

Mihailo R. JOVANOVIĆ

Electrical and Computer Engineering
University of Minnesota
200 Union Street SE, Minneapolis, MN 55455

Phone: (612) 625 7870
E-mail: mihailo@umn.edu
URL: www.umn.edu/~mihailo

Appointments

Assistant Professor of Electrical and Computer Engineering.

University of Minnesota, since Dec. 2004.

Postdoctoral Scholar.

Department of Mechanics, Royal Institute of Technology, Stockholm, Sweden, Sept. 2004 – Dec. 2004.

Advisor: Professor Dan S. Henningson.

Education

PhD in Mechanical Engineering.

University of California, Santa Barbara, 2004.

Thesis: *Modeling, analysis, and control of spatially distributed systems.*

Advisor: Professor Bassam Bamieh.

MS in Mechanical Engineering.

University of Belgrade, Serbia, 1998.

Thesis: *Practical tracking automatic control of axial piston hydraulic motors.*

Advisors: Professors Zoran Ribar and Dragan Lazić.

Dipl. Ing., Mechanical Engineering.

University of Belgrade, Serbia, 1995.

Graduated with First Class Honors, **GPA:** 9.53/10.00.

Experience

Graduate Researcher.

University of California, Santa Barbara, 1999 – 2004.

Teaching Assistant.

University of California, Santa Barbara, 1998 – 2001.

Served as a Teaching Assistant for the following graduate: *Linear Systems A*, *Linear Systems B*, *Modeling and Control of Infinite Dimensional Systems*, *Numerical Optimization Methods*, and undergraduate courses: *Control Systems Design Laboratory*, *Statics*.

Staff Intern.

Raytheon Co., Santa Barbara Remote Sensing, Summer 2001.

Assistant Lecturer.

University of Belgrade, Dept. of Mech. Eng., 1995 – 1998.

Served as an Assistant Lecturer for three upper-level undergraduate courses: *Nonlinear Systems*, *Automatic Control*, and *Fundamentals of Automatic Control*.

Graduate Researcher.

University of Belgrade, Dept. of Mech. Eng., 1995 – 1998.

Staff Intern.

Siemens Co., Spring 1997.

Undergraduate Researcher.

University of Belgrade, Dept. of Mech. Eng., Spring 1995.

Primary Research Areas

Modeling, dynamics, and control of spatially distributed systems

- Distributed systems theory and applications
- Modeling and control of Newtonian and viscoelastic fluid flows
- Computational tools for large-scale and spatially distributed systems
- Parametric resonance in PDEs
- Architectural issues in distributed control design
- Limitations and tradeoffs in the control of vehicular formations
- Analysis of biological systems

Grants and Contracts

”Enabling methods for modeling and control of transitional and turbulent wall-bounded shear flows”, *National Science Foundation CAREER Award*, Mar. 01, 2007 – Feb. 28, 2012, \$400,000.

”Design of scalable control strategies for large-scale automated highways,” *University of Minnesota Grant-in-Aid Program*, Jan. 01, 2009 – June 30, 2010, \$29,346.

”Model-based sensorless flow control,” *University of Minnesota Grant-in-Aid Program*, Jan. 01, 2006 – June 30, 2007, \$23,083.

Research Group

Current PhD Advisees: Rashad Moarref, Fu Lin, Binh Lieu.

Former Members:

Dr. Makan Fardad, Postdoctoral Associate, Aug. '06 - June '08 (now at Syracuse University)

Teaching

EE 5235: <i>Robust Control System Design</i> (Graduate)	Spring 08
EE 8235: <i>Adaptive Control</i> (Graduate)	Fall 07
EE 8235: <i>Modeling, Dynamics, and Control of Distributed Systems</i> (Graduate)	Spring 07, 09
EE 5231: <i>Linear Systems and Optimal Control</i> (Graduate)	Fall 06, 08
EE 4233: <i>State Space Control System Design</i> (Undergraduate)	Spring 05, 06
EE 4237: <i>State Space Control Laboratory</i> (Undergraduate)	Spring 05, 06
EE 4951W: <i>Senior Design Project</i> (Undergraduate)	Spring 06, 08, 09
EE 3015: <i>Signals and Systems</i> (Undergraduate - Recitation Sessions)	Fall 06, 07, 08

Awards, Honors and Recognition

National Science Foundation CAREER Award, 2007.

Finalist, Best Student Paper Award, 2007 American Control Conference, New York City, NY, 2007 (as advisor).

Best Session Presentation Award (five times), American Control Conference, 2001-04, 2007.

Invited Participant, 2006 Center for Turbulence Research Summer Program, Stanford University, July – August 2006.

Outstanding Reviewer, IEEE Transactions on Automatic Control, 2005.

Invited Speaker, AMS–IMS–SIAM Joint Summer Conference on Hydrodynamic Stability and Flow Control, Snowbird, UT, July 2003.

The Nicolitch Trust Scholarship – ”for a recipient with exemplary grades and a leadership potential”, 2002 – 2004.

The Mechanical & Environmental Engineering Department Fellowship, University of California at Santa Barbara, 1998.

The Best Student of the Class Award (a class of approximately 500 students), Department of Mechanical Engineering, University of Belgrade, 1995.

Appeared on Dean’s list each year during undergraduate studies, 1991 – 1995.

The Fund for an Open Society Grant, to participate at the FLUCOME’97 conference in Japan, 1997.

The Ministry of Science & Technology of the Republic of Serbia Fellowship, Jan. 1996 – Jan. 1997.

The Foundation for Development of Young Researchers of the Republic of Serbia Fellowship, Oct. 1995 – Oct. 1996.

Energoproject Co. Fellowship, Oct. 1994 – Oct. 1995.

Professional Service and Activities

Associate Editor: Conference Editorial Board, IEEE Control Systems Society, July 2006 – present.

Program Committee Member: 2010 American Control Conference; 2008 American Control Conference; 2008 IEEE International Conference on Control Applications; 2006 IEEE International Conference on Robotics and Automation; 13th Mediterranean Conference on Control and Automation, 2005.

Workshop Organizer: ”Control, Estimation, and Optimization of Interconnected Systems: From Theory to Industrial Applications”, joint 44th IEEE Conference on Decision and Control & European Control Conference 2005, Seville, Spain, Dec. 2005. (Workshop web page: www.umn.edu/~mihailo/cdc-ecc05.html)

Referee: Air Force Office of Scientific Research; National Science Foundation; IEEE Transactions on Automatic Control; IEEE Transactions on Control Systems Technology; Automatica; Systems and Control Letters; IEEE Transactions on Circuits and Systems; European Journal of Control; Journal of Fluid Mechanics; Physics of Fluids; Journal of Atmospheric Sciences; Applied Mechanics Reviews; ASME Journal of Dynamic Systems, Measurement and Control; Journal of Vibration and Control; Vehicle System Dynamics; IEEE Conference on Decision and Control; American Control Conference; European Control Conference; Mediterranean Conference on Control and Automation; IEEE International Conference on Robotics and Automation.

Conference Session Chair: ”Optimization Theory and Applications”, 2008 American Control Conference, Seattle, WA, June 2008; ”Distributed Parameter Systems IV”, 43rd IEEE Conference on Decision and Control, Paradise Island, Bahamas, December 2004.

Conference Session Co-chair: ”Model reduction and control of distributed process systems”, 2006 American Control Conference, Minneapolis, MN, June 2006; ”Distributed parameter systems III”, 2006 American Control Conference, Minneapolis, MN, June 2006; ”Control and Optimization of Distributed Processes”, 2005 American Control Conference, Portland, OR, June 2005; ”Distributed Parameter Systems III”, 42nd IEEE Conference on Decision and Control, Maui, HI, December 2003.

Member: IEEE, Control Systems Society; SIAM, Activity Group on Control and Systems Theory; APS, Division for Fluid Dynamics.

Additional Information

Citizen of the United States.

Publications

Journals: published/in press

- [1] N. Hoda, M. R. Jovanović, and S. Kumar, “Frequency responses of streamwise-constant perturbations in channel flows of Oldroyd-B fluids,” *J. Fluid Mech.*, 2009, in press.
- [2] M. R. Jovanović, “On the optimality of localized distributed controllers,” *International Journal of Systems, Control and Communications*, 2009, special issue on “Information Processing and Decision Making in Distributed Control Systems”, in press.
- [3] M. Fardad, M. R. Jovanović, and B. Bamieh, “Frequency analysis and norms of distributed spatially periodic systems,” *IEEE Transactions on Automatic Control*, vol. 53, no. 10, pp. 2266–2279, November 2008.
- [4] M. R. Jovanović and M. Fardad, “ H_2 norm of linear time-periodic systems: a perturbation analysis,” *Automatica*, vol. 44, no. 8, pp. 2090–2098, August 2008.
- [5] M. R. Jovanović, J. M. Fowler, B. Bamieh, and R. D’Andrea, “On the peaking phenomenon in the control of vehicular platoons,” *Systems & Control Letters*, vol. 57, no. 7, pp. 528–537, July 2008.
- [6] N. Hoda, M. R. Jovanović, and S. Kumar, “Energy amplification in channel flows of viscoelastic fluids,” *J. Fluid Mech.*, vol. 601, pp. 407–424, April 2008.
- [7] M. R. Jovanović, M. Arcak, and E. D. Sontag, “A passivity-based approach to stability of spatially distributed systems with a cyclic interconnection structure,” *IEEE Transactions on Circuits and Systems, Part-I: Special Issue on Systems Biology*, vol. 55, no. 1, pp. 75–86, January 2008.
- [8] M. R. Jovanović, “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *Physics of Fluids*, vol. 20, no. 1, p. 014101, January 2008.
- [9] M. R. Jovanović and B. Bamieh, “Architecture induced by distributed backstepping design,” *IEEE Transactions on Automatic Control*, vol. 52, no. 1, pp. 108–113, January 2007.
- [10] M. R. Jovanović and B. Bamieh, “A formula for frequency responses of distributed systems with one spatial variable,” *Systems & Control Letters*, vol. 55, no. 1, pp. 27–37, January 2006.
- [11] M. R. Jovanović and B. Bamieh, “On the ill-posedness of certain vehicular platoon control problems,” *IEEE Transactions on Automatic Control*, vol. 50, no. 9, pp. 1307–1321, September 2005.
- [12] M. R. Jovanović and B. Bamieh, “Componentwise energy amplification in channel flows,” *J. Fluid Mech.*, vol. 534, pp. 145–183, July 2005.
- [13] M. R. Jovanović and B. Bamieh, “Lyapunov-based distributed control of systems on lattices,” *IEEE Transactions on Automatic Control*, vol. 50, no. 4, pp. 422–433, April 2005.
- [14] D. Debeljković and M. R. Jovanović, “Non-Lyapunov stability consideration of linear descriptor systems operating under perturbing forces,” *Advances in Modeling and Analysis*, vol. 49, no. 1-2, pp. 1–8, 1997.

Journals: under review

- [1] M. R. Jovanović and S. Kumar, “Nonmodal amplification of disturbances as a route to elasticity-induced turbulence,” *Physical Review Letters*, 2008, submitted, also arXiv:0810.2815v1, 16 Oct 2008.
- [2] F. Lin and M. R. Jovanović, “Least-squares approximation of structured covariances,” *IEEE Transactions on Automatic Control*, 2008, submitted.

Refereed Proceedings

- [1] N. Hoda, M. R. Jovanović, and S. Kumar, “Input-output analysis of the 2D/3C model in channel flows of viscoelastic fluids,” in *Proceedings of the 47th IEEE Conference on Decision and Control*, Cancun, Mexico, 2008, pp. 841–846, **(Invited paper)**.
- [2] M. Fardad and M. R. Jovanović, “Remarks on the state-space design of optimal controllers for distributed systems with finite communication speed,” in *Proceedings of the 47th IEEE Conference on Decision and Control*, Cancun, Mexico, 2008, pp. 5488–5493.
- [3] B. Bamieh, M. R. Jovanović, P. Mitra, and S. Patterson, “Effect of topological dimension on rigidity of vehicle formations: fundamental limitations of local feedback,” in *Proceedings of the 47th IEEE Conference on Decision and Control*, Cancun, Mexico, 2008, pp. 369–374.
- [4] R. Moarref, M. Fardad, and M. R. Jovanović, “Perturbation analysis of eigenvalues of a class of self-adjoint operators,” in *Proceedings of the 2008 American Control Conference*, Seattle, WA, 2008, pp. 955–960, **(Invited paper)**.
- [5] R. Moarref and M. R. Jovanović, “Remarks on computing the H_2 norm of incompressible fluids using descriptor state-space formulation,” in *Proceedings of the 2008 American Control Conference*, Seattle, WA, 2008, pp. 3064–3069.
- [6] F. Lin and M. R. Jovanović, “Energy amplification in a parallel Blasius boundary layer flow subject to free-stream turbulence,” in *Proceedings of the 2008 American Control Conference*, Seattle, WA, 2008, pp. 3070–3075.
- [7] M. R. Jovanović, M. Arcač, and E. D. Sontag, “Remarks on the stability of spatially distributed systems with a cyclic interconnection structure,” in *Proceedings of the 2007 American Control Conference*, New York City, NY, 2007, pp. 2696–2701.
- [8] F. Lin and M. R. Jovanović, “On the least-squares approximation of structured covariances,” in *Proceedings of the 2007 American Control Conference*, New York City, NY, 2007, pp. 2648–2653.
- [9] R. Moarref and M. R. Jovanović, “On using the streamwise traveling waves for variance suppression in channel flows,” in *Proceedings of the 2007 American Control Conference*, New York City, NY, 2007, pp. 2060–2065, **(Invited paper; Finalist, Best Student Paper Award)**.
- [10] R. Moarref and M. R. Jovanović, “Transition control using an array of streamwise vortices,” in *Proceedings of the 45th IEEE Conference on Decision and Control*, San Diego, CA, 2006, pp. 107–112, **(Invited paper)**.
- [11] M. R. Jovanović, R. Moarref, and D. You, “Turbulence suppression in channel flows by means of a streamwise traveling wave,” in *Proceedings of the 2006 Summer Program*, Center for Turbulence Research, Stanford University/NASA, 2006, pp. 481–494.
- [12] M. R. Jovanović, “ H_2 norm of linear time-periodic systems: a perturbation analysis,” in *Proceedings of the 2006 American Control Conference*, Minneapolis, MN, 2006, pp. 1452–1457.

- [13] M. R. Jovanović, “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” in *Proceedings of the 2006 American Control Conference*, Minneapolis, MN, 2006, pp. 1161–1166, **(Invited paper)**.
- [14] M. R. Jovanović, “On the optimality of localized distributed controllers,” in *Proceedings of the 2005 American Control Conference*, Portland, OR, 2005, pp. 4583–4588, **(Invited paper)**.
- [15] M. R. Jovanović and B. Bamieh, “On the ill-posedness of certain vehicular platoon control problems,” in *Proceedings of the 43rd IEEE Conference on Decision and Control*, Paradise Island, Bahamas, 2004.
- [16] M. R. Jovanović and B. Bamieh, “Architecture induced by distributed backstepping design,” in *Proceedings of the 43rd IEEE Conference on Decision and Control*, Paradise Island, Bahamas, 2004.
- [17] M. R. Jovanović, J. M. Fowler, B. Bamieh, and R. D’Andrea, “On avoiding saturation in the control of vehicular platoons,” in *Proceedings of the 2004 American Control Conference*, Boston, MA, 2004, pp. 2257–2262.
- [18] M. R. Jovanović and B. Bamieh, “Unstable modes versus non-normal modes in supercritical channel flows,” in *Proceedings of the 2004 American Control Conference*, Boston, MA, 2004, pp. 2245–2250.
- [19] M. R. Jovanović and B. Bamieh, “Lyapunov-based output-feedback distributed control of systems on lattices,” in *Proceedings of the 42nd IEEE Conference on Decision and Control*, Maui, HI, 2003, pp. 1333–1338.
- [20] M. R. Jovanović and B. Bamieh, “Exact computation of frequency responses for a class of infinite dimensional systems,” in *Proceedings of the 42nd IEEE Conference on Decision and Control*, Maui, HI, 2003, pp. 1339–1344.
- [21] M. R. Jovanović, B. Bamieh, and M. Grebeck, “Parametric resonance in spatially distributed systems,” in *Proceedings of the 2003 American Control Conference*, Denver, CO, 2003, pp. 119–124.
- [22] M. R. Jovanović and B. Bamieh, “Frequency domain analysis of the linearized Navier-Stokes equations,” in *Proceedings of the 2003 American Control Conference*, Denver, CO, 2003, pp. 3190–3195.
- [23] M. R. Jovanović and B. Bamieh, “Lyapunov-based state-feedback distributed control of systems on lattices,” in *Proceedings of the 2003 American Control Conference*, Denver, CO, 2003, pp. 101–106.
- [24] M. R. Jovanović, “Nonlinear control of an electrohydraulic velocity servosystem,” in *Proceedings of the 2002 American Control Conference*, Anchorage, AL, 2002, pp. 588–593.
- [25] M. R. Jovanović and B. Bamieh, “Modelling flow statistics using the linearized Navier-Stokes equations,” in *Proceedings of the 40th IEEE Conference on Decision and Control*, Orlando, FL, 2001, pp. 4944–4949.
- [26] M. R. Jovanović and B. Bamieh, “The spatio-temporal impulse response of the linearized Navier-Stokes equations,” in *Proceedings of the 2001 American Control Conference*, Arlington, VA, 2001, pp. 1948–1953.
- [27] D. V. Lazić, M. R. Jovanović, and M. R. Ristanović, “Practical tracking of a hydraulic cylinder and an axial piston hydraulic motor,” in *Proceedings of Bath Workshop on Power Transmission and Motion Control*. Bath, England, 1998, pp. 331–346.
- [28] M. R. Jovanović, “The j -th order practical tracking,” in *Proceedings of the 6th International Conference on Systems, Automatic Control and Measurements*. Niš, Yugoslavia, 1998.

- [29] Z. B. Ribar, M. R. Jovanović, and R. Ž. Jovanović, “Application of practical straight-line tracking in the process industry,” in *Proceedings of the 41th ETRAN Conference*, vol. 1. Zlatibor, Yugoslavia, June, 03-06, 1997, pp. 444–447.
- [30] N. A. Čebašek and M. R. Jovanović, “PWM control of hydraulic cylinder and axial piston hydraulic motor,” in *Proceedings of the 5th Triennial International Symposium on Fluid Control, Measurement and Visualization*, vol. 1. Hayama, Japan, September, 01-04, 1997, pp. 361–366.
- [31] Z. B. Ribar, D. V. Lazić, and M. R. Jovanović, “Application of practical exponential tracking in fluid transportation industry,” in *Proceedings of the 14th International Conference on Material Handling and Warehousing*. Belgrade, Yugoslavia, December, 11-12, 1996, pp. 5.65–5.70.
- [32] M. R. Jovanović and D. Debeljković, “Stability of linear singular systems on finite time interval under perturbing forces,” in *Proceedings of the 40th ETRAN Conference*, vol. 1. Budva, Yugoslavia, June, 04-07, 1996, pp. 451–453.
- [33] D. Debeljković and M. R. Jovanović, “Time continuous control design for linear singular systems on finite time interval,” in *Proceedings of the 40th ETRAN Conference*, vol. 1. Budva, Yugoslavia, June, 04-07, 1996, pp. 454–457.

Unrefereed Proceedings

- [1] M. R. Jovanović, N. Hoda, and S. Kumar, “Nonmodal energy amplification in channel flows of viscoelastic fluids,” in *Bulletin of the American Physical Society*, San Antonio, TX, November 2008.
- [2] N. Hoda, M. R. Jovanović, and S. Kumar, “Energy amplification in channel flows of viscoelastic fluids,” in *2008 AIChE Annual Meeting*, Philadelphia, PA, November 2008.
- [3] M. R. Jovanović and R. Moarref, “Control of transition in channel flows by a streamwise traveling wave,” in *Bulletin of the American Physical Society*, Tampa, FL, November 2006.
- [4] M. R. Jovanović, “Turbulence suppression in channel flows by transverse wall oscillations,” in *Bulletin of the American Physical Society*, Chicago, IL, November 2005.
- [5] M. R. Jovanović, “On the optimality of localized distributed controllers,” in *Sixth SIAM Conference on Control and its Applications*, New Orleans, LA, July 2005.
- [6] M. R. Jovanović and B. Bamieh, “Unstable modes versus non-normal modes in supercritical channel flows,” in *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, East Rutherford, NJ, November 2003.
- [7] M. R. Jovanović and B. Bamieh, “The spatio-temporal frequency responses of the linearized Navier-Stokes equations,” in *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, Dallas, TX, November 2002.
- [8] B. Bamieh and M. R. Jovanović, “Drag reduction/enhancement with riblets as parametric resonance,” in *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, San Diego, CA, November 2001.
- [9] M. R. Jovanović and B. Bamieh, “The impulse response of the linearized Navier-Stokes equations,” in *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, Washington, DC, November 2000.
- [10] B. Bamieh, M. R. Jovanović, and M. Dahleh, “A model for the effect of riblets on wall bounded shear flow transition,” in *Bulletin of the American Physical Society Division of Fluid Dynamics Meeting*, New Orleans, LA, November 1999.

Talks

Invited Talks

- [1] “Large scale and structured distributed control problems,” *Excel Engineering 2009 Utility and Industrial Technical Conference*, Minneapolis, MN, January 2009.
- [2] “Dynamics and control of Newtonian and viscoelastic fluids: a system-theoretic perspective,” *Emerging Areas in Control Applications Seminar Series, Control Science and Dynamical Systems Center, University of Minnesota*, Minneapolis, MN, December 2008.
- [3] “Dynamics and control of Newtonian and viscoelastic fluids: a system-theoretic perspective,” *Cymer Center for Control Systems and Dynamics, University of California at San Diego*, San Diego, CA, October 2008.
- [4] “Nonmodal amplification of disturbances in channel flows of Newtonian and viscoelastic fluids: implications for transition and control,” *Control Seminar Series, University of Michigan*, Ann Arbor, MI, October 2008.
- [5] “Dynamics and control of Newtonian and viscoelastic fluids: a system-theoretic perspective,” *Tech Tune-Up: Innovative and Disruptive Technologies, Department of Electrical and Computer Engineering, University of Minnesota*, Minneapolis, MN, June 2008.
- [6] “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *ISyE Seminar Series, Department of Mechanical and Industrial Engineering, University of Minnesota*, Minneapolis, MN, March 2008.
- [7] “Control of vehicular formations: limitations and tradeoffs,” *NSF Workshop on Real Time Control of Hybrid Systems*, Budapest, Hungary, October 2007.
- [8] “Transition to turbulence in wall-bounded shear flows: a system-theoretic perspective,” *Department of Mechanical Engineering, University of Belgrade*, Belgrade, Serbia, June 2007.
- [9] “Large scale and structured distributed control problems,” *SPINCOM Seminar, Department of Electrical and Computer Engineering, University of Minnesota*, Minneapolis, MN, May 2007.
- [10] “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *Department of Mechanical and Industrial Engineering, University of Illinois at Urbana-Champaign*, Urbana-Champaign, IL, April 2006.
- [11] “Input-output analysis of the Navier-Stokes equations: implications for transition and turbulence,” *Dynamical Systems Seminar, Department of Mathematics, University of Minnesota*, Minneapolis, MN, March 2006.
- [12] “Input-output analysis of the Navier-Stokes equations: implications for transition and turbulence,” *Microscale Flow and Transport Seminar, Department of Chemical Engineering and Materials Science, University of Minnesota*, Minneapolis, MN, February 2006.
- [13] “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *Center for Control, Dynamical Systems and Computation, University of California at Santa Barbara*, Santa Barbara, CA, October 2005.

- [14] “On the optimality of localized distributed controllers,” *Mini-Symposium on Optimal and Robust Control Methods for Distributed and Structured Design, 6th SIAM Conference on Control and Its Applications*, New Orleans, LA, July 2005.
- [15] “Distributed control of systems on lattices,” *Honeywell Laboratories*, Minneapolis, MN, April 2005.
- [16] “Control of vehicular platoons: limitations and tradeoffs,” *Robotics Seminar, Department of Computer Science and Engineering, University of Minnesota*, Minneapolis, MN, January 2005.
- [17] “Distributed control of systems on lattices,” *Department of Mathematics, Royal Institute of Technology*, Stockholm, Sweden, December 2004.
- [18] “Input-output analysis of the linearized Navier-Stokes equations,” *Department of Automatic Control, Lund Institute of Technology*, Lund, Sweden, October 2004.
- [19] “Control of vehicular platoons: limitations and tradeoffs,” *Department of Signals, Sensors and Systems, Royal Institute of Technology*, Stockholm, Sweden, September 2004.
- [20] “Input-output analysis of the linearized Navier-Stokes equations,” *Department of Mechanics, Royal Institute of Technology*, Stockholm, Sweden, September 2004.
- [21] “Input-output analysis of the linearized Navier-Stokes equations,” *AMS–IMS–SIAM Joint Summer Conference on Hydrodynamic Stability and Flow Control*, Snowbird, UT, July 2003.
- [22] “Input-output analysis of the linearized Navier-Stokes equations,” *Center for Control Engineering and Computation, University of California at Santa Barbara*, Santa Barbara, CA, April 2003.

Regular Talks

- [1] “Input-output analysis of the 2D/3C model in channel flows of viscoelastic fluids,” *47th IEEE Conference on Decision and Control*, Cancun, Mexico, December 2008.
- [2] “Remarks on the state-space design of optimal controllers for distributed systems with finite communication speed,” *47th IEEE Conference on Decision and Control*, Cancun, Mexico, December 2008.
- [3] “Nonmodal energy amplification in channel flows of viscoelastic fluids,” *61th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, San Antonio, TX, November 2008.
- [4] “Remarks on the stability of spatially distributed systems with a cyclic interconnection structure,” *2007 American Control Conference*, New York City, NY, July 2007.
- [5] “Control of transition in channel flows by a streamwise traveling wave,” *59th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, Tampa, FL, November 2006.
- [6] “New methods for modeling and control of shear flow turbulence,” *2006 AFOSR Joint Program Review*, Atlanta, GA, August 2006.
- [7] “Turbulence suppression in channel flows by streamwise traveling waves,” *2006 Center for Turbulence Research Summer Program*, Stanford University, CA, August 2006.
- [8] “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *2006 American Control Conference*, Minneapolis, MN, June 2006.
- [9] “ H_2 norm of linear time-periodic systems: a perturbation analysis,” *2006 American Control Conference*, Minneapolis, MN, June 2006.

- [10] “On the optimality of localized distributed controllers,” *Workshop on Control, Estimation, and Optimization of Interconnected Systems: From Theory to Industrial Applications, joint 44th IEEE Conference on Decision and Control and European Control Conference 2005*, Seville, Spain, December 2005.
- [11] “Control of vehicular platoons: limitations and tradeoffs,” *Workshop on Control, Estimation, and Optimization of Interconnected Systems: From Theory to Industrial Applications, joint 44th IEEE Conference on Decision and Control and European Control Conference 2005*, Seville, Spain, December 2005.
- [12] “Turbulence suppression in channel flows by small amplitude transverse wall oscillations,” *58th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, Chicago, IL, November 2005.
- [13] “On the optimality of localized distributed controllers,” *2005 American Control Conference*, Portland, OR, June 2005.
- [14] “Architecture induced by distributed backstepping design,” *43rd IEEE Conference on Decision and Control*, Paradise Island, Bahamas, December 2004.
- [15] “On the ill-posedness of certain vehicular platoon control problems,” *43rd IEEE Conference on Decision and Control*, Paradise Island, Bahamas, December 2004.
- [16] “Unstable modes versus non-normal modes in supercritical channel flows,” *2004 American Control Conference*, Boston, MA, June 2004.
- [17] “On avoiding saturation in the control of vehicular platoons,” *2004 American Control Conference*, Boston, MA, June 2004.
- [18] “Control of vehicular platoons: limitations and tradeoffs,” *8th Southern California Nonlinear Control Workshop*, Santa Barbara, CA, May 2004.
- [19] “Exact computation of frequency responses for a class of infinite dimensional systems,” *42nd IEEE Conference on Decision and Control*, Maui, HI, December 2003.
- [20] “Lyapunov-based output-feedback distributed control of systems on lattices,” *42nd IEEE Conference on Decision and Control*, Maui, HI, December 2003.
- [21] “Unstable modes versus non-normal modes in supercritical channel flows,” *56th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, East Rutherford, NJ, November 2003.
- [22] “Parametric resonance in spatially distributed systems,” *2003 American Control Conference*, Denver, CO, June 2003.
- [23] “Lyapunov-based state-feedback distributed control of systems on lattices,” *2003 American Control Conference*, Denver, CO, June 2003.
- [24] “Frequency domain analysis of the linearized Navier-Stokes equations,” *2003 American Control Conference*, Denver, CO, June 2003.
- [25] “Lyapunov-based distributed control of systems on lattices,” *6th Southern California Nonlinear Control Workshop*, San Diego, CA, May 2003.
- [26] “The spatio-temporal frequency responses of the linearized Navier-Stokes equations,” *55th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, Dallas, TX, November 2002.

- [27] “Input-output analysis of the linearized Navier-Stokes equations,” *4th Southern California Nonlinear Control Workshop*, Santa Barbara, CA, May 2002.
- [28] “Nonlinear control of an electrohydraulic velocity servosystem,” *2002 American Control Conference*, Anchorage, AL, May 2002.
- [29] “Modeling flow statistics using the linearized Navier-Stokes equations,” *40th IEEE Conference on Decision and Control*, Orlando, FL, December 2001.
- [30] “Drag reduction/enhancement with riblets as parametric resonance,” *54th Annual Meeting of the American Physical Society, Division for Fluid Dynamics*, San Diego, CA, November 2001.
- [31] “The spatio-temporal impulse response of the linearized Navier-Stokes equations,” *2001 American Control Conference*, Arlington, VA, June 2001.
- [32] “PWM control of hydraulic cylinder and axial piston hydraulic motor,” *5th Triennial International Symposium on Fluid Control, Measurement and Visualization*, Hayama, Japan, September 1997.
- [33] “Application of practical straight-line tracking in the process industry,” *41th ETRAN Conference*, Zlatibor, Yugoslavia, June 1997.
- [34] “Application of practical exponential tracking in fluid transportation industry,” *14th International Conference on Material Handling and Warehousing*, Belgrade, Yugoslavia, December 1996.
- [35] “Stability of linear singular systems on finite time interval under perturbing forces,” *40th ETRAN Conference*, Budva, Yugoslavia, June 1996.
- [36] “Time continuous control design for linear singular systems on finite time interval,” *40th ETRAN Conference*, Budva, Yugoslavia, June 1996.