE Systems.

292. Series of virtual lectures [**short course**] at the 2-nd Summer Workshop on PDE and Dynamical Systems , Henan University, July 15-19, 2020.

293. **Plenary talk** at the Inauguration of the **Center for Dynamical Systems** , Henan University, Henan, China, July 22, 2020.

294. Summer School :"Fluids and Control", Czech Academy of Sciences, Prague, August 24-28, 2020, **Plenary speaker**-postponed till 2021.

295. International Video-worhshop om Infinite Dimensional Dynamical Systems. Donghua University- Shanghai. China. Sepember 12-19, 2020 **one of 8 plenary Speakers**. .

296. AMS Regional Conference in Chattanooga, **Plenary Speaker** [45 min] at the invited virtual session*Modern Analysis,* October 10-11, 2020.

2021

297. Plenary speaker at the MSRI Workshop Recent Developments in Fluid Dynamics, April 12-April 23, 2021.

X(c) Colloquium talks

Scuola Normale Superiore, Analysis Department, Pisa, Italy, June 1984

University of Bologna, Mathematics Department, Bologna, Italy, June 1984

Scuola Normale Superiore, Pisa, Italy, June 15–July 30, 1985

International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, July 1986

Scuola Normale Superiore, Pisa, Italy, June 10–30, 1986

University of Paris IX, Mathematics Department, Paris, France, June 1987

Carnegie Mellon University, Mathematics Department, Pittsburgh, PA, Jan. 1987

University of Zürich, Mathematics Department, Zürich, Switzerland, July 9–15, 1987

Scuola Normale Superiore, Pisa, Italy, July 15–30, 1987

University of Maryland, Mathematics Department, College Park, MD, Oct. 1988

Virginia Polytechnic Institute, Mathematics Department, March 1988

University of Cincinnati, Mathematics Department, May 1988

Georgetown University, Mathematics Department, Nov. 1988

Scuola Normale Superiore, Pisa, Italy, July 1988

Cornell University, Seminar on Microlocal Analysis, MIS, Nov. 1988

Scuola Normale Superiore, Pisa, July 1989

University of Bologna, Mathematics Department, Bologna, Italy, July 1990

University of Kansas, Department of Mathematics, Lawrence, KS, April 1991

University of Bologna, Department of Mathematics, Bologna, Italy, June 1991

Scuola Normale Superiore, Pisa, July 1991

Virginia Polytechnic Institute, ICIAM Center, Blacksburg, VA, Nov. 1991

University of Kansas, Department of Mathematics, Lawrence, KS, Dec. 1991

IIASA Institute, series of four lectures, Laxenburg, Austria, Aug. 1991

University of Maryland, Department of Mathematics, College Park, MD, April 17, 1992

Scuola Normale Superiore, Pisa, Italy, July 1992

University of Bologna, Department of Mathematics, Bologna, Italy, June 1992

University of Trento, Department of Mathematics, series of five lectures, Italy, Oct. 1992

University of Pavia, Department of Mathematics, Pavia, Italy, Nov. 26, 1992

University of Torino, Department of Applied Mathematics, Italy, July 1992

University of L'Aquila, Department of Mathematics, Italy, Dec. 5, 1992

University of Trento, Department of Mathematics, Italy, Jan. 1993

University of Torino, Department of Mathematics, Torino, Italy, July 3, 1993

University of Bologna, Department of Mathematics, series of six lectures, Bologna, Italy, June 1993

Scuola Normale Superiore, Pisa, Italy, July 20–25, 1993

University of Jyvaskyle, Department of Mathematics, series of 10 lectures, Finland Aug. 15–28, 1993

Polish Academy of Sciences, Institute of Fundamental Problems in Technology, Warsaw, Aug. 5, 1993

Wright State University, Department of Mathematics, April 1994

RPI, Department of Mathematical Sciences, Troy, NY, May 2, 1994

CNR, IAC, Rome, Italy, June 1994

Scuola Normale Superiore, series of lectures, Pisa, Italy, July 1995

Wichita State University, Department of Mathematical Sciences, April, 1996

Scuola Normale Superiore, series of lectures, Pisa, Italy, June–July 1997

University of Nebraska, Mathematics Department, Lincoln, NE, Oct. 1997

Seoul National University, Mathematics Department, Korea, June 1998

Scuola Normale Superiore, July 1998

Texas Tech, University, Mathematics Department, Lubbock, TX March 2000

Univ. of Firenze, Firenze, Italy, May 2002

Univ. of Brescia, Bresia, Italy, May 2002

Scuola Normale Superiore, Pisa, Italy, Feb–June 2002

Univ. of Maryland, October 25, 2003

Wayne State University, Detroit, MI, March 7, 2005

University of Nebraska, Lincoln, NE, March 2007

Michigan State University, MI, April 2007

UCLA, Los Angeles, October 2007

Scuola Normale Superiore, March 2008

University of Nebraska, March 2009

University of Zurich, Department of Mathematics, Zurich, Switzerland. January, 2010.

Tata Institute, School of Mathematics, Bangalore, India, January 2010.

Kent State University, February 2010.

University of Prague, Department of Mathematics, Prague , Czech Republic. 2010.

University of Berlin, Department of Mathematics, Germany, 2010

University of Nebraska, Lincoln, 2010

University of Warsaw, Poland, May-June, 2010

Weiestrass Institute, Berlin, Germany, December 2010.

Eli Cartan Institute, L' Universite de Nancy, Nancy, France December 2009.

L'Universite de Nice and L'Ecole de Mines, Sophia Antipolis, Nice, France, 2010

University of Graz , Austria, 2010.

Institute of Mathematics, Polish Academy of Sciences, Warsaw, June 2010.

King Fahd University (KFUPM), Dhahran, KSA, December, 2011

Rutgers University, New Brunswick, NJ, March 2011

University of Memphis, Department of Mathematics, April 2012.

University of Maringa (UEM) and UFRJ (Univ. Federal Rio de Janeiro) , Brazil, August-September 2012.

University of California, UCLA, November , 2012

University of Warsaw, Department of Mathematics, October 2012.

University of Southern California, USC, Los Angeles, CA Fall 2013.

University of Maryland, College Park, MD, April 30, 2014.

University of Kansas, December , December 2013.

Institute of Mathematics, Polish Academy of Sciences, December 2014.

Department of Mathematics, University of Parma, Italy,July 2015.

Institute of Mathematics, Polish Academy of Sciences, December 2015.

Department of Mathematics, University of Maringa, Brasil, May 2016.

Department of Mathematical Sciences, Florida Institute of Technology, November 2017.

Department of Applied Mathematics, Politechnico di Milano, March 28, 2018.

Department of Mathematics, University of Nebraska, Lincoln, Oct 10-12,2018

Department of Mathematics, Vanderbilt University, Nashville, February 28, 2019.

Department of Mathematics, University of Alabama,Huntseville, Dr. Karen Ames Memorial Lecture, April 18, 2019.

Institute of Mathematics, Technical University of Warsaw, Series of four lectures, June 18-26, 2019.

Department of Mathematics, University of Alabama, Birmingham, January 23, 2020.