

CURRICULUM VITAE

PANOS J. ANTSAKLIS

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POSITIONS

- The H. Clifford and Evelyn A. Brosey Professor of Electrical Engineering, at the University of Notre Dame, 2002 to present.
Professor 1989-2001. Associate Professor 1984-1989; Assistant Professor 1980-1984.
- Concurrent Professor of Computer Science and Engineering, 2002 to present.
- Concurrent Professor of Applied and Computational Mathematics and Statistics 2010 to present.
- Director of the Center for Applied Mathematics of the University of Notre Dame, 1999-2005.
- Visiting Professor, Dept. of Electrical Engineering, Div. of Computer Science, National Technical University of Athens, Athens, Greece; and
- Senior Visiting Scientist, Dept. of Electrical Engineering and the IR Center on Process Control, Imperial College, London, England. January-June 1992.
- Senior Visiting Scientist, Laboratory for Information and Decision Systems, Massachusetts Institute of Technology. January-June 1987.
- Visiting Professor at the Dept. of Electrical and Computer Engineering, Technical University of Crete, Chania, Greece. Summer 1993.
- NASA Summer Faculty Fellow. Jet Propulsion Laboratory. Summer 1986.
- Lecturer, Department of Computing and Control, Imperial College of Science, Technology and Medicine, University of London, London, England, 1978-1980
- Visiting Assistant Professor, Department of Electrical Engineering, Rice University; 1977-1978.
- Assistant Professor (Research), Division of Engineering, Brown University, 1977-1978.
- Teaching and Research Fellow, Division of Engineering, Brown University, 1976-1977.
Research and Teaching Assistant, Division of Engineering, Brown University. 1972-1976.
Research Assistant, Nuclear Research Center Democritus, Athens, Greece. Summer 1971.
Research Assistant, Gimelli Co., Bern, Switzerland. Summer 1970.

EDUCATION

- Brown University, Division of Engineering, Sc.M., 1974; Ph.D., 1977.
- National Technical University of Athens, Greece, Diploma of Mechanical and Electrical Engineering, 1972.

AREAS OF EXPERTISE AND RESEARCH INTERESTS

His research focuses on Cyber Physical Networked Embedded Systems and addresses systems, control and automation problems in the interdisciplinary research area of Control, Computing and Communication Networks. This research examines ways to design engineering systems that will exhibit high degrees of autonomy in performing useful tasks. High autonomy and ways to achieve it has been the driving force and the central theme of his research on the control of complex systems. Application areas include transportation, power, manufacturing, and chemical process systems, as well as computer and communication networks. His work includes analysis of behavior and control strategies for complex autonomous, intelligent, learning and reconfigurable systems. It is based on mathematical and data models of continuous, hybrid and discrete event dynamical systems. His recent work on a general theory for the analysis and robust design of Cyber-Physical Systems uses the energy like concepts of passivity (passivity indices) and dissipativity.

HONORS, AWARDS, RECOGNITIONS

- **Honorary Doctorate** (Docteur Honoris Causa) by the University of Lorraine, Nancy, France, 2012.
- Recipient of the 2006 Brown Engineering **Alumni Medal** (BEAM) of Brown University, May 2006. This medal is awarded to Brown Engineering graduates who have established exceptional records of accomplishment in their engineering careers.
- **Editor-in-Chief**, IEEE Transactions on Automatic Control, January 2010 to December 2017.
- **President IEEE Control Systems Society** (CSS), 1997.
- **Founding President** of the Mediterranean Control Association (MCA). President, 1998 to Present. MCA is the parent organization of the annual MED Control and Automation conference currently in its 29th year. (www.med-control.org)
- **Fellow of the American Association for the Advancement of Science (AAAS) 2011**. Citation reads: "For distinguished contributions to the field of Systems and Control, particularly for feedback control of multi-variable systems, intelligent, hybrid and discrete event systems."
- **Fellow of the International Federation of Automatic Control (IFAC) 2010**. Citation reads: "For fundamental contributions to hybrid control systems, supervisory control of discrete event systems, control of systems over networks and for leadership in the profession."
- **Fellow of the Institute of Electrical and Electronics Engineers (IEEE) 1991**. Citation reads: "For contributions to the theory of feedback stabilization and control of linear multivariable systems."
- **IEEE Millennium Medal, 2000**.
- **IEEE Distinguished Member** Award, Control Systems Society, 1998
- **IEEE Distinguished Lecturer**, Control Systems Society, 1996-2003.

He is the first Notre Dame faculty member to have been awarded both prestigious faculty awards of the University of Notre Dame, namely:

The Research Achievement Award (2020)
The Faculty Award (2013).

- Recipient of the **2020 Research Achievement Award of the University of Notre Dame**. May 2020. The Research Achievement Award, established in 2001, honors a distinguished faculty member who has made significant contributions to scholarship in his or her discipline and to the research and graduate education goals of the University. It is awarded to a single recipient each year.
<https://provost.nd.edu/faculty-recognitions/faculty-awards/research-achievement-award/>

The Citation reads:

2020 RESEARCH ACHIEVEMENT AWARD

This year's Research Achievement Award goes to a genuine visionary, one whose research spans the disciplines of computer science, engineering, mathematics, physics, and biology. He was among the founders of the field of "cyber-physical systems," which integrates computer-based control systems with the physical world and is the basis for today's autonomous systems. His work in this field has resulted in more than 600 publications and 28,000 citations; 12 books, including monographs, textbooks, and edited volumes; and a lengthy record of competitive external research awards. During his 40 years at Notre Dame, he has mentored untold undergraduates while serving as the advisor for 27 Master's degrees and 29 Ph.D. dissertations. In his own words, he prioritizes his students' "significant freedom" in research topics, just as he treasures "love of the subject, enthusiasm, and intellectual curiosity"—an extension, no doubt, of his own passion for seeking answers.

The University of Notre Dame is proud to present the 2020 Research Achievement Award to
PANOS J. ANTSAKLIS
H. Clifford and Evelyn A. Brosey Professor of Electrical Engineering

- Recipient of the **2013 Faculty Award of the University of Notre Dame**. May 2013.
The Faculty Award was established in the 1927-28 academic year and singles out that faculty member, who, in the opinion of his or her colleagues has contributed outstanding services to the University of Notre Dame, such as through leadership activities, mentoring faculty colleagues, or exemplary dedication to students. It is awarded to a single recipient each year. Nominations are received from the faculty at large and a committee of former Faculty Award winners selects the recipient.
<https://provost.nd.edu/faculty-recognitions/faculty-awards/faculty-award/>

The Citation reads:

2013 FACULTY AWARD

Since joining the Notre Dame faculty in 1980, the honoree for the 2013 Faculty Award has been widely recognized professionally and personally, on our campus and around the world. This individual is at home applying his knowledge of control and automation to the complex machinations of bodies ranging from hybrid dynamical systems and power systems to the University's Academic Council. He is an effective teacher and valued mentor of both undergraduate and graduate students, and his service to the College of Engineering and Notre Dame has been exceptional. His many roles have included everything from an appointment as director of graduate studies in the Department of Electrical Engineering to three separate terms on the Faculty Senate and his tenure as director of the Center for Applied Mathematics, the predecessor of the Department of Applied and Computational Mathematics and Statistics. This past year alone, in addition to sitting on the Academic Council, he served as a member of the Graduate Council, the Academic and Faculty Affairs Committee of the Board of Trustees, and two committees within Electrical Engineering. An international authority in his field, he is editor-in-chief of a flagship journal published by the Institute of Electrical and Electronics Engineers, a winner of the Brown Engineering Alumni Medal, and, most recently, the recipient of an honorary doctorate from the University of Lorraine in France.

The University of Notre Dame is proud to confer the 2013 Faculty Award upon
PANOS J. ANTSAKLIS
H. Clifford and Evelyn A. Brosey Professor of Electrical Engineering

- Notre Dame **All-Faculty Team Recognition**. November 2011.
Faculty Recognition Award. Recognized on the football field (20 yard line) during the Notre Dame vs Boston College game on November 19, 2011, before 85,000 football fans.
Presented with a signed football by the Provost Tom Burish.
- **Kaneb Teaching Award** for Excellence in Undergraduate Teaching, Univ. of Notre Dame, 2000.
- **Master Mentor** of Graduate Students, the Graduate School, Univ. of Notre Dame, 1999.
- **Outstanding Teacher Award** for Undergraduate Teaching, Dept. of Electr. Engr., Univ. of Notre Dame, 1991.
- **A Symposium titled "Control Systems and the Quest for Autonomy,"** organized by my past and present graduate students, in my honor, took place on the Notre Dame campus on Saturday-Sunday October 27-28, 2018. Additional information may be found at the Symposium's website sites.nd.edu/autonomy-symposium
- **Co-Editor-in-Chief**, *Foundations and Trends in Systems and Control*, Now Publishers, 2012 to Present.
- MathWorks Research Summit, "Control Systems and the Quest for Autonomy," **Plenary**, Newton, MA, June 1-3, 2019.
- Science **Keynote Speaker** - 2012 NSF Cyber-Physical Systems (CPS) PI Meeting Washington D.C., October 3-5, 2012.
- **Chair of the Scientific Advisory Board** (Fachbeirat) of the Max-Planck-Institut für Dynamik Komplexer Technischer Systeme, Magdeburg, Germany 2008-2013. Member 2002-2013.

- President’s Council of Advisors for Science and Technology (PCAST), **member of subcommittee** on Networking and Information Technology. 2006-2007.
- NITRD “Federal Strategic Plan Forum for the Networking and Information Technology Research & Development Program.” **Invited Participant**. Washington, DC, February 24-26, 2009.
- **Article based on an Interview** for the Electrical Engineering, University of Notre Dame Website titled The Past, Present and Future of Control: A Celebration of the work of Panos Antsaklis. By Leslie Lestinsky, July 2019. https://www3.nd.edu/~pantaskl/index_Interviews.php
As a Follow up to
A Symposium titled “Control Systems and the Quest for Autonomy,” organized by my past and present graduate students, in my honor, that took place on the Notre Dame campus on Saturday-Sunday October 27-28, 2018. Additional information may be found at the Symposium’s website sites.nd.edu/autonomy-symposium
- **Interview** for the National Herald, the Greek-American Newspaper. By Natalie Bakopoulos of the University of Michigan. The interview appeared in the 2010 Christmas Issue of The National Herald, Issue#689, pp. 1 & 4, December 25-31, 2010. https://www3.nd.edu/~pantaskl/index_Interviews.php
- **Interview** for Kathimerini (Greek Newspaper), Patridognosia column. By Anna Grimani, Patridognosia Column Editor The interview appeared in August 29, 2010. https://www3.nd.edu/~pantaskl/index_Interviews.php
- **Interview** by publisher for the textbook: *Structure and Interpretation of Signals and Systems*, by Edward A. Lee and Pravin Varaiya, Addison Wesley, 2003. Pages 83-84. https://www3.nd.edu/~pantaskl/index_Interviews.php
- **General Chair**, 34th IEEE Conf. on Decision and Control, New Orleans, LA, December 1995.
- **General Chair**, 8th IEEE Intern Symposium on Intelligent Control, Chicago IL, August 1993.
- **Program Chair**, 30th IEEE Conf. on Decision and Control, Brighton, England, December 1991.
- **Program Chair**, European Control Conference 2007 (ECC’07), Kos, Greece. July 2-6, 2007.
- **General co-Chair**, 24th IEEE Mediterranean Conference on Control and Automation (MED’16), Athens, Greece, June 21-24, 2016.
- **General co-Chair**, 21st IEEE Mediterranean Conference on Control and Automation (MED’13), Chania, Crete, Greece, June 26-28, 2013.
- **General co-Chair**, 15th IEEE Mediterranean Conference on Control and Automation (MED’07), Athens, Greece, June 27-29, 2007.
- **General co-Chair**, 8th IEEE Mediterranean Conference on Control and Automation (MED’00), University of Patras, Rio Greece, July 17-19, 2000.
- **Honorary Chair**, 30th Mediterranean Conference on Control and Automation (MED’22), Athens, Greece, June 2022.
- **Honorary Chair**, 26th Mediterranean Conference on Control and Automation (MED’18), Zadar, Croatia, June 2018.
- **Honorary Chair**, 18th Mediterranean Conference on Control and Automation (MED’10), Marrakech, Morocco, June 2010.
- **Honorary Chair**, 16th Mediterranean Conference on Control and Automation (MED’08), Corsica, France, June, 2008.
- **Honorary Chair**, 4th IEEE Mediterranean Symposium on Control and Automation, Crete, Greece, June 10-14, 1996.
- **Honorary co-Chair**, 2013 International Conference on Control, Decision and Information Technologies (CoDIT’13) Hammamet, Tunisia, May 6-8, 2013.
- **Honorary co-Chair**, 2013 International Conference on Systems and Control (ICSC 2013) Algiers, Algeria, October 29-31, 2013.
- **Founding Associate Editor** for Letters, IEEE Transactions on Neural Networks, 1989-1990.
- **Advisory Committee Member** for the Instituto de Sistemas e Robotica (ISR) of the Instituto Superior Tecnico (IST) of the University of Lisbon, Portugal, 1998-2002.
- Invited **EU expert** on strategy planning in control, hybrid and embedded systems research for the Commission

of the European Union, Directorate-General Information Society, Information Society Technologies, since 2000.

- **2001 Zaborszky Lectures** in the Department of Systems Science and Mathematics, Washington University, St. Louis, Missouri, on March 19-21, 2001.
- Organizer/Moderator of the US/EU Workshop “Advanced hybrid systems theory for the control of networked systems” in Barcelona, Spain on July 21, 2002 at the IFAC’02. This workshop was co-sponsored by NSF and the European Commission, IST Programme, Brussels, Belgium. (with M.Morari, ETH, Zurich, Switzerland) Activities Board and the IEEE Educational Activities Board, 1997.
- Member of NSF Technical Advisory Committee on Underwater Vehicle Project at the Center for Advanced Computer Studies, Univ. of Southwestern Louisiana, Lafayette, LA, February 1996.
- Alcoa Foundation Science Support Grant Award recipient. 1991.
- C.B. Keen Research Fellowship (Brown University) 1975-1976.
- Fulbright-Hayes Fellowship (Travel Grant) 1972-1977.
- Greek Government Fellowship (IKY) 1968-1972.
- **Service Award**, Saint Andrew's Greek Orthodox Church, South Bend, Indiana, 1996; for services as the Founding Director of the Greek School and as the Founding President of the Hellenic Cultural Society.

Keynote and Plenary Speaker at Conferences

- International Conference on Unmanned Aircraft Systems (ICUAS)-Keynote address “Control Systems and AI in the Quest for Autonomy,” Athens, Greece September 2, 2020.
- MathWorks Research Summit, “Control Systems and the Quest for Autonomy,” Plenary, Newton, MA, June 1-3 2019.
- First International Conf. on Event-Based Control, Communication and Signal Processing “Model-Based Event-Triggered Control for Networked Systems” Krakow, Poland, June 18, 2015.
- 2012 NSF Cyber-Physical Systems (CPS) PI Meeting – Science Keynote Address “Cyber-Physical Systems Design Using Dissipativity and Symmetry” Washington DC, October 3-5, 2012.
- The 31st Chinese Control Conference (CCC’12) “Cyber-Physical Systems Design Using Dissipativity” Hefei, China, July 25 -27, 2012.
- International Workshop on Emerging Frontiers in Systems and Control “Cyber-Physical Systems, Symmetry and Passivity” Tsinghua University, Beijing, China, May 18, 2012.
- The 8th IEEE International Conference on Control & Automation (IEEE ICCA’10) “Feedback Control Over Digital Networks” Xiamen, China, June 9-11, 2010.
- 2009 American Control Conference (ACC2009) “From Hybrid to Networked Cyber-Physical Systems” St. Louis, Missouri, USA, June10-12, 2009. (For video and slides (pdf files) see <http://a2c2.org/conferences/acc2009/plenary.htm>)
- WODES 2008-Workshop on Discrete Event Systems “On Control and Cyber-Physical Systems: Challenges and Opportunities for Discrete Event and Hybrid Systems” Chalmers University of Technology, Goteborg, Sweden, May 28-30, 2008.
- MPI Symposium on Information and Control Hierarchies: Foundations, Computation and Applications “Building Networked Embedded Sensing and Control Systems: Architecture and Fundamental Issues Systems” Max-Planck-Institut fur Dynamik komplexer technischer Systeme, Magdeburg, Germany, May 22-23, 2008.
- US-Japan Workshop on Sensors, Smart Structures and Mechatronic Systems University of Tokyo, Tokyo, Japan, November 12-13, 2005
- 9th IEEE International Conference on Methods and Models in Automation and Robotics (MMAR’03), Miedzyzdroje, Poland, August 25, 2003.
- 11th Mediterranean Conference in Control and Automation (MED’03) Rhodes, Greece, June 18-20, 2003.
- IEEE/South East Michigan (IEEE/SEM) Section Technical Meeting (IEEE Control Systems Society, Distinguished Lecturer Program) Yazaki-North America, Detroit, Michigan, March 26, 2003.
- IFAC Symposium on System Structure and Control (SSSC2001), Prague, Czech Republic, August 29-31, 2001.
- Workshop in honor of Professor J. Boyd Pearson Jr on "New Directions in Dynamical Systems and Control"

- Rice University, Houston Texas, 9-10 March 2001.
- IFAC/IEEE 5th Triennial Symposium on Advances in Control Education (ACE), Brisbane, Australia, December 17-19, 2000.
- IEEE International Symposium on Intelligent Control/Intelligent Systems and Semiotics, Cambridge, MA, September 15-17, 1999.
- Fourth Joint Conference on Information Sciences (JCIS'98), Research Triangle Park, NC, October 23-28, 1998.
- 3rd European Robotics, Intelligent Systems & Control Conference (EURISCON'98), Athens, Greece, June 22-25, 1998.
- IFAC Workshop on Control Applications and Ergonomics in Agriculture, Athens, Greece, June 14-17, 1998.
- Workshop on Hybrid Systems: Computation and Control, Univ. of California, Berkeley, April 13-15, 1998.
- 3rd International Conference on Automation of Mixed Processes: Dynamic Hybrid Systems (Automatisation des Processus Mixtes: les Systemes Dynamiques Hybrides; ADPM'98), Reims, Champagne-Ardenne, France, March 19, 1998.
- International Symposium on Issues and Challenges of Manufacturing Education for the 21st Century, University of Patras, Greece, June 26, 1997.
- International Conference on Intelligent Systems: A Semiotic Perspective, National Institute of Standards and Technology (NIST), Gaithersburg, Maryland, October 23, 1996.
- ISIC Plenary Address at the IEEE CCA/ISIC/CACSD Conference on Control Applications (CCA), Intelligent Control (ISIC), and Computer Aided Control System Design (CACSD), Dearborn, Michigan, September 17, 1996.
- Adv. Summer Inst. ASI'96, the Annual Conference of the European Network of Excellence in Intelligent Control and Integrated Manufacturing Systems (ICIMS), Toulouse, France, June 2-6, 1996.
- Annual Rockwell Control Conference and Power Seminar of Allen-Bradley, Mequon, WI. May 3, 1996.
- ISPE' '95, Conference on Intelligent Systems in Process Engineering, Snowmass, Colorado, July 9-14, 1995.
- The 1992 Workshop on Intelligent Autonomous Control Systems, Leshem, Israel, Nov. 2-3, 1992.
- First Joint Conference on AI, Neural Networks and Fuzzy Systems, Seoul, Korea, Nov. 6-8, 1991.
- 1991 AI Simulation and Planning in High Autonomy Systems, Cocoa Beach, FL, April 1 - 2, 1991.

Guest Editor of Special Issues

- Special issue on "Technology of Networked Control Systems," *Proceedings of the IEEE*, Vol.95, No. 1, pp. 5-312, January 2007 (P.J. Antsaklis and J. Baillieul, Eds.).
- Special issue on "Networked Control Systems," *IEEE Transactions on Automatic Control*, Vol.49, No.9, pp. 1421-1603, September 2004. (P.J. Antsaklis and J. Baillieul, Eds.)
- Special issue on "Hybrid Systems: Theory and Applications," *Proceedings of the IEEE*, July 2000. (P.J. Antsaklis, Ed.)
- Special issue on "Hybrid Systems," *Journal on Discrete Event Dynamic Systems*, Vol. 8, No. 2, June 1998. (P.J. Antsaklis and M.D. Lemmon Eds.)
- Special issue on "Hybrid Control Systems," *IEEE Transactions on Automatic Control*, Vol. 43, No. 4, April 1998. (P.J. Antsaklis and A. Nerode, Eds.)
- Special Issue on "Fundamental Issues in Control," *European Journal of Control*, Vol13, No.2-3, 2007. S.G. Tzafestas and P.J. Antsaklis, Eds.
- Special issue on "Agriculture and the Environment," *IEEE Control Systems Magazine*, Vol.21, No.5, October 2001. (N. Sigrimis, P.J. Antsaklis, and P. Groumpos Eds.)
- Special issue on "Intelligence and Learning," *IEEE Control Systems Magazine*, June 1995. (P.J. Antsaklis, Ed.)
- Special issue on "Neural Networks in Control Systems," *IEEE Control Systems Magazine*, April 1992. (P.J. Antsaklis, Ed.)

- Special issue on "Neural Networks in Control Systems," *IEEE Control Systems Magazine*, April 1990. (P.J. Antsaklis, Ed.)

PUBLICATIONS

- Over 590 publications in highly reputable journals, and in conference proceedings, books and reports. His research publications have been cited over 30,000 times with an h-index of 78 (Google Scholar, June 2021).

115 of his publications have been cited from 40 to 2,000 times each - 57 publications have more than 100 citations each. Details may be found in a separate document.

A list of the books authored follows.

Co-Authored the graduate textbooks:

- *Hybrid Dynamical Systems: Fundamentals and Methods* (Springer 2021; with Hai Lin)
<https://www.springer.com/us/book/9783030787295>
- *A Linear Systems Primer* (Springer 2007; with A.N. Michel).
<https://www.springer.com/us/book/9780817644604>
- *Linear Systems* (Springer 2006; with A.N. Michel)
<https://www.springer.com/us/book/9780817644345>
- *Linear Systems* (McGraw-Hill 1997; with A.N. Michel).

Co-Authored the research monographs:

- *Model-Based Control of Networked Systems* (Springer 2014; with E. Garcia and L. Montestruque)
<https://www.springer.com/us/book/9783319078021>
- *Supervisory Control of Concurrent Systems: A Petri Net Structural Approach* (Springer 2006; with M.V. Iordache)
<https://www.springer.com/us/book/9780817643577>
- *Supervisory Control of Discrete Event Systems using Petri Nets* Springer 1998; with J.O. Moody)
<https://www.springer.com/us/book/9780792381990>

Co-Edited six books:

- *Networked Embedded Sensing and Control* (Springer 2006; with P. Tabuada)
<https://www.springer.com/us/book/9783540327943>
- *Stability and Control of Dynamical Systems with Applications: A Tribute to Anthony N. Michel* (Springer 2003; with D. Liu)
<https://www.springer.com/us/book/9780817632335>
- *Hybrid Systems V* (Springer-Verlag 1999).
Co-edited with W. Kohn, M. Lemmon, A. Nerode and S. Sastry
- *Hybrid Systems IV* (Springer-Verlag 1997).
Co-edited with W. Kohn, A. Nerode and S. Sastry
- *Hybrid Systems II* (Springer-Verlag 1995).
Co-edited with W. Kohn, A. Nerode and S. Sastry
- *An Introduction to Intelligent and Autonomous Control* (Kluwer Academic 1993).
Co-edited with K.M.Passino

TEACHING GRADUATE AND UNDERGRADUATE STUDENTS

Teaching Experience. Courses Taught

- **Undergraduate:** Control System Design; Control Lab. Signals and Systems. Logic Design. Applied Linear Analysis. Introduction to Electrical Networks. Introduction to Electrical Science.

- **Graduate:** Linear Systems. Advanced Control Systems. Multivariable Control Systems. Advanced Topics in Control. Digital Control Systems. Linear and Nonlinear Optimization. Introduction to Intelligent Control. Topics in Embedded Sensor and Actuator Networks.

- Courses on Digital Control Systems and on Neural Networks were also taught while visiting:

Imperial College, University of London, England

Dept. of Electrical Engineering and the IRCenter on Process Control. 1992.

National Technical Univ. of Athens, Greece

Dept. of Electrical Engineering. 1992.

Technical University of Crete, Greece

Dept. of Electrical and Computer Engineering. 1993.

Teaching Recognitions

- Kaneb Teaching Award for Excellence in Undergraduate Teaching, Univ. of Notre Dame, 2000
- Master Mentor of Graduate Students, the Graduate School, Univ. of Notre Dame, 1999.
- Outstanding Teacher Award for Undergraduate Teaching, Dept. of Electr. Engr., Univ. of Notre Dame, 1991.

Graduate Students. Ph.D. and M.S. Students Supervised

Hasan Zakeri

Website

Ph.D. Research Topic: Passivity and Dissipativity of Complex Systems: Approximate Models and Local Results
MSEE, University of Notre Dame, May 2016.

MSc. Control Systems, Electrical Engineering, Tarbiat Modares University, Tehran, Iran, 2013.

BSEE, Shiraz University of Technology, Shiraz, Iran, 2009.

Etika Agarwal (GE R&D India)

<https://curate.nd.edu/show/np19377562z>

Ph.D. May 2019. Compositional Control of Large Scale Cyber-Physical Systems Using Hybrid Models and Dissipativity Theory.

MSEE, University of Notre Dame, May 2016.

B.Tech., Indian Institute of Space Science and Technology, May 2012.

Yang Yan (United Technologies, Carrier)

<https://curate.nd.edu/show/6395w665x5p>

Ph.D. May 2019. Dissipativity Analysis and Resilient Design for Cyber-Physical Systems

MSEE, University of Notre Dame, May 2016.

MS, Engineering, Shandong University, China, June 2015.

BS, Shandong University, China, June 2012.

Arash Rahnema (Booz Allen Hamilton; Amazon)

<https://curate.nd.edu/show/bk128913b51>

Ph.D. May 2018. “Learning-Based Approaches to Control, Estimation and Modeling”

MSEE, University of Notre Dame, May 2015.

BS, Texas Tech, May 2013.

Zhi Wang (MathWorks)

<https://curate.nd.edu/show/c534fn1312t>

Ph.D. May 2018. “Spatial Systems Modeling and Control of A Microscale Additive Manufacturing Process.”

Panos Antsaklis co-advisor, David Hoelzle advisor

B.Eng. in ME, Tsinghua University, July 2013

Moeen Mostafavi

<https://curate.nd.edu/show/9p290863t7x>

MSEE, University of Notre Dame, May 2018. Research Thesis: “Control Design Based on Passivity Indices with Learning”

MSEE, K.N.Toosi University of Technology, Iran.

BSEE, Shiraz University of Technology, Shiraz, Iran.

Vahideh Ghanbari

Website

Ph.D. May 2017. "Dissipativity/Passivity Based Control Design for Symmetric and Switched Systems with Application to Medical Robotics."

MSEE, University of Notre Dame, May 2013.

BSEE, Azad University, July 2007.

Meng Xia (MathWorks)

Website

Ph.D. May 2015. "Analysis and Design of Cyber-Physical Systems Using Passivity and Passivation."

MS Control Science and Engineering, Harbin Institute of Technology, July 2010.

BS Information and Computational Science, Harbin Institute of Technology, July 2008.

Feng Zhu (Amazon; Clobotics)

Website

Ph.D. May 2014. "Passivity Analysis and Passivation in the Design of Cyber-Physical Systems"

MSc, Applied Mathematics, University of Notre Dame, May 2013

BS Automatic Control, Harbin Institute of Technology, July 2008.

Michael McCourt (University of Washington, Tacoma)

Website

Ph.D. May 2013, "Dissipativity Theory for Hybrid Systems with Applications to Networked Control Systems"

BSEE, University of Washington, June 2007.

Po Wu (Amazon)

Website

Ph.D. August 2013, "Symmetry and Dissipativity in the Design of Large-Scale Complex Control Systems"

MSc, Applied Mathematics, University of Notre Dame, May 2013.

BS Department of Automation, Tsinghua University, July 2007.

Han (Cherry) Yu (GE R&D; Amazon)

Website

Ph.D. January 2013, "Passivity and Dissipativity as Design and Analysis Tools for Networked Control Systems"

BS Measuring and Control Technology and Instruments, Huazhong University of Science & Technology, June 2007.

Eloy Garcia (AFRL Dayton, Ohio)

Website

Ph.D. June 2012, "Model-Based Control over Networks: Architecture and Performance"

MSEE, University of Illinois at Chicago, May 2006.

BSEE, Universidad Autonoma de Zacatecas, June 2003.

Matthew Zyskowski (Hamilton Sundstrand, Electric Systems)

Ronald Diersing co-advisor, Michael K Sain Advisor

Website

Ph.D. December 2010, "Cost Density-Shaping for Stochastic Optimal Control."

MSEE, University of Pennsylvania, May 2006.

BSEE Mathematics, Drexel University, December 2003.

Tomas Estrada, Ph.D. (Elizabethtown College, PA)

Website

Ph.D. May 2009. "Model-Based Networked Control Systems with Intermittent Feedback."

MSEE, University of Notre Dame, 2005.

B.S. in Electrical Engineering, University of Costa Rica, 2002.

Hui Fang, Ph.D. (JP Morgan-Chase, NYC)

Website

Ph.D. January 2008. "Cooperative Control of Multi-agent Systems with Information Flow Constraints."
MSc, Applied Mathematics, University of Notre Dame, 2006.
B.S. in Electrical Engineering, University of Science and Technology of China, 2001.

Nicholas Kottenstette, Ph.D. (Corindus Vascular Robotics, Natick, MA)

Website

Ph.D. August 2007. "Control of Passive Plants with Memoryless Nonlinearities over Wireless Networks."
M.S. in Mechanical Engineering, Massachusetts Institute of Technology, 1997.
B.S. in Mechanical Engineering, Catholic University of America, 1995.

Lei Fang, Ph.D. (Magnetar Capital LLC, Chicago, IL)

Website

Ph.D. August 2006. "Control of Distributed Systems with Interconnection Constraints."
M.S., University of Connecticut, 2002.
M.S., University of Macau, 1999.
B.S. in Electrical Engineering, Zhejiang University, 1996.

Anastasios Tzimas, M.S.

MSEE, University of Notre Dame, May 2006.
Diploma in Electrical and Computer Engineering, National Technical University of Athens, November 2003.

Emmanuel Sifakis, M.S.

MSEE, University of Notre Dame, "Routing Protocols for Wireless Networked Sensing and Control." May 2006.
B.S. in Electrical and Computer Science Engineering, Ecole Supérieure d'Electricité-Supelec, December 2005.

Erez Abittan, M.S.

MSEE, University of Notre Dame, "Model-Based Approach for Bridge Structural Health Monitoring Using Wireless Sensor Networks." May 2006.
B.S. in Electrical and Computer Science Engineering, Ecole Supérieure d'Electricité-Supelec, December 2005.

Hai Lin, Ph.D. (University of Notre Dame)

Website

Ph.D. August 2005. "Robust Analysis and Synthesis of Uncertain Linear Hybrid Systems with Networked Control Applications."
M.S., Electrical Engineering, Chinese Academy of Sciences, 2002.
B.S. University of Science and Technology China, 1997.

Luis Montestruque, M.S., Ph.D. (EmNet LLC, South Bend, IN)

Website

Ph.D. January 2005. "Model-Based Networked Control Systems."
MSEE, University of Notre Dame, 2001.
B.S., Pontificia Universidad Católica, Peru, 1997.

Ioannis E. Koutroulis, M.S.

MSEE, University of Notre Dame, January 2004.
B.S. in Electrical and Computer Engineering, University of Patras, Greece, May 2002.

Marian V. Iordache, Ph.D. (LeTourneau University, TX)

Website

Ph.D. January 2004. "Methods for the Supervisory Control of Concurrent Systems Based on Petri Net Abstractions."
MSEE, University of Notre Dame, "Deadlock Prevention in Discrete Event Systems Using Petri Nets." May 1999.
M.S. in Electrical Engineering--Microsystems, Politehnica University of Bucharest, Romania, 1997.
Diploma in Electronics and Computing Systems, Politehnica University of Bucharest, Romania, 1996.

Vishwani Silochan, M.S. (Bechtel, Trinidad and Tobago)

MSEE, University of Notre Dame, December 2002.
B.S. in Electrical Engineering, Louisiana State University, 2001.

Xuping Xu, Ph.D. (California Baptist University, Riverside, CA)
Ph.D. July 2001. "Analysis and Design of Switched Systems."
MSEE, University of Notre Dame, 1999.
M.S. Applied Mathematics, University of Notre Dame, 2000.
B.S. in Electrical Engineering, Shanghai Jiao Tong University, May 1995.

Kenneth P. Laberteaux, Ph.D. (Toyota Technical Center, Ann Arbor, MI)
Ph.D. October 2000. "Explicit Rate Congestion Control for Data Networks."
MSEE, University of Notre Dame, 1996.
B.S. in Electrical Engineering, University of Michigan, 1992.

Xenofon D. Koutsoukos, Ph.D. (Vanderbilt University, Nashville, TN)
Website
Ph.D. July 2000. "Analysis and Design of Piecewise Linear Hybrid Dynamical Systems."
MSEE, University of Notre Dame, 1998.
MSc, Applied Mathematics, University of Notre Dame, 1998.
Diploma in Electrical and Computer Engineering, National Technical University of Athens, 1993.

Jean-Kesney Auguste, M.S. (BAE Systems Controls)
MSEE, University of Notre Dame, "Modeling and Hinf Control of a Hot Strip Steel Mill." May 1999.
B.S., Boston University, 1992.

John O. Moody, Ph.D. (Lockheed Martin Federal Systems, Owego, NY)
Ph.D. May 1998. "Petri Net Supervisors for Discrete Event Systems."
MSEE, University of Notre Dame, "A New Method for Constructing and Training Neural Networks." May 1993.
BSEE. University of Notre Dame, May 1991.

Ioannis K. Konstantopoulos, Ph.D. (DEH, Athens, Greece)
Ph.D. January 1996. "Optimal Controller Design and Reconfigurable Control Under Stability Robustness."
MSEE, University of Notre Dame, "Controller Design with Failure Diagnostic Capabilities Using Neural Networks." January 1993.
Diploma in Electrical and Computer Engineering, May 1989, National Technical University of Athens.

James. A. Stiver, Ph.D. (Harris Corporation, Melbourne, FL)
Ph.D. May 1995. "Analysis and Design of Hybrid Control Systems."
MSEE, University of Notre Dame, "Modeling of Hybrid Control Systems Using Discrete Event System Models." May 1991.
BSEE, University of Notre Dame, May 1989.

Zugang Hou, M.S.
MSEE, University of Notre Dame, "Analysis of Automotive Powertrain Dynamics Using Neural Networks." May 1992.
B.S. Shandong University of Technology, China. May 1982.

Michael A. Sartori, M.S., Ph.D. (Venable LLP, Washington, DC)
Website
Ph.D. May 1991. "Neural Networks and their Application to the Control of Systems."
MSEE, University of Notre Dame, May 1989.
BSEE, University of Notre Dame, May 1987.

Zhiqiang Gao, Ph.D. (Cleveland State University, OH)
Website
Ph.D. August 1990. "Reconfigurable Control Systems: Analysis and Design."
MSEE, University of Notre Dame, "Model Matching and Related Control Problems: Conditions and Algorithms." August 1987.
B.S. Beijing Institute of Posts and Telecommunications, January 1984.

Mark D. Peek, M.S. (TellLabs)
MSEE, University of Notre Dame, "Machine Learning of Parameter Values for System Performance Adaptation." September 1989.

BSEE, University of Notre Dame, 1985.

Kevin M. Passino, Ph.D. (The Ohio State University, Columbus, OH)

Website

Ph.D. May 1989. "Analysis and Synthesis of Discrete Event Regulator Systems."

MSEE, University of Notre Dame, "Reconstruction Methods and the Zeros of Sampled Systems." January 1985.

BSEE, Tri-State University, January 1983.

Oscar R. Gonzalez, Ph.D. (Old Dominion University, Norfolk, VA)

Website

Ph.D., August 1987. "Analysis and Synthesis of Two Degrees of Freedom Control Systems."

MSEE, University of Notre Dame, "Regulation Problem with Internal Stability (RPIS): Compensator Structure and Internal Models." May 1984.

BSEE, University of Idaho, January 1982.

Donald P. McLane, M.S. (University of Washington, Tacoma WA)

Website

MSEE, University of Notre Dame, "Discrete System Identification in the Frequency Domain via Least Squares." January 1987.

B.S. Indiana University South Bend, January 1981.

Rodolfo F. Lopez, M.S. (Nicaragua)

MSEE, University of Notre Dame, "Multivariable Control Design Via Polynomial Interpolation Methods." May 1984.

**Students from Computing and Control and Electrical Engineering,
Imperial College, London, England**

Kevin Warwick (Coventry University UK)

Ph.D. under John Westcott

Website

Trevor W. Williams, Ph.D. (NASA Goddard Center)

Formerly, University of Cincinnati, Aeronautics

Ph.D. 1981. "Inverse and Decoupling Problems in Linear Systems."

João José Santos Sentieiro, M.S. Portuguese Science and Technology Foundation, Lisbon, Instituto Superior Tecnico, Lisbon, Portugal

Website

M.S., "On the Flexibility Offered by State Feedback Compensation." 1980.

Academic Visitors and Postdoctoral Research Associates

- Lanlan Su, The University of Hong Kong, Academic Visitor, 09/2017-02/2018 and Postdoc Researcher 11/2018-08/2019.
- Surya Shraavan Kumar Sajja, Hamilton Institute, NUI Maynooth, Co. Kildare, Ireland, Postdoctoral Research Associate, Dec 2012 to Dec 2013.
- Getachew Befekadu, University of Duisburg-Essen, Germany, Moreau Postdoctoral Fellow, June 2010-August 2012. August 2012-June 2015, Research Assistant Professor.
- Yue Wang, Worcester Polytechnic Institute, Postdoctoral Research Associate, July 2011-August 2012.
- Giorgio Vitaioli, Università Politecnica delle Marche, Ancona, Italy, Research Visitor, Sept 2009-Feb 2010.
- Nicholas Kottenstette, University of Notre Dame, Postdoctoral Research Associate and Visiting Assistant Professor, Aug 2007-May 2008.
- Joao Almeida, Institute for Systems and Robotics, Instituto Superior Tecnico, Lisboa, Portugal, Research Visitor, April-July 2008.
- Hui Fang, University of Notre Dame, Postdoctoral Research Associate, February 2008-May 2008.
- Hai Lin, University of Notre Dame, Postdoctoral Research Associate, Aug 2005-May 2006.
- Marian V. Iordache, University of Notre Dame, Postdoctoral Research Associate, Jan. 2004-Aug.2004.
- Dr. Xiaojun Yang, Institute of Automation, Chinese Academy of Sciences, Academic Visitor, Sept. 1993-Aug. 1995.

- Mr. Costantino Lucisano, University of Milan, Italy, Academic Visitor, June 1993-October 1994.
- Dr. Katerina Yamalidou, Ecole Polytechnique de Lausanne, Switzerland, Academic Visitor, Sept. 1993-Dec. 1994.
- Dr. Yu-Qun Wang, Univ. of Science and Technology of China, Beijing, Academic Visitor, Feb. 1985-Sept. 1986.

Invited Speaker and Panel Discussion Panelist at Workshops and Conferences

- Moderator of Round Table Discussion on “Data Driven Control.” Panelists: Doerfler, Feuer, Mansour, Antsaklis. At the 27th Mediterranean Conference on Control and Automation (MED19), Akko, Israel, July 1-4, 2019.
- Panel Discussion at the ARO Workshop on Distributed Reinforcement Learning and Reinforcement Learning Games, University of Maryland, April 12-13, 2019.
- Organizer and Chair of Round Tables at the 26th Mediterranean Conference on Control and Automation (MED18), Zadar, Croatia, June 20-22, 2018.
Round Table Discussion on “Control Systems and AI in the Quest for Autonomy.” Panelists: Kamgarpour, Maze, Mostofi, Vukic, Antsaklis.
Round Table Discussion on “Social Implications of Autonomy and Automation.” Panelists: Chapman, Hirche, Kamgarpour, Tzes, Antsaklis.
- Panel Discussion on “Control Engineering Impact on the Society of the Future: Challenges of Cyber-Physical Systems” at the 2012 Mediterranean Conference on Control and Automation (MED12), Barcelona, Spain, July 4, 2012.
- Panel Discussion on “Cyber-Physical Systems” at the NIST Workshop on Performance Metrics for Intelligent Systems (PerMIS 2012), University of Maryland, March 22, 2012.
- NSF Workshop on “Developing Dependable and Secure Automotive Cyber-Physical Systems from Components.” Troy, MI, March 17-18, 2011. Panelist.
- NSF CMMI Workshop on “Building Systems.” University of Illinois in Urbana-Champaign, IL, May 24-25, 2010.
- NITRD “Federal Strategic Plan Forum for the Networking and Information Technology Research & Development Program.” Invited Participant. Washington, DC, February 24-26, 2009.
- NSF Workshop on “HCSS National Workshop on New Research Directions for High Confidence Transportation Cyber-Physical Systems: Automotive, Aviation, and Rail.” Vienna, Virginia, November 18-20, 2008.
- NSF Workshop on “High Confidence Automotive Cyber-Physical Systems.” Troy, MI, April 3-4, 2008. Speaker.
- NSF/NITRD “Beyond SCADA: Networked Embedded Control for Cyber Physical Systems.” Pittsburgh, PA, November 8-9, 2006. Speaker.
- NSF Workshop on “Cyber-Physical Systems. Research Motivation, Techniques and Roadmap,” Austin, TX, October 16-17, 2006. Speaker.
- NITRD “Beyond SCADA: Networked Embedded Control Systems.” Planning Meeting. Washington, DC, March 14, 2006.
- NSF “Real-time GENI Workshop.” Washington, DC, February 6-7, 2006.
- US National Science Foundation (NSF) and the Japan Society for Promotion of Science (JSPS). US-Japan Workshop on “Sensors, Smart Structures and Mechatronic Systems” University of Tokyo, Tokyo, Japan, November 12-13, 2005. Speaker
- Panel Discussion on “Real-time Systems, Sensor/Actuator Networks and Autonomous Vehicles: What do they have in Common?” at the Workshop on Networked Embedded Sensing and Control, University of Notre Dame, October 17-18, 2005.
- Panel Discussion on “The Future of Control Systems: The Presidents' Report” at the 43rd IEEE Conference on Decision and Control in Maui, Hawaii, December 2003.
- Panel Discussion on “Intelligent Control Imitating Biology: Promises, Challenges and Lessons,” at the 18th IEEE International Symposium on Intelligent Control (ISIC), Houston, Texas, October 7, 2003.
Organizer and Moderator.
- NSF (ECS) Workshop on “Wireless Networked Sensor and Actuator Systems,” UCLA, Los Angeles, CA, September 8-9, 2003. Speaker.
- Workshop on “Sensor Webs-An Autonomous Control Systems Perspective,” Univ. of Calif.-Berkeley, CA, May 9, 2003. Speaker.
- NSF/ EC Workshop on “Hybrid Control for Networked Systems,” Barcelona, Spain, July 21, 2002.
Sponsored by NSF (US) and EC (European Union). Organizer and Speaker.
- ARO Research Strategy Planning Workshop, Charleston, South Carolina, January 3-5, 2001.
Sponsored by the Army Research Office, Computing and Information Sciences Division.

- ARO Workshop on "Intelligent Systems," Australian National University, Canberra, Australia, December 8-9, 2000. Sponsored by the Army Research Office. Speaker.
- NSF/DARPA Workshop on "Future Directions in Hybrid and Embedded Systems," Arlington, Virginia October 25, 2000. Sponsored by DARPA and NSF.
- Panel Discussion on "Measuring the Intelligence of Autonomous Systems," at the 15th IEEE International Symposium on Intelligent Control and the 8th IEEE Mediterranean Conference on Control & Automation, Univ. of Patras, Rio, Greece, July 18, 2000. *Co-organizer*.
- EU Workshop on "Future and Emerging Control Systems," Brussels, Belgium, June 19, 2000. Sponsored by the Commission of the European Union, Directorate-General Information Society. Speaker.
- DARPA Workshop on "Networked Embedded Systems Technology," MIT, Boston, MA, March 6-7, 2000. Sponsored by the DARPA Information Technology Office.
- **Panel Discussion titled "At the Gates of the Millennium: Are we in Control?" at the 38th IEEE Conference on Decision and Control in Phoenix, AZ, December 8, 1999. *Organizer and Moderator*.**
- Panel Discussion on "The Control Challenge in the 21st Century," at the 14th Triennial World Congress of the International Federation of Automatic Control (IFAC), Beijing, China, July 5-9, 1999.
- NSF/IEEE CSS Workshop on "New Directions in Control Engineering Education," University of Illinois in Urbana-Champaign, IL, October 2-3, 1998. Sponsored by the National Science Foundation. Organizer.
- Panel Discussion on "Autonomy in Engineering Systems: What is it and Why is it Important?" at the ISIC/CIRA/ISAS'98 Conference, National Institute of Standards and Technology (NIST), Gaithersburg, MD, September 14-17, 1998.
- Workshop on "Autonomous Underwater Vehicles for Shallow Waters and Coastal Environments," Lafayette, Louisiana, February 17-19, 1998. Sponsored by the National Science Foundation. Speaker.
- Panel Discussion on "Intelligent Systems: Beyond Neural Networks and Fuzzy Control," at the 13th Triennial World Congress of the International Federation of Automatic Control, San Francisco, CA, July 1-5, 1996.
- Panel Discussion on "Intelligent Control Systems," at the 13th Triennial World Congress of the International Federation of Automatic Control, San Francisco, CA, July 1-5, 1996.
- Panel Discussion on "Control, Automation: Friends or Foes?" at the 4th IEEE Mediterranean Symposium on Control and Automation, in Crete, Greece, June 10-14, 1996.
- NSF/ISR Workshop on "Undersea Robotics and Intelligent Control," Lisbon, Portugal, March 2-3, 1995. Sponsored by the National Science Foundation. Speaker.
- NSF/EPRI Workshop on "Intelligent Control Systems," Palo Alto, CA, October 10-11, 1994. Sponsored by the National Science Foundation and the Electric Power Research Institute.
- Panel Discussion on "Defining Intelligent Control," at the 9th IEEE Intern. Symposium on Intelligent Control, Columbus, Ohio, August 16-18, 1994.
- Panel Discussion on "Intelligent Control," at the 1994 IEEE/IFAC Joint Symposium on Computer-Aided Control System Design, Tucson, AZ, March 7-9, 1994.
- AFOSR Workshop "Control of Discrete Event Systems," Wright-Patterson AFB, February 24-25, 1994. Sponsored by the Air Force Office of Scientific Research. Speaker.
- ARO/NASA Workshop "Formal Models for Intelligent Control," MIT, Cambridge, MA, Sept. 30-Oct. 2, 1993. Sponsored by the Center for Intelligent Control Systems Brown, Harvard and MIT and the Intelligent Machines and Robotics Lab, Univ. of California, Berkeley. Speaker.
- Panel Discussion on "Towards Autonomous Control Systems," at the 1993 IEEE Med. Symposium on New Directions in Control Theory and Applications, Chania, Crete, Greece, June 21-23, 1993.
- AFOSR Workshop on "Autonomous Structural Control Symposium," Colorado Springs, CO, August 24-25, 1992. Sponsored by Phillips Lab at Edwards AFB, AFOSR and the US Air Force Academy. Speaker.
- Panel Discussion on "Neural Networks in Control Systems," at the 30th IEEE Conference on Decision and Control, Brighton, England, Dec. 11-13, 1991.
- NSF Workshop on "Discrete Event Systems," Amherst, MA, June 21-23, 1991. Sponsored by the National Science Foundation.
- Panel Discussion on "Intelligent Control," at the 29th IEEE Conference on Decision and Control, Honolulu, Hawaii, Dec. 5-7, 1990.
- NSF/EPRI Workshop on "Intelligent Control Systems," Palo Alto, CA, October 15-16, 1990. Sponsored by the National Science Foundation and the Electric Power Research Institute.
- Panel Discussion on "Hierarchical Autonomous Control," at the 5th IEEE International Symposium on Intelligent Control, Philadelphia, PA, September 5-7, 1990.
- NSF Workshop on "Bio-Control by Neural Networks," Alexandria, VA, May 16-18, 1990. Sponsored by the National Science Foundation, Program on Biochemical Engineering.

- Panel Discussion on "Machine Learning in a Dynamic World" Intern. Symposium on Intelligent Control, Arlington, VA, Aug. 24-26, 1988.

Invited Presentations of Research Results at Universities/Companies/Workshops

I have been presenting my research results as invited Keynote and Plenary Speaker at Conferences, as listed earlier. I have also given research presentations as Invited Participant at Workshops on Future Research Directions that were supported by Federal Funding Agencies, and as Invited Panelist, as described above. In addition, invited talks were given at universities, companies and workshops.

A list of invited presentations follows:

- University of Michigan – Department of Electrical Engineering and Computer Science, Ann Arbor, MI, November 1, 2019.
Title: "Passivity Based CPS Design for Autonomy"
- Mathworks Research Summit, "Control Systems and the Quest for Autonomy," **Plenary**, Newton, MA, June 1-3, 2019.
- University of Denver – Department of Electrical and Computer Engineering, Denver, CO, February 26, 2018.
Title: "Control Systems and the Quest for Autonomy"
- 2015 American Control Conference – Tutorial Session on Autonomy and Machine Intelligence Chicago, IL, July 3, 2015.
Title: "The Quest for Autonomy. Are We There Yet? Are CPS a Way to Build Autonomous Systems?"
- **Control Systems Forum- Control Systems Webinar Tuesday April 7, 2015 12:00 PM CDT**

PresentationVideo:

http://msm.movie.mst.edu/public/misc/DCE_Webinar/ControlSystemsForum/Control_Systems_Webinar_040715.wmv
Title: "Design of Cyber-Physical Systems using Passivity/Dissipativity"

- University of Denver – Department of Electrical and Computer Engineering, Denver, CO, March 7, 2013.
Title: "Passivity, Dissipativity and Symmetry in Cyber-Physical Systems Design"
- Universite de Lorraine – Electrical Engineering. Research Centre for Automatic Control (CRAN) Nancy, France. December 4, 2012. <http://www.cran.uhp-nancy.fr>
Title: "On the Control of Cyber-Physical Systems"
- Imperial College of Science, Technology and Medicine – Electrical Engineering London, UK October 16, 2012.
Title: "Control of Cyber-Physical Systems Using Passivity and Symmetry"
- Technische Universität Berlin (TU Berlin) – Elektrotechnik und Informatik Berlin, Germany March 13, 2012.
Title: "Control of Cyber-Physical Systems"
- Chinese University of Hong-Kong (CUHK) – Dept. of Mechanical and Automation Engineering Hong-Kong, June 7, 2010.
Title: "Model-Based and Intermittent Feedback Control Over Networks"
- National Technical University of Athens (NTUA) – Dept. of Mechanical Engineering Athens, Greece October 23, 2009.
Title: "Model-Based Intermittent Feedback in Networked Sensing and Control Systems"
- Technische Universität München (TU München) – Fakultät für Elektrotechnik und Informationstechnik Munich, Germany September 14, 2009.
Title: "Networked Embedded Sensing and Control Systems: Model-Based Intermittent Feedback Control"
- Temple University – Department of Electrical and Computer Engineering, Philadelphia, PA, April 3, 2009.
Title: "Model-Based Intermittent Feedback in Networked Control Systems "
- University of Denver – Department of Electrical and Computer Engineering, Denver, CO, March 12, 2009.
Title: "Networked Embedded Sensing and Control Systems: Model-Based Intermittent Feedback Control "
- University of Michigan – Department of Electrical Engineering and Computer Science,

- Ann Arbor, MI, February 13, 2009.
 Title: "Embedded Sensing and Control Systems: Model-Based Intermittent Feedback Control and Passivity"
- Technische Universitaet Berlin (TU Berlin) – Elektrotechnik und Informatik
 Berlin, Germany May 26, 2008.
 Title: "Embedded Sensing and Control Systems: Model-Based and Intermittent Feedback Control"
 - University of California-Los Angeles – Electrical Engineering Department
 Los Angeles, CA, March 14, 2008.
 Title: "Networked Control Systems with Communication Constraints: The Case for Model-Based and Intermittent Feedback Control"
 - University of California-San Diego – Department of Mechanical & Aerospace Engineering, Center for Control Systems and Dynamics
 San Diego, CA, February 15, 2008.
 Title: "Networked Embedded Control Systems: Model-Based and Intermittent Feedback "
 - University of South Florida – Department of Computer Science and Engineering,
 Tampa, FL, November 15, 2007.
 Title: "Networked Sensing and Control: The Case for Intermittent Feedback "
 - Georgia Institute of Technology- Department of Electrical and Computer Engineering
 Atlanta, GA, January 19, 2005
 Title: "Modeling and Control of Networked Embedded Systems"
 - The Ohio State University-Department of Computer and Information Science
 Columbus, Ohio, October 12, 2004
 Title: " Model-Based Control of Networked Embedded Systems "
 - Vanderbilt University-Department of Electrical Engineering and Computer Science
 Nashville, TN, April 15, 2004
 Title: " Control of Networked Embedded Systems: Rethinking Feedback"
 - Georgia Institute of Technology- Workshop on Recent Advances in Algebraic Systems and Control Theory
 Atlanta, GA, January 23-24, 2004
 Title: "Networking in Control and Rethinking Feedback"
 - National Technical University of Athens
 Athens, Greece, June 10, 2003.
 Title: "The Quest for Autonomy in Engineering Systems: Intelligent Control, Hybrid Systems and Networking."
 (also an IEEE Control Systems Society Distinguished Lecture)
 This lecture was televised and simultaneously broadcast to several other Universities in Greece.
 Also it was made available on the Internet via webcast.
 - University of Pennsylvania, GRASP Laboratory
 Philadelphia, Pennsylvania, November 15, 2002.
 Title: "On Networked Control Systems."
 (also an IEEE Control Systems Society Distinguished Lecture)
 - Instituto Superior Tecnico (IST), Instituto de Sistema e Robotica (ISR).
 Lisbon, Portugal October 17, 2001.
 Title: " Networked Embedded Control Systems: Issues and Challenges."
 - Honeywell Corporation, Research Center. Prague.
 Prague, Czech Republic August 28, 2001.
 Title: "Hybrid Supervisory Control in Intelligent Autonomous Systems."
 - University of Patras, Greece.
 Patras, Rio, Greece, July 12, 2001.
 Title: "Hybrid Supervisory Control for Networks of Embedded Systems"
 - **Washington University , Department of Systems Science and Mathematics**
St. Louis, Missouri, March 19, 20, 21, 2001
These were the invited lectures of the 2001 Zaborszky Lecture Series at Washington University,
on the topic of Hybrid and Discrete Event Systems in Autonomous Intelligent Control
Title: "The Quest of Autonomy in Engineering Systems: Hybrid and Discrete Event Control in Networked Embedded Systems," on March 19, 2001.
Title: "A Supervisory Control Approach to Hybrid System Design Based on Discrete Abstractions,"
on March 20, 2001
Title: "Control of Discrete Event Systems using Petri nets and Structural Net Properties," on March 21
 - Griffith University and Institute of Engineers,
 Brisbane, Australia, December 15, 2000.

- Organized under the Distinguished Lecturer program of IEEE. IEEE CSS Australia Chapter .
Title: "Hybrid Systems in Intelligent Control"
- Georgia Institute of Technology, School of Electrical and Computer Engineering,
Atlanta, GA, September 18, 2000.
Title: "Design and Verification of Networked Control Systems"
- Xerox Corporation, Wilson Center for Research & Technology
Webster, NY, January 18-19, 1999. *Xerox Distinguished Lecture in Control and Diagnostics*.
Title: "The Quest for Autonomy in Engineering Systems."
Title: "Recent Results in Hybrid and Discrete Event Control." Informal Lecture.
- Johns Hopkins University, Department of Electrical and Computer Engineering,
Baltimore, MD, September 17, 1998. Invited talk.
Title: "Hybrid Control for Autonomous Systems"
- University of Maryland, Department of Electrical Engineering,
College Park, MD, September 18, 1998. Invited talk.
Title: "On the Control of Hybrid and Discrete Event Systems (The Quest for Autonomy)"
- Honeywell Technology Center,
Minneapolis, MN, October 13, 1998. Invited talk.
Title: "Autonomous Systems using Hybrid and Discrete Event Control (The Quest for Autonomy)"
- Rice University, Department of Electrical and Computer Engineering, February 11, 1997.
Title: "Hybrid Systems"
- National Technical University of Athens, in Athens, Greece on June 23, 1997.
Organized under the Distinguished Lecturer program of IEEE. IEEE CSS Greece Chapter .
Title: "Hybrid Control of Intelligent Systems: Challenges and Opportunities"
- Academy of Sciences, Czech Republic, in Prague on June 30, 1997.
Organized under the Distinguished Lecturer program of IEEE. IEEE CSS Czech Republic Chapter.
Title: "Intelligent Control and Hybrid Systems"
- Brown University, Division of Engineering and LEMS, October 7, 1997.
Title: "Hybrid Control for Highly Autonomous Systems"
- Boston University, Department of Manufacturing Engineering, October 8, 1997.
Title: "Recent Results in the Control of Hybrid and Discrete Event Systems"
- Northeastern University, Department of Electrical and Computer Engineering, October 9, 1997.
Title: "Challenges and Opportunities in Intelligent Control"
- Georgia Institute of Technology, School of Electrical Engineering, November 5, 1997.
Distinguished Lecturer Series in Systems and Control of the Georgia Institute of Technology.
Title: "Building Highly Autonomous Control Systems"

PANOS ANTSAKLIS - PROFESSIONAL ACTIVITIES

Current Professional Activities

- President of the Mediterranean Control Association (MCA), 1998 to present.
- Co-Editor-in-Chief, *Foundations and Trends in Systems and Control*, Now Publishers, 2012 to present.
- Evaluator of research proposals for
US Funding Agencies
ISTand ERC European Union Commission, Belgium
Swedish Foundation for Strategic Research (SSF), Sweden
The Hellenic Ministry of Development, Greece
Funding agencies in Israel, Cyprus, Singapore, EU, USA
- Program Committee Member, Invited Session Organizer in conferences
IEEE Conf. on Decision and Control (CDC), the American Control Conference (ACC),
- Reviewer of papers submitted to journals and conferences.

Past Professional Activities

- Editor-in-Chief, *IEEE Transactions on Automatic Control*, January 2010 to December 2017.
- Organizer of the Control of Cyber-Physical Systems Workshop at the University of Notre Dame London Centre October 20-21, 2012.
- Chair of the Scientific Advisory Board (Fachbeirat) of the Max-Planck-Institut für Dynamik komplexer technischer Systeme, Magdeburg, Germany 2008-2012. Member 2002-2012.
- President's Council of Advisors for Science and Technology (PCAST). Member of subcommittee on Networking and Information Technology. 2006-07.
- Invited expert for strategy planning on control, hybrid and embedded systems research of the Commission of the European Union, Directorate-General Information Society, Information Society Technologies, since 2000.
- Member of the Advisory Committee for the Instituto de Sistemas e Robotica (ISR) of the Instituto Superior Tecnico (IST) of the University of Lisbon, Portugal, 1998-2002.
- Editor-Elect of *IEEE Transactions on Automatic Control*, 2009.
- Chair of the Awards Committee of the IEEE Control Systems Society (CSS), 2002-2008.
- Associate Editor At Large (AEAL), of the journal *IEEE Transactions on Automatic Control*, 2000-2008.
- Editorial Board Member, of the journal *Discrete Event Dynamic Systems: Theory and Applications*, 1996-2009.
- Guest Editor, Special section on "Applications of Control and Automation to Agriculture," *IEEE Control Systems Magazine*, October 2001.
- Guest Editor, Special issue on "Intelligence and Learning," *IEEE Control Systems*, June 1995.
- Guest Editor, Special issue on "Neural Networks in Control Systems," *IEEE Control Systems*, April 1992.
- Guest Editor, Special issue on "Neural Networks in Control Systems," *IEEE Control Systems*, April 1990.
- Guest Editor, Special issue on "Technology of Networked Control Systems," *Proceedings of the IEEE*, January 2007.
- Guest Editor, Special issue on "Hybrid Systems: Theory and Applications," *Proceedings of the IEEE*, July 2000.
- Guest Editor, Special issue on "Networked Control Systems," *IEEE Transactions on Automatic Control*, September 2004.
- Guest Editor, Special issue on "Hybrid Control Systems," *IEEE Trans. Automatic Control*, April 1998.
- Guest Editor of Special issue on *Hybrid Control Systems* in the Journal of Discrete Event Dynamic Systems (with M. Lemmon; 1998).
- Editorial Board Member, of the journal of *Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Application and Algorithms*, 2001-02.
- Editorial Board Member, of the journal *International Journal of Hybrid Systems*, 2002-2010.
- Editorial Board Member, of the journal *Intelligent Control and Systems*, 1996-2002.
- Editorial Board Member, of the journal *Information Sciences*, 1998-2002.
- Editor, IEE Control Engineering Book Series 1989- 1995.
- Associate Editor, IEEE Transactions on Neural Networks, 1989- 1993.
- Founding Associate Editor for Letters, IEEE Transactions on Neural Networks, 1989-1990.
- Associate Editor, IEEE Transactions on Automatic Control (AC), 1985-1986.
- Member, Linear Systems Committee, IEEE Transactions on AC, 1983-1984.
- Program Vice-Chair, European Control Conference 2009 (ECC'09), Budapest, Hungary, 2009.
- Program Chair, European Control Conference 2007 (ECC'07), Kos, Greece. July 2-6, 2007.
- Organizer and co-Chair of the "Symposium to Honor Bill Wolovich," Cancun, Mexico, (preceding the 2008 CDC) December 7, 2008.
- Co-Organizer and General co-Chair of the Workshop on Networked Embedded Sensing and Control, University of Notre Dame, October 16-17, 2006.
- General co-Chair, 15th IEEE Mediterranean Conference on Control and Automation (MED'07),

- Athens, Greece, June 27-29, 2007.
- Co-Organizer and General co-Chair of the Workshop on Networked Embedded Sensing and Control, University of Notre Dame, October 17-18, 2005.
 - Organizer of the 2002-2003 Brosey Distinguished Lectures in Networked Embedded Systems at the University of Notre Dame, Spring 2003. (See <http://www.nd.edu/~cam/broseylectures.htm>).
 - General Chair of the Workshop “Contemporary Issues in Systems Stability and Control with Applications” in Honor of Anthony N. Michel, Notre Dame, IN, April 5, 2003.
 - Organizer/Moderator of the US/EU Workshop “Advanced hybrid systems theory for the control of networked systems” in Barcelona, Spain on July 21, 2002 at the IFAC’02. This workshop was co-sponsored by NSF and the European Commission, IST Programme, Brussels, Belgium. (with M.Morari, ETH, Zurich, Switzerland)
- President IEEE Control Systems Society (CSS), 1997.
 - President-Elect IEEE CSS, 1996. Past-President IEEE CSS, 1998.
 - Chairman of the Technical Committee on Fuzzy and Neural Systems of the International Federation of Automatic Control (IFAC), 1999-2002.
 - Member of the IEEE Control Systems Society (CSS) Nominating Committee, 2000, 2010, 2011.
 - Chair of the IEEE Control Systems Society (CSS) Nominating Committee, 1998.
 - Vice President, Conferences; IEEE CSS, 1994-95.
 - Member of Executive Committee; IEEE CSS, 1994-97.
 - Member of the Board of Governors (Elected), IEEE CSS, 1991- 93; 1994- 96.
 - General Chair, 34th IEEE Conf. on Decision and Control, New Orleans, LA, December 1995.
 - General Chair, 8th IEEE Intern Symposium on Intelligent Control, Chicago IL, August 1993.
 - Program Chair, 30th IEEE Conf. on Decision and Control, Brighton, England, December 1991.
 - Director, American Automatic Control Council (AACC) 1996-97; Director (alternate) AACC 1994-95.
 - Chair, IEEE CSS Task Force on Defining Intelligent Control, 1993-94.
 - Chair, IEEE CSS Society Brochure committee, 1993-94.
 - Chair, Technical Committee on Theory, IEEE Control Systems Society (CSS), 1988-1990.
 - Group Leader, Control Systems of Technical Committee on Intelligent Control, IEEE CSS, 1989- 93
 - Member, IFAC Technical Committee on Theory, 1991-93.
 - Member-at-Large, Technical Activities Board, IEEE CSS, 1987-1990 .
 - Chair, Student Activities IEEE CSS, 1984.
 - Member, Financial Activities Board, IEEE CSS, 1980-1983.
- Organizer and Moderator of the Panel Discussion "Real-time Systems, Sensor/Actuator Networks and Autonomous Vehicles: What do they have in Common?" at the Workshop on Networked Embedded Sensing and Control, University of Notre Dame, October 17-18, 2005.
 - Chair, Student Affairs, IEEE Conference on Decision and Control, (43rd IEEE CDC), 2004.
 - Member of the Hybrid Systems Computation and Control Steering Committee, 1997-2002.
 - Chair, International Program Committee, IFAC Workshop “**Advanced Fuzzy/Neural Controls 2001,**” **Valencia, Spain. October 15-16, 2001.**
 - Organizer and Moderator of the conference-wide Panel Discussion "At the Gates of the Millennium: Are we in Control?" at the 38th IEEE Conference on Decision and Control in Phoenix, AZ, December 8, 1999.
 - Co-Organizer of the NSF/IEEE CSS Workshop on "New Directions in Control Engineering Education," University of Illinois in Urbana-Champaign, October 2-3, 1998.
 - General Chair, Hybrid Systems V Workshop, University of Notre Dame, Notre Dame, IN, September 11-13, 1997.
 - Co-Chair Int'l Program Committee, 2nd Asian Control Conf. (ASCC'97), Seoul, Korea, July 22-25, 1997.
- General co-Chair, 24th IEEE Mediterranean Conference on Control and Automation (MED'16), Athens, Greece, June 21-24, 2016.
 - General co-Chair, 21st IEEE Mediterranean Conference on Control and Automation (MED'13), Chania, Crete, Greece, June 26-28, 2013.
 - General co-Chair, 15th IEEE Mediterranean Conference on Control and Automation (MED'07), Athens, Greece, June 27-29, 2007.
 - General co-Chair, 8th IEEE Mediterranean Conference on Control and Automation (MED'00), University of Patras, Rio Greece, July 17-19, 2000.
 - Honorary co-Chair, 26th Mediterranean Conference on Control and Automation (MED'18), Zadar, Croatia, June 2018.
 - Honorary Chair, 18th Mediterranean Conference on Control and Automation (MED'10),

- Marrakech, Morocco, June 2010.
- Honorary Chair, 16th Mediterranean Conference on Control and Automation (MED'08), Corsica, France, June, 2008.
- Honorary Chair, 4th IEEE Mediterranean Symposium on Control and Automation, Crete, Greece, June 10-14, 1996.
- Honorary co-Chair, 2013 International Conference on Control, Decision and Information Technologies (CoDIT'13) Hammamet, Tunisia, May 6-8, 2013.
- Honorary co-Chair, 2013 International Conference on Systems and Control (ICSC 2013) Algiers, Algeria, October 29-31, 2013.

PANOS ANTSAKLIS – ADMINISTRATION - University of Notre Dame

University level Committees and Appointments

- Faculty Senate, Elected Member (2019 - Present)
- Academic Council, Elected Member (2000-2003; 2003-2006; 2006-2009; 2009-2012, 2012-2015, 2015-2018).
Executive Committee of the Academic Council, Member. Elected or Appointed by the President of the University. (2001-02, 2002-03, 2005-06, 2006-07, 2007-08, 2008-09, 2009-10, 2010-11).
Advanced Studies Committee of the Academic Council, Member (2007-08; 2010-18). Chair (2007-08; 2010-11, 2011-12)
Graduate Studies Committee of the Academic Council, Chair (2002-03).
Faculty Affairs Committee of the Academic Council, Member (2009-10).
Undergraduate Committee, Sub-committee on admissions, Chair (2005-06).
Committee on restructuring the committee structure of the Academic Council, Member (2003-04).
- Academic and Faculty Affairs Committee of the Board of Trustees. Member. (2012-2015)
- Elected Member. Review Committee for the Provost (2014-2015).
- Review Committee for the 5-year of the Dean of Engineering, Chair (2011-12).
- Graduate Council, Member (1995-96; 2004-05; 2007-08; 2008-09; 2010-11, 2011-12, 2012-13)
Executive Committee of the Graduate Council, Member (2007-08; 2010-11, 2011-12).
- Director, Center for Applied Mathematics (1999-2002 & 2002-2005)
Executive Committee of the Center for Applied Mathematics.
Chair (1999-2005). Member (1998-99 & 2005-08).
- Dean of Freshman Studies Search Committee, Member (2004-05).
- Provost Search Committee, Member (2005).
- External Review of the Department of Computer Science and Engineering.
Internal University reviewer in four member panel (April 2003).
- Committee on Research and Sponsored Programs. Member (1988-1990).
- Faculty Senate, Member (1985-88; 1989- 91; 2000-02).
Executive Committee, Treasurer. (1990- 91).
Committee on Administration, Member (2000-02).
- Committee on University Governance. Member (1989-1990).
- Ad-Hoc Parking Committee. Member, since 1990. • New Bookstore Advisory Committee (1997- 99)
- Colloquy for the Year 2000. Committee of the Whole (1991- 93)
Committee on Finance, Athletics and Univ. Relations, Subcommittee on Human Resources.

College of Engineering Committees

- College Council. Elected Member. (2004-07, 2007-10).
- Committee for the Coordination of Graduate Courses in Applied Mathematics. (1999-2008).
- Chair of the Advisory Committee on Control Systems, Automation and Artificial Intelligence (1988- 98).
- Graduate Committee. Member (1995-97).
- Elections Committee. Member (1992- 94).
- Chair of the Search Committee for the Chair of Computer Science and Engineering Department (1990- 91).
- College Council. Member (1984-1989).
- Graduate Studies Committee. Member (1984-1986).
- Services Committee. Member (1984-1985).

Department of Electrical Engineering Committees

- Communications Committee. Member (2019 -)
- Appointments and Promotions Committee. Member (1992- 93, 1997- 99, 2012-14)
- Graduate Admissions Committee. Member (1983-85, 1989- 91, 2006-07, 2012-13).
- Director of Graduate Studies (1995-97). Graduate Committee. Chair (1995- 97).
- Long Range Planning Committee (2000-Present).
- Electrical Engineering-Systems Search Committee (2009-11).
- Graduate Studies Committee. Member (2001-03).
- Undergraduate Studies Committee. Member (1999- 2001).
- Chair of the Systems Area Committee (1984-86) and (1993- 95).
- Chair of the Long-Range Planning Committee (1992- 98).
- Facilities Committee. Member (1992- 93)
- Undergraduate Lab Equipment Committee Member (1986-89).
- Chair of the Honors Committee (1985-86).
- Chair of the Undergraduate Studies Committee (1982-84). Member (1981-82).
- Graduate Admissions Committee. Member (1983-85).