

Petros Ioannou

Short CV

Petros A. Ioannou received the B.Sc. degree with First Class Honors from University College, London, England, in 1978 and the M.S. and Ph.D. degrees from the University of Illinois, Urbana, Illinois, in 1980 and 1982, respectively. During the period 1975-1978, he held a Commonwealth Scholarship from the Association of Commonwealth Universities, London, England. He was awarded several prizes, including the Goldsmid Prize and the A. P. Head Prize from University College, London. From 1979 to 1982 he was a research assistant at the Coordinated Science Laboratory at the University of Illinois. In 1982, Dr. Ioannou joined the Department of Electrical Engineering-Systems, University of Southern California (USC), Los Angeles, California. He currently holds the prestigious title of University Professor and the A.V. 'Bal' Balakrishnan Chair Professor in the same Department. He is the Director of the Center of Advanced Transportation Technologies an organized research unit at USC and holds courtesy appointments with the Departments of Aerospace and Mechanical Engineering and Industrial System Engineering. He is the Associate Director for Research for the University Transportation Center METRANS at the University of Southern California and the founder and Director of the Master Degree program on Financial Engineering at USC. He is also the Director of the Center for Responsible AI in Decision Making in Finance supported by CapitalOne He was visiting Professor at the University of Newcastle, Australia and the Australian National University in Canberra during parts of Fall of 1988, the Technical University of Crete in summer of 1992 and Fall of 2001 and served as the first Dean of the School of Pure and Applied Science at the University of Cyprus (UCY) in 1995 while on leave from the University of Southern California. As a Dean he pioneered the establishment of the School of Engineering at UCY. In 2008/2009 he was a faculty member at the Department of Electrical Engineering and Information Technologies of the Cyprus University of Technology while on sabbatical leave from the University of Southern California where he helped established the educational curriculum of the Department.

Dr. Ioannou was the recipient of the *Axelby Best Paper Award* by the IEEE Control System Society in 1984 and the recipient of a *1985 Presidential Young Investigator Award* for his research in Adaptive Control. In 2009 he received the Institute of Electrical and Electronic Engineering (*IEEE Intelligent Transportation System (ITS) Society (ITSS) Outstanding ITS Application Award* and the *2009 IET Heaviside Medal for Achievement in Control* by the Institution of Engineering and Technology (former IEE) in UK. In 2012 he received the *IEEE ITSS Outstanding ITS Research Award*. In 2016 he received the *IEEE Transportation Technologies Field Award* (highest level in IEEE), the *Senior Research Award* from the Viterbi School of Engineering and the *Transition to Practice Award* from the IEEE Control System Society. In 2019 he received the *User-Inspired Research Award* in recognition and Appreciation of Excellence from the Viterbi School of Engineering at USC. In 2022 he was inducted to the *National Academy of Engineering* and elected *Fellow of the National Academy of Inventors* and became *Foreign member of the Academy Europaea*. In 2023 he became Foreign Member of the European Academy of Sciences. In 2024 he was awarded the Lifetime Achievement Award of the IEEE ITS Society, he was designated as University Professor, highest recognition given by the University of Southern California and was awarded the ASME Rufus Oldenburger Medal and became Fellow of Asia-Pacific Artificial Intelligence Association.

He is currently the President Elect of the IEEE ITS Society. Prior to that he was Vice President (VP) for Membership, VP for Publications and served as Editor in Chief of the IEEE Transactions on Intelligent Transportation Systems. He has been an Associate Editor for the IEEE Transactions on Automatic Control, the International Journal of Control, Automatica and IEEE Transactions on Intelligent Transportation Systems. He served as a Member of the Control System society on IEEE ITS Council Committee and his center on advanced transportation technologies was a founding member of ITS America. He also served as Associate Editor at Large of the IEEE Transactions on Automatic Control and Chairman of the International Federation of Automatic Control (IFAC) Technical Committee on

Transportation Systems. He served as a member of the Board of Governors of the IEEE ITS Society for over a decade. He is one of the founders of the Mediterranean Control Association and a member of the Board of Governors and one of the founders of the IEEE Mediterranean Control Conference, which has been taking place annually since 1992. He is a co-founder of the University Transportation Center, METRANS, at the University of Southern California and California State University Long Beach.

Dr. Ioannou is a Lifetime Fellow of IEEE, Fellow of International Federation of Automatic Control (IFAC), and Fellow of American Association for the Advancement of Science (AAAS) and the author/co-author of 11 books and over 400 research publications in controls, vehicle dynamics, neural networks, nonlinear dynamical systems, intelligent transportation systems and Financial Engineering. He founded SSC Systems Inc in the US in the early 90's and TranSim Inc in Cyprus which operated as research consulting companies in transportation and autonomous vehicles for a decade.

In his spare time he serves as a technical consultant to several automotive, aerospace and computer/electronics companies and as expert witness in the area of intelligent transportation systems that involves vehicle routing and traffic management for passenger, trucks, airport busses, shuttles and taxis, congestion control and traffic management technologies, autonomous vehicles, safety and human factors, vehicle accident analysis, collision avoidance systems as well as patent infringement cases.

Extended CV

PETROS A. IOANNOU, Ph.D.

BACKGROUND/EXPERIENCE

Educational Record

1. University of Illinois, College of Engineering, Urbana, Illinois. 1/80 - 8/82, Ph.D. in Electrical Engineering, Thesis title: "Robustness of Adaptive Schemes with Respect to Modeling Errors."
2. University of Illinois, College of Engineering, Urbana, Illinois. 8/78 - 12/79 M.S. Thesis title: "Microprocessor Control of Double Magnet Suspension System."
3. University of London, University College, London. 9/75 - 6/78, B.Sc. in Mechanical Engineering, June 1978. Thesis title: "Calibration of the Water Wave Tank."

Work Experience/Accomplishments

- University Professor at University of Southern California, 2024- present
- University of Southern California, Department of Electrical Engineering-Systems: Assistant Professor from Fall 1982 to Spring 1987. Associate Professor from Spring 1987 to 1992. Full Professor from Fall 1992 to present
- A.V. 'Bal' Balakrishnan Chair, 2016-present
- President of IEEE ITS Society 2026-present
- Director of the Center for Responsible AI for Decision Making in Finance (CREDIF), 2024-present
- Joint Appointment with the Department of Aerospace and Mechanical Engineering, 2004-present
- Joint Appointment with the Department of Industrial and Systems Engineering, 2011-present
- Adjunct Professor University of Cyprus, Sept. 2010 to 2013
- Founder of the Southern California Center of Advanced Transportation Technologies, 1991
- Director of the Southern California Center of Advanced Transportation Technologies, 1991 to present.
- Associate Director for Research, METRANS 2006-present
- Visiting Professor Cyprus University of Technology, 2008/2009
- Visiting Professor, Technical University of Crete, Chania, Greece, Summer 1992, Fall 2001
- Visiting Professor at the University of Newcastle, Australia, Fall 1988
- Visiting Professor at the Australian National University in Canberra Fall of 1988,
- Dean of the School of Pure and Applied Science at the University of Cyprus in 1995/1996 where he pioneered the establishment of the School of Engineering at the University of Cyprus
- One of the founders of the Mediterranean Control Association, 1998
- One of the founders of the IEEE Mediterranean Conferences which started in 1992 and became an annual event
- One of the founders of the University Transportation Center METRANS at the University of Southern California/California State University Long Beach, 1999
- Controls Group Leader 2004-2008
- Founder and Director of the Master Program in Financial Engineering 2008-present
- Editor in Chief of the IEEE Transactions on Intelligent Transportation Systems 2015-2018

- Vice President for Publications of the IEEE Intelligent Transportation Systems Society 2019-2021
- Vice President for Membership Activities of the IEEE Intelligent Transportation Systems Society 2021 to 2025
- President Elect, IEEE Intelligent Transportation Systems Society 2025
- Distinguished Visiting Professor at KIOS Research and Innovation Center of Excellence at the University of Cyprus 2018, 2019
- Affiliated Professor at KIOS Research and Innovation Center of Excellence at the University of Cyprus, 2023-2025

Consulting

- Expert Witness for Vahan Mikayelyan Haffner Law Case No. O-228865, Antonio Lujak v. Alfa Romeo, roll off accident, 2023- ongoing
- Expert Witness for Friedman Rubin® PLLP Case No. 1:23-cv-03054-MKD, BURGESS vs Daimler Truck etc Truck accident case. Oct. 2023 - ongoing
- Expert Witness for Koskoff Koskoff and Bieder PC. Two accident cases, 2022
- Expert Witness for AutoStore Technology, Kirkland and Ellis LLP, 2022
- MEMsDRIVE, 2017-2019
- Liner LLP consultant on behalf of Signal IP Inc. 2014-2015
- Tempest Technologist Inc. 8939 S Sepulveda Blvd, Los Angeles, CA 90045 Technical Consultant, 2012
- RCRSD Legal firm, Newport Beach, CA: Expert Consultant to Toyota Unattended Acceleration (Utah case) 2011, 2012
- Thomson Reuters Expert Witness Services: Expert Consultant to a Toyota Unattended Acceleration (San Diego Case) , 2012
- ACORN Technologies, Technical Consultant, 1999 to 2002
- Lockheed Company Technical Consultant, 1985 to 1993.
- Ford Motor Company Design and implementation of an intelligent cruise control system on a Lincoln Towncar, June 1992 to 1994.
- Project Trilby, General Motors Research Laboratories: A successful design and implementation of a steer-by-wire control system, July 1988.
- Rockwell International, 12214 Lakewood Boulevard, Downey, CA 90241: Technical Consultant, 1985.
- HR TEXTRON, Systems Engineering Division, Irvine, CA 92714: Technical Consultant, May and June 1985.
- Dynamic Systems, 2014 Silver Court West, Urbana, Illinois: Technical Consultant from October 1980 to September 1984.
- General Electric Company, One River Road, Schenectady, NY 12435: Technical Consultant, 15 days, July - December 1981.
- Ford Motor Company, P. O. Box 2053, Dearborn, MI 48121: Technical Consultant, 2 days in November 1980, 7 days in November 1981.

Professional Activities

2026

- President of the IEEE ITS Society 2026-present

2025

- President Elect of the IEEE ITS Society

2022 - 2024

- Vice President for Membership Activities IEEE Intelligent Transportation Systems, Jan. 2022-present

2019-2021

- Vice President for Publications IEEE Intelligent Transportation Systems 2018-2021
- Board of Governors Member of IEEE Intelligent Transportation Systems 2018-today
- Workshop Organizer: Smart Freight Mobility – Current Applications and Guidelines for Future Development’, 22st IEEE International Conference on Intelligent Transportation Systems (ITSC2019) on Oct. 2019 at Auckland, New Zealand
- ITSS Award evaluation committee
- Graduate Curriculum Committee in EE-Systems
- Advisor on the South Coast AQMD Clean Fuels Advisory Committee South Coast AQMD

2018

- Editor in Chief of the IEEE Transactions on Intelligent Transportation Systems, 2015 to 2018
- Finance Chair of the 21st IEEE International Conference on Intelligent Transportation Systems Nov. 2018, Maui, Hawaii, US
- General Chair of IEEE Intelligent Vehicles Symposium, June 2017, Redondo Beach, CA
- Steering committee member of the IEEE Transactions on Intelligent Vehicles, 2014-present
- 2015- present ITSS Award evaluation committee
- Graduate Curriculum Committee in EE-Systems 2018-present
- Merit Review member of Teaching/Service Committee 2018
- Workshop Organizer: Smart Freight Mobility – Current Applications and Guidelines for Future Development’, 21st IEEE International Conference on Intelligent Transportation Systems (ITSC2018) on Nov. 4, 2018 at Maui, Hawaii, US

2010-2017

- General Chair 2017 IEEE Intelligent Vehicles Symposium – June 11-14, 2017
- Associate Editor of IMA Journal of Mathematical Control and Information 2012-2017
- External member of promotion committee of Prof. Papamichael Technical University of Crete, Greece
- Member of the Council of Educational Evaluation-Accreditation (CEEA/SEKAP) 2004-2015, Ministry of Education, Republic of Cyprus
- External member of promotion committee of Prof. Boutalis Democritus University of Thrace, Greece
- Member of the committee for the external evaluation of the Postgraduate Programs of the School of Science and Technology (a. MSc in Information and Communication Technology Systems and b. MSc in Energy Systems) of the International Hellenic University, November 4 - 9 2013
- 2013 ITSS Award evaluation committee
- Member of the Council of Educational Evaluation-Accreditation (CEEA/SEKAP), Ministry of Education, Republic of Cyprus
- Proposal Review for Dutch Institute for Advanced Logistics (DINALOG), Netherlands
- Proposal Review for Dutch Institute for Advanced Logistics (DINALOG), Netherlands

- Program Committee of the 2012 International Conference on Logistics and Maritime Systems (LOGMS) to be held in Bremen, Germany, August 22-24 2012.
- Guest Editor International Journal of Adaptive Control and Signal Processing, Special Issue on New trends in Adaptive Control Systems 2012
- Associate Editor of IMA Journal of Mathematical Control and Information 2012-2020
- Associate Editor, 2012 IEEE International Conference on Vehicular Electronics and Safety (ICVES'12) sponsored by the IEEE Intelligent Transportation Systems Society Istanbul July 24-27, 2012.
- Program Committee Member of the 2012 International Conference on Logistics and Maritime Systems (LOGMS) held in Bremen, Germany, August 22-24 2012.
- International Program Chair of the IFAC Symposium on Control in Transportation to take place in Sept. 2012 in Sofia, Bulgaria.
- Member of the Board of Governors of the IEEE Intelligent Transportation Systems Society, 2005-2017
- Member of Evaluation Committee of Private College and University Programs appointed by the Ministry of Education of the Republic of Cyprus, 2011-2015
- Panel Reviewer for the Department of Energy (DOE) 'Driver Feedback Technology Area of Interest of the FY 2011 Vehicle Technologies Program Wide Funding Opportunity Announcement (FOA-0000239)
- Track Chair on Port Operations and Program Organizer Committee member of the 4th METRANS National Urban Freight Conference, Long Beach, CA, October 12-14, 2011
- Program Committee Member of the 2011 IEEE Mediterranean Conference on Control and Automation, Corfu, Greece
- Chair of the external evaluation committee for the Department of Electrical and Electronic Engineering of the Technical University of Crete, Chania, Greece appointed by the Higher Education Quality Assurance Agency of Greece, May/June 2011.
- Reviewer for the Research Grant Council (RGC) of Hong Kong, 2011
- Reviewer for the EPSRC Research Grants, UK, 2011
- Associate Editor for the Intelligent Vehicle Symposium June 2011 Kongresshaus Baden-Baden, Germany
- Guest Editor for International Journal of Adaptive Control and Signal Processing on 'New trends in Adaptive Control Systems' 2011
- Advisory Board Member for the Integrated Series on Intelligent Systems Books to be published by Zhejiang University and Springer
- Member of the Board of Governors of the IEEE Intelligent Transportation Systems Society, 2005-present
- Member of the Board of Governors of the Mediterranean Control Association, 1998-present
- Chairman of the IFAC Technical Committee on Transportation Systems, 2005 to 2009
- Associate Editor of the 13th International IEEE Conference on Intelligent Transportation Systems – ITSC2010
- Associate Editor for 2010 Intelligent Vehicles Symposium June 21-24, 2010 in University of California, San Diego, CA, USA
- NSF Review Panelist NSF CPS Medium Panel, Transportation, P101806 June 7-8, 2010
- Expert panel member for evaluating 'Concepts and Solutions for Zero-Emission Container Movement Systems' for the Ports of Los Angeles/Long Beach and Alameda Corridor Transportation Authority, 2010
- Panel member of the Ministry of Education of the Republic of Cyprus committee (SEKAP) for accreditation of University programs in Cyprus 2007-2011

- Expert panel member to review test plans by the USDOT/VOLPE to look into vehicle safety with focus on alleged unintended Toyota acceleration problem 2010
- Invited Participant NSF-sponsored Workshop on ‘The Future of Intelligent Transportation Systems and its Implication with regard to Mobility and Sustainability’, Columbus, Ohio, May 4-5, 2010
- IPC member IFAC Symposium Advances in Automotive Control, Munich, Germany, July 12-14, 2010
- Member of the European Space Policy expert panel of the Ministry of Transportation and Works of the Republic of Cyprus 1/2009- present
- Guest Editor of the special Issue on ‘Selected papers from the 2nd National Urban Freight Conference, Long Beach, CA, Dec. 2007’ Transportation Research Part E: Logistics and Transportation Review, Vol. 46E, issue 4, July 2010

Prior to 2010

- Organizer and National Organizing Committee Chair 12th IFAC Symposium on Transportation Systems, September 2-4, 2009
- Organizer and General Chair of the 2008 International Trade and Freight Transportation Conference, September 1-3, 2008, Ayia Napa, Cyprus
- Technical Program Chair of the 2007 IEEE Intelligent Vehicles Symposium, June 13-15, 2007, Istanbul, Turkey
- Organizer and Program Chair of the International Conference on Intelligent Systems And Computing: Theory And Applications (ISYC), July 6-7, 2006, Ayia Napa, Cyprus
- Technical Program Chair of the 2nd Annual National Urban Freight Conference, Dec. 5-7, 2007
- Associate Editor for the 2008 IFAC Congress, July 2008, Korea
- Chair of the IEEE Fellow committee of the IEEE Intelligent Transportation Society 2006-2008
- Associate Editor at Large of the IEEE Transactions on Automatic Control, 1999 to 2010
- IEEE Control System Society External Member IEEE-USA Transportation Policy 1995-2005
- Organizer of the Workshop on Modeling and Control of Complex Systems, June 30-July 2, 2005, Ayia Napa, Cyprus
- Invited participant to FHWA Advanced Research Think Tank Meeting, Berkeley, CA October 26-27, 2006
- Steering Committee Chair IEEE 13th Mediterranean Conference, June 2005, Limassol, Cyprus
- Technical Program Chairman IEEE 12th Mediterranean Conference, June 2004, Kusadaci, Turkey
- Session Chair at IEEE Conference on Decisions and Control and European Control Conference, Dec. 2005, Seville Spain
- Session Chair at IEEE Conference on Intelligent Transportation Systems, Sept. 2005, Vienna Austria
- Control System Society Member on IEEE ITS Council Committee, 1997 to 2005
- Control System Society Chair Member of Technical Activities Board, 2000 to 2005
- Guest Editor on Special Issue on Adaptive Cruise Control, IEEE Transactions on Intelligent Transportation Systems, Sept. 2003, Vol. 4, No. 3
- External Committee Member on IEEE-USA Transportation and Aerospace Technology Policy, 2000-2005
- Vice-Chairman of the IFAC Technical Committee on Transportation Systems, 2000 to 2005

- Associate Editor for the IEEE Transactions on ITS 1999- 2004
- Associate Editor for Automatica, December 1993 - 1995.
- Associate Editor for the IEEE Transactions on Automatic Control, 1987 - 1990.
- Member of the Editorial Board for the International Journal of Control. 1990-1995
- Member of the Technical Review Panel for the IVHS-IDEA program of the Transportation Research Board, 1992- 2000.
- Member of the Steering Committee on Advanced Vehicle Control Systems of IVHS America, 1992- 2000
- Member of the Advisory Group on Highway Electrification and Automation Technologies Project for the Southern California Association of Governments, 1992
- Session Chairman: The Third Yale Workshop on Applications of Adaptive Systems Theory, June 1983; 1984, 1989, 1992, 1993, 1996, 1997 American Control Conference; 1986, 1987, 1988, 1989, 1993, 1996, 1997, IEEE Conference on Decision and Control.
- Co-Organizer of the Montana Summer Institute on Current Issues in Adaptive Control, August 1984, 1985.
- Session Organizer: 1986, 1990, 1992 IEEE Conference on Decision and Control.
- Program Committee Member: 1987, 1992, 1997 IEEE Conference on Decision and Control.
- Program Committee Member: IFAC 7th Symposium on Transportation Systems: Theory and Application of Advanced Technology, China 1994.
- International Program Committee Member: IFAC Workshop on Robustness Issues in Adaptive Control, New South Wales, Australia, August 1988.
- Program Committee Member: International Conference on Vehicle Navigation and Information Systems, Ottawa, Canada, October 1993.
- General Chairman and Organizer of the Third IEEE Mediterranean Symposium on New Directions in Control and Automation, July 11-13, 1995, Limassol, Cyprus
- Member of the IEEE Control System Society, Fellow Nominating Committee, 2000
- Finance Chairman and Organizer of the 5th IEEE Mediterranean Symposium on Control and Systems, July 21-23, 1997, Paphos, Cyprus
- International Program Committee Member: International Conference on Advances in Vehicle Control and Safety, AVCS'98, Amiens-France, July 1-3, 1998
- Program Chairman of the 3rd IEEE Conference on Intelligent Transportation Systems, 2000
- Member of the Council of Educational Evaluation-Accreditation (CEEAA/SEKAP), Ministry of Education, Republic of Cyprus
- Award committee chair of IEEE ITS Society

University Services/Committees/Activities

Current/Continuing

- Director of the Masters Degree Program in Financial Engineering 2008-present
- Director of the Center for Advanced Transportation Technologies 1992-present
- Member of executive committee of METRANS 1999-present
- Associate Director for Research for METRANS 2006-present and of the Pacific South West University Transportation Regional Center
- Curriculum Committee Member
- A.V. 'Bal' Balakrishnan Award Committee Chair 2019-present
- Engineering Faculty Council member 2021-present
- Merit Review Committee Member Spring 2021, 2023

- Executive Committee member, Depart. Of Electrical Engineering, Spring 202
- 2024 USC Faculty Lifetime Achievement Award Committee

2016

- Member of a 3-person External Reviewer committee to evaluate the Department of Electrical and Computer Engineering of the University of California at Riverside

2015

- Chair of Department Space Committee
- Controls Group leader

2013

- Member of Engineering Faculty Council (EFC)
- Member of Merit Review Committee for Research

2012

- Member of the advisory committee of the Ming Hsieh Institute (MHI) 2011-present
- Chair of the Evaluation Committee of evaluating the Chair of EE systems, 2012
- Member of committee for Chair election EE systems, 2012
- Member of Merit Review Committee for Teaching and Service
- Member of Engineering Faculty Council (EFC)

2010-2011

- Member of the Merit Review Committee for Teaching and Service 2010
- Member of Engineering Faculty Council (EFC) Sept. 2010-present
- Representative of EFC to the Division of Engineering Education (DEE) School of Engineering Committee, Oct. 2010-2011
- Meeting with incoming MS students on Preview event on Financial Engineering Incoming Students, November 4, 2011, Town and Gown

2006-2008

- Chair of Merit Review Department Sub-Committee 2004-2006
- Controls group leader 2004-2008
- Member of the Engineering Faculty Council 2004-2008

2004-2005

- Chair of the Faculty Merit Review Committee of the Engineering Faculty Council 2005
- Chair of the Department Research Merit Committee for 2004 evaluation
- Engineering Faculty Subcommittee on Dean's Evaluation, 2004/2005
- Associate Chairman of Engineering Faculty Council 2004-2005
- Member of University Faculty Senate 2004-2005
- Member of University Research Committee 2004-2005
- Member of Executive Committee for Appointment, Promotion, and Tenure, School of Engineering, 2003-2005
- Chair of Research Merit Committee 2005

2001-2003

- EE-Systems Department Strategic Guidance Committee Member 2001-23
- Chair of Research Merit Committee, 2001
- Chair of Research Merit Committee, 2002
- Member of Search Committee for EE-Systems Department Chair, 2002-03
- Member of the EE-Systems Department Curriculum Committee 2002-23
- METRANS Executive Committee Member 2000-present
- Director Center for Advanced Transportation Technologies 1992-present
- Member of Executive Committee for Appointment, Promotion, and Tenure, School of Engineering, 2003

- Member of EE-Systems Nomination for Committee 2003

AWARDS AND HONORS

2026

- **President of the IEEE ITS Society**

2025

- **President Elect of the IEEE ITS Society**
- **International Federation of Automatic Control, TC Award on Adaptive and Learning Systems**
- **Plenary Speaker**
 1. 5th Conference on Intelligent Traffic Systems and Smart City, August 22-24 2025 Chongqing, China, Title: Control of Vehicles and Traffic for Safety and Mobility in Smart Cities
 2. IEEE International Conference on Mechatronic and Embedded Systems and Applications (MSA), November 8-10, 2025, Macau China, Title: Management, Control and Optimization for Vehicles and Traffic for Safety, Mobility and Efficiency
 3. IEEE Research and Technologies for Society and Industry, Gammarth, Tunisia August 24-26, 2025
Title: Control and Optimization of Vehicles and Traffic for Safety and Mobility
 4. Cyprus AI Conference, November 6, 2025
Title: AI in Transportation
- **Distinguished Invited Lecture**
Purdue Engineering Indianapolis , October 20, 2025
Title: Control of Vehicles and Traffic for Safety and Mobility
- **Dean's Distinguished Speaker Lecture**
Nanyang Technological University, Singapore
Title: Control and Optimization of Vehicles and Traffic for Safety and Mobility

2024

- University Professor, highest recognition given by the University of Southern California
- ASME Rufus Oldenburger Medal, For fundamental contributions to robust adaptive control, vehicle control, and intelligent transportation systems; for leadership in academia; and for innovation in connecting research to industry
- Fellow of Asia-Pacific Artificial Intelligence Association
- IEEE ITS Society Lifetime Achievement Award “For pioneering and sustained contributions span the areas of vehicle automation, highway system automation, automated container terminals, intelligent freight transportation”
- IEEE ITS Society Distinguished Lecturer
- Plenary Speaker at the IEEE/CAA Journal of Automatica Sinica Conference 2024 IEEE/CAA JAS Conference, Sept. 21, 2024

2023

- Foreign Fellow of the **European Academy of Sciences**
- Keynote speaker at International Conference on Intelligent Systems and consciousness Society, ITS2023, Patras, Greece, 2023
- Member of the Advisory Board of the Department of Automation at Tsinghua University 2023.

- Distinguished Speaker, City University of Hong Kong, Febr. 8, 2023

2022

- Inducted to the **National Academy of Engineering** for contributions to robust adaptive control and intelligent transportation systems for improved traffic flow and driver safety.
- Foreign member of the **Academia Europaea**
- Fellow of the **National Academy of Inventors**
- **Keynote Speaker** Intelligent Transportation Systems Conference, Macau, China, October 11, 2022
- **Keynote Speaker**, IEEE Intelligent Transportation Systems Society Workshop on Connected and Autonomous Vehicles, Oct. 27, 2022, Tysons, VA22102
- **Distinguished Lecture** KIOS Center at University of Cyprus, Cyprus , March 11, 2022

2021

- **Keynote Speaker** 2021 2nd International Conference on Control Theory and Applications, ICoCTA 2021, Nov. 4, 2021
- **Keynote Speaker**, Australian and New Zealand Control Conference, 25 November 2021 (ANZCC2021)

2020

- **Keynote Speaker** 2020 4th International Conference on Smart Rail, Traffic and Transportation Engineering (ICSTTE 2020) Madrid, Spain, October 19-21, 2020.
- **Plenary Speaker** EWGT 2020: The 23rd Euro Working Group on Transportation Cyprus, September 16-18, 2020.

2019

- **User-Inspired Research Award** *In recognition and Appreciation of Excellence*, USC Viterbi School of Engineering, April 24, 2019
- **H.S. Tsien International Distinguished Scientists Lecture Series Speaker**, ‘Self Driving Cars, Connectivity and Traffic Flow Control, Shanghai Jiao Tong University, 09/19/2019
- **Keynote Speaker** at the NSF Workshop on Control for Networked Transportation Systems “Traffic Flow Control in a Connected Environment”, July 8-9, 2019, Philadelphia, Pennsylvania
- **Keynote Speaker**, 2019 International Forum on Innovation and Emerging Industries Development, Shanghai, China, Sept. 17-19, 2019
- **Invited Speaker** at University of Minnesota, Department of Mechanical Engineering on Wednesday, November 20, 2019
- **Invited Speaker** KIOS Research Center, University of Cyprus, Nicosia, Cyprus, April 8, 2019
- **Invited Speaker**, Department of Mechanical Engineering, Worcester Polytechnic Institute (WPI), Worcester, MA, April 26, 2019

2018

- **Keynote Speaker** at IET Innovation Conference 2018, Oct. 3, 2018, Nicosia Cyprus
- **Plenary Speaker** at 2018 European Control Conference, Limassol Cyprus, June 15, 2018
- **IEEE Lifetime Fellow**

2017

- **Fellow of AAAS**
- **Transition to Practice Award** by IEEE Control System Society,
- **Plenary speaker** at ASME Dynamic Systems and Control Conference, October 11, 2017, Title: ‘Connectivity and Feedback Control and Optimization in Transportation’
- **Plenary Speaker** at the 1st IEEE Conference on Control Technology and Applications Connected Vehicles: Closing the loop with the highway, August 27-30, 2017, Hawaii, US

- **Keynote Speaker** at 29th Chinese Control and Decision Conference (2017 CCDC), May 29, 2017, Chongqing, China, Title: Traffic Flow Control: Closing the loop
- **Keynote Speaker** at the 6th Symposium of the European Association for Research in Transportation, (hEART 2017), Sept. 12-14, 2017, Haifa, Israel, Title: Connected Vehicles and Control of Traffic
- **Distinguished Lecture** (ECE & TASI) at Indiana University-Purdue University, Indianapolis, Oct. 27, 2018, Title: Traffic Flow Control: Closing the loop
- **Distinguished lecture** at UC Riverside, May 8, 2017, Title: Combined Variable Speed Limit and Lane Change Control for Highway Traffic

2016

- A.V. 'Bal' Balakrishnan Endowed Chair
- The 2016 IEEE Transportation Technologies Field Award presented at the IEEE ITS conference in Rio De Janeiro, Brazil, Nov. 2016
- Senior Research Award, by the Viterbi School of Engineering
- Keynote Speaker at the 1st Symposium on Management of Future Motorway and Urban Traffic Systems, Chania (Greece), June 2-3, 2016.

2015

- Invited panelist for the session 'ECE as an Interdisciplinary Science' University of Illinois, Electrical and Computer Engineering, Nov. 6, 2015
- Invited Speaker for IPAM Traffic Long Program Opening Day Temescal Gateway Park Retreat , Sept. 8, 2015
- Invited Speaker for IPAM program on Traffic Modeling, October 26-27, 2015
- Invited Speaker University of California San Diego, October 9, 2015
- Invited Speaker University of California Santa Barbara, January 30, 2015
- Invited Speaker Traffic Flow Management Culminating Workshop, IPAM, Lake Arrowhead, 12/6-12/11/2015

2013

- Keynote speaker in the 10th IEEE International Conference on Control & Automation (IEEE ICCA 2013) June 12-14, 2013, in Hangzhou, China
- Plenary Speaker for the 21st IEEE Mediterranean Conference on Control and Automation, Chania, Crete, June 2013
- Invited speaker for the TRAMAN21 Workshop 2013, Chania, Crete, Nov. 1st, 2013
- Invited Speaker, 3rd KIOS Workshop, University of Cyprus, June 25, 2013

Prior to 2013

- 2012 IEEE ITSS Outstanding Research Award
- Invited to be a Keynote speaker in the "Indo-US Conference, On Preventing Road Crash Injury Through Vehicle Safety Design" to be held in the Indian Institute of Science, Bangalore on March 6 and 7, 2012.
- Invited to be a Plenary speaker for the Chinese Control Conference, Hafei, China, July 25-27, 2012
- Rated as the 2nd most productive author and the 6th most cited author in the IEEE Transactions on ITS (see study in, L. Li et.al. 'A Bibliographic Analysis of the IEEE Transactions on Intelligent Transportation Systems Literature' IEEE Trans. on ITS vol.11, no.2, June 2010 pp 251-255)
- 2008 IEEE ITSS Outstanding ITS Application Award, June 2009
- 2009 IET Heaviside Medal for Achievement in Control, November 2009
- Fellow of the Institution of Engineering and Technology (IET), 2009
- Fellow of the Institute of Electrical and Electronic Engineers (IEEE) since 1992
- Fellow of the International Federation of Automatic Control since 2006
- Outstanding Teacher of the Year, The Latter-day Saint Student Association, March 2007

- Plenary Speaker at the 17th IEEE Mediterranean Conference on Control and Automation, June 24-26, 2009, Makedonia Palace, Thessaloniki, Greece
- Semi-Plenary Speaker at the 47th IEEE Conference on Decision and Control, Dec. 9-11, 2008 Cancun, Mexico
- Invited to be a Keynote Speaker at the 2nd IEEE Conference on Industrial Electronics & Applications, 23-25 May, 2007
- Plenary Speaker at the 11th IFAC Symposium on Control in Transportation Systems, August 28-September 1st, 2006, Delft, Netherlands
- Plenary Speaker IEEE International Conference on Vehicular Electronics and Safety, Oct. 14-16, 2005, Xi'an, China
- 1985 Presidential Young Investigator Award, The White House, February 14, 1985. A five-year award.
- Outstanding Transactions Paper Award for the best paper published in the IEEE Transactions on Automatic Control during 1982, 1983.
- Best Paper Presentation at the Session on "Numerical Methods in Analysis and Design of Control Systems" at the 1991 American Control Conference.
- Best Paper Presentation at the Session TA1 on "Robust Adaptive Control" at the 1989 American Control Conference.
- Best Paper Presentation for the paper "Identification and Control of Aircraft Dynamics Using Radial Basis Function Neural Networks" in the 1992 AIAA Guidance, Navigation and Control Conference.

TEACHING

1. Courses Taught

- Mathematics and Tools for Financial Engineering (EE518)
- Evolutionary Stochastic Processes (EE512)
- Parameter Identification and Adaptive Control (EE 599, EE 685)
- Nonlinear Control Systems (EE 587)
- Linear Control Systems (EE 482)
- Digital Control Systems (EE 543a)
- Digital Control Laboratory Experiments (EE 543bL -- Lab course)
- Feedback Systems: Input-Output Properties (EE 599)
- Probability and Statistics (EE364)
- Linear Algebra and Differential Equations (Math 225)
- Ordinary Differential Equations (ENG499)
- Linear Systems Theory (EE585)
- Mathematics of Financial Engineering, 60 hour course for the USC Viterbi School of Engineering, Professional Programs, Fall 2011

2. Courses Developed

- Mathematics of Financial Engineering, 60 hour course for the USC Viterbi School of Engineering, Professional Programs, which I developed and taught in Fall of 2011
- Parameter Identification and Adaptive Control (EE 685)
- Digital Control Systems (EE 543a)
- Digital Control Laboratory Experiments (EE 543bL)
- Re-organized "Nonlinear Control Systems (EE 587)
- Combine EE685 and EE587 into one course Nonlinear and Adaptive Control (EE587)
- Mathematics and Tools for Financial Engineering (EE518), 4 unit course, Fall 2013

3. Directed Research and Internships Supervised (CPT)

2013

- **ENGR 596:** 4 in spring 2013; 7 in summer 2013; and 4 in fall of 2013

2012

- **ENGR 395:** Daniel Seturino
- **Undergraduate students sponsored as part of AUDI project:** Samuel Levy, Derek Lim, Renuka Fernandes Andrew Arey
- **ENGR 596 CPT course.**
 - Spring 2013 Lin, Shuaiqi, Alsuwaidi , Ahmed
 - Fall 2012 Lin Shuaiqi; Meng Fang
 - Summer 2012 He, Jiayi; Lin Shuaiqi; Rajabioun Tooraj, Shi Wen
- **EE590:** Fall 2012 Patel Kushal

4. Programs Developed

- Aerospace Controls Program for Masters students, 1984
- Masters Degree Program in Financial Engineering, 2009

5. Short Courses

- ‘Autonomous Vehicles, Platooning and Traffic Flow Control for Connected Vehicles’ IEEE Intelligent Transportation Society, 2017, <https://edu.itss-ieee.org/course/index.php?categoryid=1>
- "Traffic Flow Modeling and Control and Intelligent Vehicle and Highway Systems," Crown Sterling Suites, Los Angeles, June 1-4, 1993.
- “Intelligent Vehicle and Highway Systems” Lake Buena Vista, FL., December 1994.
- " Robust Adaptive Control Designs for Linear and Nonlinear Plants" 13th IFAC World Congress, San Francisco, CA, June 30- July 5, 1996
- " Control Issues in Intelligent Vehicle Highway Systems" 13th IFAC World Congress, San Francisco, CA, June 30- July 5, 1996
- " Robust Adaptive Control " IEEE Intern. Conf. on Control Applications, Dearborn, MI, Sept. 15-18, 1996
- “Design of Robust Adaptive Systems” 36th IEEE Conf. On Decision and Control, San Diego, CA, Dec. 8, 1997
- " Control Issues in Intelligent Vehicle Highway Systems" 36th IEEE Conf. On Decision and Control, San Diego, CA, Dec. 9, 1997.
- “Mathematics of the Internet” Department of Computer Science, University of Cyprus, June 2004
- ‘Robust Adaptive Control’ NASA Glen Research Center, Cleveland Ohio, June 2005

6. Invited Talks (other than conference papers. Selected list)

2024

- **Distinguished Lecture, Purdue University,** March 22, 2024
Title: Control and Optimization for Safety and Mobility in Intelligent Transportation Systems
- **Distinguished Lecture, University of Michigan,** August 29, 2024
Title: Vehicle and System Level Control for Safety and Mobility in Intelligent Transportation Systems
- **Distinguished Lecture, University of Washington,** May 14, 2024

Title: Control of Vehicles and Traffic for Safety, Mobility and Efficiency

2022

- **KIOS Distinguished Lecture**, University of Cyprus, 3/11/2022
Title: Rejection of Vibrations with Unknown Frequencies using Robust and Adaptive Feedback

2019

- **H.S. Tsien International Distinguished Scientists**, Shanghai Jiao Tong University, China, 9/19/2019
Title: Self-Driving Cars, Connectivity and Traffic Flow Control
- **KIOS Distinguished Lecture**, University of Cyprus, 4/8/2019
Title: Adaptive Control of a Multi-Zone HVAC System
- **Distinguished Lecture**, Worcester Polytechnic Institute, 4/26/2019
Title: Self-Driving Cars, Connectivity and Traffic Flow Control
- **Distinguished Lecture** University of Minnesota, Department of Mechanical Engineering on 11/20/2019

2018

- **Distinguished Lecture** KIOS, University of Cyprus, Nicosia, Cyprus, January 19, 2018
Title: Traffic Flow Control: Closing the Loop

2017

- **Distinguished Lecture** (ECE & TASI) at Indiana University-Purdue University, Indianapolis, Oct. 27, 2018, Title: Traffic Flow Control: Closing the loop
- **Distinguished lecture** at UC Riverside, May 8, 2017, Title: Combined Variable Speed Limit and Lane Change Control for Highway Traffic

1985-86

- "Robustness Issues in Adaptive Control," at Montana Summer Institute on Current Issues in Adaptive Control, August 1984, 1985.
- "Adaptive Control: Theory and Applications," at AIAA Orange County Section, November 1985.
- "Robust Adaptive Control," General Motors Research Laboratories, Project Trilby, November 1985.
- "Robust Adaptive Tuning of Controllers," Ford Motor Company, June 1986.
- "Robust Adaptive Tuning of Controllers," General Motors Research Laboratories, Project Trilby, June 1986.
- "Theory and Design of Robust Adaptive Control Schemes," Oxford University, Department of Engineering Science, Oxford, England, July 1986.
- "Robust Adaptive Control," USC Industrial Associates Research Review, 1983, 1985.

1987

- "Adaptive Control of Time-Varying Plants," Workshop on Robust and Adaptive Control, Oaxaca, Mexico, December 2-4, 1987.

1988

- "Robust Adaptive Control: Theory, Applications, Limitations," Ford Motor Company, Electrical Engineering Division, July 28, 1988.
- "Design, Implementation and Testing of the Steer-by-Wire Control System," Project Trilby, General Motors Research Labs, July 27, 1988.
- "Adaptive Control of Time Varying Plants," Australian National University, November 1, 1988; and University of Newcastle, October 1988.
- "Time and Frequency Domain Uncertainty Bounds in Robust Adaptive Control," Australian National University, October 31, 1988; and University of Newcastle, October 1988.

1989

- "Robust Adaptive Control for Linear Plants," SIAM Conf. on Control in the 90's: Achievements, Opportunities and Challenges, May 17-19, 1989, San Francisco, CA.
- "Robust Adaptive Control," University of California at Santa Barbara, May 1989.

1990

- "Robust Adaptive Control: A Unified Approach," the 1990 Grainger Lectures on Foundations of Adaptive Control, University of Illinois, September 28 - October 1, 1990.
- "Decentralized Indirect Adaptive Control of Interconnected Systems," Rockwell International, Thousand Oaks, CA, October 11, 1990.
- "Learning and Convergence Analysis of Structured Networks," Rockwell International, Thousand Oaks, CA, October 11, 1990.

1991

- "Performance Improvement versus Robust Stability in Model Reference Adaptive Control", Berkeley Center for Systems and Control, University of California Berkeley, California, April 12, 1991.
- "Indirect Adaptive Control "University of California at Santa Barbara, May 28, 1991.

1992

- "Adaptive Identification and Control Using On-line Approximators: Neural Networks and Beyond," Distinguished Speaker Series, Dept. of Electrical Engineering, Texas A & M University, April 28, 1992.
- "Intelligent Highways," Center for Control Engineering & Computation, University of California at Santa Barbara, Nov. 3, 1992.

1993

- "Intelligent Vehicle on Automated Highways," Ford Motor Company, Sponsored by the IEEE Signal Proc. and Control Societies, May 13, 1993.
- "Classes of Model Reference Adaptive Control Schemes," Institute of Mathematics and Its Applications, University of Minnesota, April 12-16, 1993.

1998

- "Vehicle and Traffic Flow Control", Georgia Institute of Technology, January 20, 1998, Distinguished Lecture Series

2000

- "The Use of Position Error Signal Measurements from Data and Servo Sectors for Disk Drive Servo Control" February 2, 2000, University of California Santa Barbara

2001

- "The Effect of Intelligent Cruise Control Vehicles in Mixed Traffic on the Environment and Traffic Flow Characteristics", Advanced Transportation Technologies Seminar Series, Intelligent Transportation Systems Institute, Center for Transportation Studies, University of Minnesota, October 9, 2001
- "Effects of ICC Vehicles on Mixed Traffic Flow" PATH Program-Wide Research Meeting, October 18, 2001

2002

- 'Adaptive Cruise Control (ACC) for Passenger Vehicles and Trucks: Effect on Traffic Flow Characteristics and Environment' University of California at Riverside, Department of Electrical Engineering

2007

- 'From Robust Adaptive Control to Practical Adaptive Control' University of California in Santa Barbara, Nov. 2, 2007

2009

- ‘Robust Adaptive Control: Accomplishments and Realities’, 2009 Monie A. Ferst Award Symposium in honor of Professor Kokotovic, Georgia Institute of Technology Chapter of Sigma Xi, October 26, 2009
- ‘Smart Vehicles and Intelligent Transportation Systems’ IET Honor Award presentation organized by the IET local chapter and the Cyprus University of Technology, Dec. 2, 2009

RESEARCH

Research Interests

- **Learning:** Adaptive learning; Q-learning; Machine learning
- **Optimization:** Vehicle routing, co-simulation optimization control approaches
- **Control Systems and Applications:** Robust Adaptive Control, Nonlinear and Adaptive Control, Neural Networks, Decentralized Control, Failure Detection, Isolation and Control Reconfiguration
- **Control Applications:** Control of Large Scale Structures, Control of Segmented Telescopes, Control of Disk Drives, Intelligent Flight Control Systems, Congestion Control in Computer and Communication Networks
- **Transportation Systems:** Vehicle Dynamics and Control, Adaptive Cruise Control, Collision Avoidance Systems, Automated Highway Systems, Traffic Flow Modeling and Control, Automated Container Terminals, Vehicle Routing and Dispatching, Advanced Transportation Technologies

Research Grants and Contracts

- **Faculty Research and Innovation Fund, Univ. of So. California**
Period: 6/83 - 6/84, Total Funds: \$2,200.00
Title: Robust Decentralized Adaptive Controllers
- **National Science Foundation**
Period: 9/84 – 9/85 Total Funds: \$58,334.00
Title: Development of Control Algorithms for Electrical Stimulation of the Human Leg (Subcontract under Rancho Los Amigos Hospital)
- **National Science Foundation**
Period: 1/84 - 1/87 Total Funds: \$75,000.00
Title: Asymptotic Analysis and Robust Design of Adaptive Control
- **NSF Presidential Young Investigator Award**
Period: 8/85 - 8/90 Total Funds: \$125,000.00
- **NSF Presidential Young Investigator Award and General Motors Matching Funds**
Period: 12/85 - 6/91 Total Funds: \$500,000.00
Title: Development of Robust Adaptive Control Techniques for Large Scale Systems
- **Ford Motor Company**
Period: 12/85 - 12/87 Total Funds: \$17,500.00
Title: Adaptive Control Algorithms
- **AT & T**
Period: 12/85 - 12/87 Total Funds: \$50,000.00
Title: Control Techniques for Packet Switching Networks
- **Collaborative Faculty Research and Innovation Fund, Univ. of So. California**
Period: 1/85 - 1/86 Total Funds: \$43,347.00
Title: Development of Laboratory for Modeling and Control
With Co-PIs G. Shiflett and H. Flashner
- **Sun Microsystems, Inc.**

Period: 10/86 - 10/87 Total Funds: \$14,600.00

Sun Workstation

- **Rockwell International**

Period: 6/87 - 8/88 Total Funds: \$154,607.00

Title: Adaptive Roll Control Studies of the ATW Wind Tunnel Model
(With M. Safonov as co-PI)

- **AT & T Information System**

Period: 7/88 - 7/90 Total Funds: \$145,000.00

Title: Adaptive Routing and Learning Automata in Networks

- **National Science Foundation**

Period: 9/88 - 7/89 Total Funds: \$11,551.00

Title: Development of Appropriate Adaptive Control Laws for Time-Varying Plant

- **Caltrans/PATH**

Period: 9/91-5/95 Total Funds: \$2,124,898.00

Title: Automated Vehicle Control

- **Ford Motor Company**

Period: 6/92 - 6/93 Total Funds: \$75,000.00

Title: Autonomous Intelligent Cruise Control

- **National Science Foundation**

Period: 8/92 - 8/94 Total Funds: \$100,000.00

Title: Adaptive Control: Design Trade-Offs, Robustness, Performance

- **FHWA**

Period: 10/93-9/94 Total Funds: \$586,000.00

Title: Precursor Systems Analysis of Automated Highway Systems

- **Taiwan Ministry of Economic Affairs**

Period: 7/93-6/96 Total Funds: \$450,000.00

Title: Identification and Control of Nonlinear Systems using Neural Networks

- **Caltrans/PATH**

Period: 2/95-7/97 Total Funds: \$175,000.00

Title: Evaluation and Analysis of Automated Highway System Concepts and Architectures

- **USTRANSCOM/California State University Long Beach**

Period: 10/95-9/96 Total Funds: \$187,415.00

Title: Center for Commercial Deployment of Transportation Technologies

- **Caltrans/PATH**

Period: 2/95-7/96 Total Funds: \$277,363.00

Title: Development and Experimental Evaluation of Autonomous Vehicles for Roadway/Vehicle Cooperative Driving

- **PATH**

Period: 1/95-12/95 Total Funds: \$49,000.00

Title: National AHS Consortium

Co-PI with R. Hall

- **Caltrans/PATH**

Period: 3/96-2/97 Total Funds: \$167,056.00

Title: Field Test of Vehicle-Mounted, Forward-Looking Range & Relative Velocity Sensor in Closed-Loop AVCS" (With Amerigon)

- **NASA/California State University Los Angeles**

Period: 9/96-8/99 Total Funds: \$300,000.00

Title: The Use of decentralized Control in Design of a Large Segmented Space Reflector

- **Caltrans/PATH**

Period: 10/96- 9/97 Total Funds: \$86,000.00

- Title: Evaluation of Automated/Mixed Traffic
- **Caltrans/PATH**
 Period: 11/01/97-06/30/98 Total Funds: \$42,000.00
 Title: Evaluation and Analysis of Automated Highway System Concepts and Architectures
 - **Caltrans/PATH**
 Period: 01/01/98-08/31/99 Total Funds: \$78,356.00
 Title: Mixed Automated and Manual Traffic
 - **USTRANSCOM/California State University Long Beach**
 Period: 3/1/98- 12/1999 Total Funds: \$450,000.00
 Title: Center for Commercial Deployment of Transportation Technologies
 - **USTRANSCOM/California State University Long Beach**
 Period: 9/1999-8/00 Total Funds: \$427,000.00
 Title: Center for Commercial Deployment of Transportation Technologies
 - **National Science Foundation**
 Period: 5/1/99-4/30/2002 Total Funds: \$240,000.00
 Title: On-Line Learning and Control of Partially Known and Unknown Non-Linear Systems
 - **Caltrans/PATH**
 Period: 9/01/99-6/30/2001 Total Funds: \$190,217.00
 Title: Evaluation of the Effects of Intelligent Cruise Control Vehicles in Mixed Traffic
 - **Caltrans**
 Period: 1/99-1/2000 Total Funds: \$274,400
 Title: Cooperation on Transportation Research
 (Co-PI with R. Hall, J. Moore, E. Axelband and G. Giuliano)
 - **DOT/METRANS**
 Period: 7/1/99-8/31/2000 Total Funds: \$50,000
 Title: Modeling and Route Guidance of Trucks in Metropolitan Area
 - **NASA/California State University Los Angeles**
 Period: 1/2000-12/2002 Total Funds: \$162,420.00
 Title: Control of a Large Segmented Space Reflector Test Bed
 - **DOT/METRANS**
 Period: 9/1/2000-8/31/2001 Total Funds: \$47,000
 Title: Dynamic Optimization of Cargo Movement by Trucks in Metropolitan Areas with Adjacent Ports
 - **Caltrans/PATH**
 Period: 1/01/01-6/30/2003 Total Funds: \$232,845
 Title: Control of Heavy Duty Vehicles; Environmental and Fuel Economy Considerations
 - **Air Force/California State University Los Angeles**
 Period: 8/1/01- 7/31/04 Total Funds: \$800,000
 Title: Multidisciplinary Analyses and Control of High Performance Air Vehicles
 (Co-PI with M. Mirmirani, H. Boussalis and C. Wu)
 - **DOT/METRANS**
 Period: 7/1/2001-8/31/2002 Total Funds: \$50,000
 Title: Automated Trucks on Dedicated Lanes for Cargo Movement
 - **National Science Foundation/USDOT**
 Period: 1/01/02-12/31/02 Total Funds: \$99,933
 Title: Dynamic Cargo Assignment and Route Planning in the Trucking Industry
 (Co-PI with R. Hall and M. Dessouky)
 - **PATH/Caltrans**
 Period: 10/01/03- 6/30/06 Total Funds: \$416,338.00

Integrated Roadway/Adaptive Cruise Control System: Safety, Performance, Environmental and Near Term Deployment Considerations

- **NASA/ California State University Los Angeles**
Period: 03/01/03-02/28/09 Total Funds: \$3,000,000
Title: Intelligent Flight Control
(with M. Mirmirani)
- **METRANS**
Period: 8/1/2003-3/31/2005 Total Funds: \$190,000
Title: Cooperative Optimum Time Window Generation for Cargo Delivery/Pick up with Application to Container Terminals
(with A. Chassiakos)
- **METRANS**
Period: 8/15/2003-8/14/2004 Total Funds: \$90,000
Title: A Novel Approach to Routing and Dispatching Trucks Based on Partial Information in a Dynamic Environment
(with M. Dessouky)
- **DOT University Center**
Period: 10/21/98-06/30/07 Total Funds: \$4,957,200.00
Title: Metropolitan Transportation Center (METRANS)
(with G. Giuliano (PI), R. Hall, J. Moore)
- **CALTRANS University Center**
Period: 06/01/99-06/30/07 Total Funds: \$4,285,200.00
Title: Metropolitan Transportation Center (METRANS)
(with G. Giuliano (PI), R. Hall, J. Moore)
- **METRANS**
Period: 10/01/2004-12/05/2005 Total Funds: \$150,000
Title: Development of Methods for Handling Empty Containers with Applications in the Los Angeles/Long Beach Port
(with A. Chassiakos)
- **DOT/METRANS**
Period: 09/01/2005-08/31/2006 Total Funds: \$150,000
Title: Simulation Test bed and Evaluation of Truck Movement Concepts on Terminal Efficiency and Traffic Flow
(with A. Chassiakos)
- **National Science Foundation**
Period: 08/15/05-07/31/2010 Total Funds: \$240,000
Title: GOALI: Nonlinear Adaptive Control and Sensing for Precision Control with Application to Servo Control of Disk Drives
(with Alvin Despain)
- **US DOT Research and Special Projects Administration**
Period: 07/01/05-06/30/06 Total Funds: \$780,000.00
Title: Metropolitan Transportation Center (METRANS)
(with G. Giuliano (PI), J. Moore, M. Dessouky)
- **California Department of Transportation**
Period: 07/01/05-06/30/06 Total Funds: \$780,000.00 (matching funds)
Title: Metropolitan Transportation Center (METRANS)
(with G. Giuliano (PI), J. Moore, M. Dessouky)
- **US DOT Research and Special Projects Administration**
Period: 07/01/06-06/30/07 Total Funds: \$860,000.00
Title: Metropolitan Transportation Center (METRANS)

- (with G. Giuliano (PI), J. Moore, M. Dessouky)
- **California Department of Transportation**
 Period: 07/01/06-06/30/07 Total Funds: \$860,000.00 (matching funds)
 Title: Metropolitan Transportation Center (METTRANS)
 (with G. Giuliano (PI), J. Moore, M. Dessouky)
- **US DOT Research and Special Projects Administration**
 Period: 07/01/07-06/30/10 Total Funds: \$3,000,000.00
 Title: Metropolitan Transportation Center (METTRANS)
 (with G. Giuliano (PI), J. Moore, M. Dessouky)
- **California Department of Transportation**
 Period: 07/01/07-06/30/10 Total Funds: \$3,000,000.00 (matching funds)
 Title: Metropolitan Transportation Center (METTRANS)
 (with G. Giuliano (PI), J. Moore, M. Dessouky)
- **METRANS**
 Period: 02/01/2007-01/31/2009 Total Funds: \$359,507.00
 Title: Reconfiguration Strategies for Mitigating the Impacts of Port Disruptions
 (with A. Chassiakos)
- **Foundation for Research Promotion/University of Cyprus**
 Period: January 2007- December 2008, Total Funds:\$178,000
 Title: TrafficNet
 (with A. Pitsillides)
- **NASA/ California State University Los Angeles**
 Period: 03/01/07-02/28/09 Total Funds: \$442,500
 Title: Intelligent Flight Control
 (with M. Mirmirani)
- **METRANS**
 Period: 09/01/2008-02/28/2010 Total Funds: \$90,000
 Title: 'Risks and Recoveries from Extreme Disruptions in Freight Transportation System in a Megacity: Case Study for the Greater Los Angeles Area'
 (with J.P. Bardet and J. Moore)
- **Foundation for Research Promotion/University of Cyprus**
 Period: December 2008- December 2010, Total Funds: \$130,000
 Title: Emergency Message Dissemination for Safety Applications in Vehicular Adhoc Networks (VANETS) (with A. Pitsillides)
- **Department of Homeland Security/CREATE**
 Period: January 2009-August 2009, Total Funds: \$50,465.00
 Title: Terminal/Roadway modeling and security scenarios analysis
- **Department of Homeland Security/CREATE**
 Period: August 2009-December 2009, Total Funds: \$50,609.00
 Title: Terminal/Roadway modeling and security scenarios analysis year 2
- **Department of Homeland Security/CREATE**
 Period: January 2010-December 2010, Total Funds: \$50,609.00
 Title: Terminal/Roadway modeling and security scenarios analysis year 3
- **California Department of Transportation/METRANS**
 USC Account no. 53-4503-3680
 Period: 01/01/2011-12/31/2011 Total Funds: \$90,000
 Title: Dynamic Variable Speed Limit Control: Design, Analysis and Benefits
- **VW Group of America**
 USC Account no. 53-4503-3483
 Period: 01/01/2011-12/31/2013 Total Funds: \$450,000

- Title: AUDI Urban Intelligent Drive Assist
- **Northrop Grumman Aerospace Systems**
 USC Account no. 22-1503-1300
 Period: July 2012 -2013, Total Funds: \$40K
 Title: Stability Margins in Adaptive Control
 - **Korean Maritime Institute**
 USC Account no. 22-1503-1500
 Period: 2012, Total Funds: \$30K
 Title: Survey of Logistics Technologies in the USA
 Investigator: P. Ioannou 100%
 - **Northrop Grumman Aerospace Systems**
 USC Account no. 22-1503-1300
 Period: 3/28/2011- 12/31/2012, Total Funds: \$45K
 Title: Stability Margins in Adaptive Control
 Investigator: P. Ioannou 100%
 - **Department of Homeland Security/CREATE**
 Period: January 2012-December 2012, Total Funds: \$52780.85
 Title: Terminal/Roadway modeling and security scenarios analysis
 Investigator: P. Ioannou 100%
 - **USDOT Federal Transit Administration**
 Period: September 1, 2011 - June 30, 2013, Total Funds: \$899864
 USC Proposal Number 15718.0007
 Title: *"Technical and Safety Evaluation of the Southern California Regional Rail Authority Positive Train Control Deployment Project"*
 Investigators: Moore, J. E. (Principal-20%), Dessouky, M. M. (Co-Principal-20%), Ioannou, P. A. (Co-Principal-20%), Mitra, U. (Co-Principal-20%), Meshkati, N. (Co-Principal-20%)
 - **US Department of Transportation (US DOT) Research and Special Projects Administration (RSPA)**
 Award No. DTRS98-G-0019; USC Account No. 53-5701-6460,
 Period: July 1, 2007 -June 30, 2012., Total Funds: \$3583000
 Title: METRANS Transportation Center (National Center for Metropolitan Transportation Research)
 Investigators: Giuliano, G. (PI), Moore, J. E. (Co-PI), Ioannou, P. A. (Co-PI), Dessouky, M. (Co-PI),
 - **MOU Between the California Department of Transportation and the University of Southern California for Cooperation of Transportation Research**
 PCR# 13322.7802; USC Account No. 53-5701-4001,
 Period: July 1, 2007 -June 30, 2012, Total Funds: \$3583000
 Title: METRANS Transportation Center (National Center for Metropolitan Transportation Research)
 Investigators: Giuliano, G. (PI), Moore, J. E. (Co-PI), Ioannou, P. A. (Co-PI), Dessouky, M. M. (Co-PI)
 - **Volvo Research and Education Foundation**
 Period: September 2013- Sept. 2017; Total Funds \$3,499,999
 Title: METROFREIGHT The Local/Global Challenge of Urban Freight
 Investigators: Giuliano G. (PI), M. Dessouky (co-PI), P. Ioannou (co-PI)
 - **Northrop Grumman Aerospace Systems**
 USC Account no. 22-1503-1300
 Period: 2013-2014, Total Funds: \$45K
 Title: Stability Margins in Adaptive Control

- Investigator: P. Ioannou 100%
- **US Department of Transportation (US DOT) Research and Special Projects Administration (RSPA)**
 Period: 2013 - 2017, Total Funds: \$6,127,768
 Title: METRANS Transportation Center (National Center for Metropolitan Transportation Research)
 Investigators: Giuliano, G. (PI), M. Boarnet (Co-PI), Ioannou, P. A. (Co-PI), Dessouky, M. (Co-PI).
- **National Science Foundation**
 Period: 2015 - 2018, Total Funds: \$800,000
 Title: CPS: Synergy: Cyber Physical Regional Freight Transportation System
 Investigators: P. Ioannou (PI), Dessouky, M. (Co-PI), G. Giuliano (Co-PI)
- **DOT/METRANS**
 Period: 2014 - 2016, Total Funds: \$100,000
 Title: Optimum Routing of Freight in Urban Environments under Normal Operations and Disruptions using a Co-simulation Optimization Control Approach
 Investigators: P. Ioannou (PI)
- **California Energy Commission**
 Period: 2015, Total Funds: \$50,000
 Title: *Alternative and Renewable Fuel and Vehicle Technology Program*
 Investigators: P. Ioannou (PI)
- **DOT/UC Davis**
 Period: 2014 - 2017, Total Funds: \$90,000
 Title: *Reducing Truck Emissions and Improving Truck Fuel Economy via ITS Technologies*
 Investigators: P. Ioannou (PI)
- **DOT/UC Davis**
 Period: 01/01/2017 – 12/31/ 2017, Total Funds: \$100,000
 Title: *Intelligent Parking Assist for Trucks with Prediction*
 Investigators: P. Ioannou (PI)
- **University of California Riverside (Original AQMD)**
 Period: 8/3/17- 12/31/2021, Total Funds: \$236,500
 Title: Development and Application of Environmentally Friendly Intelligent Transportation System (ECO-ITS) Freight Strategies
 Contract no: 5345030935
 Investigator: P. Ioannou (PI)
- **US-Department of Transportation**
 Period: 10/01/17-9/30/22, Total Funds: \$5,175,800
 Title: METRANS University Transportation Center
 Contract no.5357017109.
 Investigators: Giuliano, G. (PI), M. Boarnet (Co-PI), Ioannou, P. A. (Co-PI), Dessouky, M. (Co-PI).
- **CA-Department of Transportation**
 Award Title: *Pacific Southwest Region University Transportation Center (PSR UTC) Consortium*
 Sponsor Award Number: 65A0674
 Period: 09/18/2018 to 01/31/2023
 Amount: \$6,594,054.00
 Investigators: Giuliano, G. (PI), M. Boarnet (Co-PI), Ioannou, P. A. (Co-PI), Dessouky, M. (Co-PI).
- **South Coast Air Quality Management District (AQMD)**

Period:11/3/17-11/2/19, Total funds: \$200,000
Contract no. 5345037278
Title: Project 2: Freight Load Balancing and Efficiencies In Alternative Fuel Freight Modes
Investigators: Ioannou, P. A. (PI), Giuliano, G. (Co-PI), Dessouky, M. (Co-PI).

- **Los Angeles Worlds Airports**
Period: Nov. 6, 2017- Nov. 5, 2019; Total funds: \$150k
Title: *Traffic Simulation Model for Los Angeles International Airport Area*
BTRC no. 233904 Investigator: P. Ioannou
- **CA-Department of Transportation**
Sponsor Award Number: 65A0674
Period 2019-02-01 to 2020-01-31 Amount: \$100K
Title: *Connected Autonomous Vehicles: Safety during Merging and Lane Change and Impact on Traffic Flow*". Investigator: P. Ioannou
- **US-Department of Transportation**
Sponsor Award Number: 69A3551747109
Period: 2016-11-30 to 2022-09-30
Amount: \$2,570,600.00
Project Period: to 2022-09-30
Amount: \$2,570,600.00
Title: METRANS University Transportation Center
Principal Investigator: Genevieve Giuliano
Co-Principal Investigator(s): Marlon Boarnet, Maged Dessouky, Petros Ioannou
- **National Science Foundation**
Sponsor Award ID: CNS-1932615
Budget Period of Performance: 2019-10-01 to 2022-09-30
USC Account No: 5345032615
Title: *CPS: Medium Collaborative Research: Smart Freight Transport Using Behavioral Incentives*
Amount: \$1,109,871
Principal Investigator: Petros Ioannou Co-Principal Investigator(s): Maged Dessouky, Genevieve Giuliano
- **US-Department of Transportation**
Award Number: 69A3551747109
Title: METRANS University Transportation Center
Period: 2019-10-01 to 2023-09-30
Amount: \$15,584,200.00
Principal Investigator: Genevieve Giuliano
Co-Principal Investigator(s): Marlon Boarnet, Maged Dessouky, Petros Ioannou
- **CA-Department of Transportation**
Award Number: 65A0674
Period: 2018-09-18 to 2023-01-31
Amount: \$10,583,014.10
Award Title: Pacific Southwest Region University Transportation Center (PSR UTC) Consortium
Principal Investigator: Genevieve Giuliano
Co-Principal Investigator(s): Marlon Boarnet, Maged Dessouky, Petros Ioannou
- **CA-Department of Transportation**
Award Number: 65A0674, Account: 53-4503-7524
Period: 1/1/2020 to 6/30/2021. Amount: \$100K

Title: *'Dynamic Routing of Trucks and Truck Platoons Using Real Time Simulators'*
Investigator: P. Ioannou

- **CA-Department of Transportation/NCST**
Award Number: 65A0686, Account: 53-4503-2775
Period: 1/1/2020 to 7/31/2021. Amount: \$100K
Title: *'Robust Design, Analysis and Evaluation of Variable Speed Limit'*,
Investigator: P. Ioannou
- **CA-Department of Transportation**
Award Number: 65A0674, Account: 53-4503-7524
Period: 1/1/2020 to 6/30/2021. Amount: \$100K
Title: *'Dynamic Routing of Trucks and Truck Platoons Using Real Time Simulators'*
Investigator: P. Ioannou
- **Department of Transportation/NCST**
Award Number: MT-20-05, Account: 53-4503-0506
Period: 8/16/2020-8/15/2021. Amount: \$100K
Title: *'Balancing of Truck Parking Demand by a Centralized Incentives/Pricing System'*,
Investigator: P. Ioannou
- **CA-Department of Transportation**
Award Number: 65A0674
Period: 2021-08-01 to 2022-12-31, Amount: \$310,089
Award Title: Task Order 042: *Implementation of Action 6 of the California Sustainable Freight Action Plan (CSFAP) and California Freight Mobility Plan (CFMP) Phase 4: Tracking Economic Competitiveness*
Principal Investigator: Genevieve Giuliano
Co-Principal Investigator(s): Marlon Boarnet, Maged Dessouky, Petros Ioannou
- **CA-Department of Transportation**
Award Number: 65A0686
Period: 11/1/2021-12/31/22, Amount: \$100K
Title: *Centrally Coordinated Schedules and Routes of Airport Shuttles with LAX Terminals as Application Area*
Investigator: P. Ioannou
- **Department of Transportation/NCST**
Contract number: DOT 69A3551747114
Title: NCST-21-09 Coordinated Traffic Flow Control in a Connected Environment
period of performance: 8/16/2021 - 6/30/2023
total amount of funds: \$100,000
PI: Petros Ioannou
- **Department of Transportation/PSR**
Contract number: 69A3551747109
Period: 08/15/2022 - 08/14/2023. Amount: \$100K
Title: *Systematic and Provably Safe Control Design Methodology for Autonomous Vehicles*
Investigator: P. Ioannou
- **California Department of Transportation/NCST**
Award Number: 65A0686 Task order 081
Period: 6/1/2023-12/31/2024. Amount: \$100K
Title: *Learning Drivers' Utility Functions in a Coordinated Freight Routing System Based on Driver's Actions*
Investigator: P. Ioannou
- **Department of Transportation/NCST**
Period: 01/01/2024 - 12/31/2024. Amount: \$100K

Title: *Electric Truck Fleet Management under Limited and Uncertain Charging Infrastructure Availability*

Investigator: P. Ioannou

- **California Department of Transportation/NCST**
Award Number: 65A0686
Period: 1/1/2024- 12/31/2024 Amount: \$100K
Title: *Battery Technologies for Current and Future Heavy-Duty and Transit Electric Vehicles*
Investigator: P. Ioannou
- **Department of Transportation/University of California Davis,**
Award number: NCST BIL/IIJA - 69A3551747114
Period: 2022-2026, Amount: \$1.8 million
Title: *National Center for Sustainable Transportation*
Investigators: Boarnet PI, Co-PIs Dessouky, Ioannou, Giuliano
- **Department of Transportation**
Grant PSR BIL/IIJA - 69A3552348309
Title: *Pacific Southwest Region University Transportation Center (PSR UTC) Consortium,*
Period: 2022 - 2026. Amount: \$15 million
Investigators: Boarnet PI, Co-PIs Dessouky, Ioannou, Giuliano
- **California of Transportation/PSR**
Period: 2025
Amount: \$100K
Title: *Intersection Control of Connected Vehicles for Mobility and Safety*
Investigator: P. Ioannou
- **California Department of Transportation/NCST**
Period: 2025 Amount: \$100K
Title: *Centrally Coordinated Parking and Route Planning for Trucks based on Load Balancing of Parking Spaces and Traffic*
Investigator: P. Ioannou
- **WAVEYE Inc.**
Period: 1/17/26-4/17/2025, Amount : \$33K
Title: *Multi-agent robotic system in dynamic environments*
Investigator: P. Ioannou
- **ULI/NASA led by the Embry-Riddle Aeronautical University**
Period: 8/2025-8/2028, Amount: USC share \$1.1 million
Title: *Safety-Aware Learning and Assured Autonomy for Aviation Applications*
Investigator: P. Ioannou
- **President's Sustainability Initiative Award, USC internal project,**
Period: 2024-2025, Amount: Total award \$249,992, My share \$58,833
Investigator: P. Ioannou

Ph.D Students

Graduated a total of 47 students as of December 2025,
13 are in Academia and 5 are Fellows of IEEE. See list below:

1. **Manuel de Ponte**
"Decentralized Adaptive Control for Large Scale Systems"
Graduated July 1988
2. **Kostas Tsakalis**
"Adaptive Control of Time Varying Plants"
Graduated August 1988
Professor at Arizona State University
3. **John Reed**
"Robust Adaptive Control of Robotic Manipulators"

- Graduated August 1988
4. **Jing Sun**
 "Robust Adaptive Tuning of Controllers"
 Graduated August 1989
 Professor University of Michigan Ann Arbor
Fellow of IEEE 2003
 5. **Gang Tao**
 "Model Reference Adaptive Control: Stability, Robustness and Performance Improvement"
 Graduated August 1989
 Professor at University of Virginia in Charlottesville
Fellow of IEEE 2007
 6. **Anastasios Economides**
 "A Unified Game-Theoretic Methodology for the Joint Load Sharing, Routing and Congestion Control Problem"
 Graduated December 1990
 Professor at University of Macedonia
 7. **Aniruddha Datta**
 "Quantitative Analysis and Robust Design of Adaptive Control Systems: Robustness Performance Tradeoffs"
 Graduated August 1991,
 Professor at Texas A&M University
Fellow of IEEE, 2008
 8. **Marios Polycarpou**
 "Artificial Neural Networks for Control Applications"
 Graduated September 1992
 Professor at University of Cyprus
Fellow of IEEE 2006
 9. **Farid Ahmed-Zaid**
 "Control and Adaptation of Time Varying Nonlinear Systems"
 Graduated summer 1993
 With Ford Motor Company
 10. **Michael Demetriou**
 "Robust Adaptive Control for Infinite Dimensional Systems"
 Graduated summer 1993
 Professor at Worcester Polytechnic Institute , *Fellow of IEEE 2014*
 11. **C.C. Chien**
 "Intelligent Vehicles and Highway Systems"
 Graduated summer 1994
 Professor in Taiwan
 12. **Youping Zhang**
 " Robustness of Nonlinear Adaptive Control "
 Graduated summer 1996
 13. **Humair Raza**
 "Infrastructure Managed Vehicle Following: A Control Perspective"
 Graduated summer 1997
www.tellabs.com, humair.raza@tellabs.com, phone 408-421-5698
 Santa Clara, CA
 14. **Alex Kanaris**
 "Automated Highway Systems: Concepts, Spacing Requirements and Performance"
 Graduated December 2000
 Research Engineer , Apple Computers, CA, USA

15. **Arnab Bose**
“Design, Analysis and Evaluation of Semi-Automated Vehicles in Mixed Traffic”
Graduated August, 2000
16. **Kun Li**
“Modeling and Overlapping Decentralized Control of a Large Segmented Telescope Test Bed”
Graduated August, 2001
17. **Chin I Liu**
“Design, Modeling, Simulation and Optimization of Automated Container Terminals”
Graduated December 2001, Senior Design Engineer, Aplus Flash Technology, San Jose, CA 95131 USA
18. **Haojian Xu**
“Robust Adaptive Control of Nonlinear Systems with Guaranteed Error Bounds”
Graduated December 2002
19. **Hossein Jula**
“Modeling and Dynamic Optimization of Container Movement in Metropolitan Networks” Graduated August 2002
20. **Baris Fidan**
“Nonlinear and Adaptive Control of Time Varying and Multivariable Systems”
Graduated December 2002, University of Waterloo, Canada
21. **Marios Lestas**
‘Intelligent Congestion Control for Computer Networks’
Graduated October 2005, Frederick University of Cyprus
22. **Jianlong Zhang**
‘Practical Adaptive Control: Theory and Applications’
Graduated February 2006, Advertising.com, San Jose, California
23. **Manorama Gollakota**
‘GPS Receiver Improvements for Low Signal-to-Noise Ratio Applications’
Graduated December 2006, Aerospace Corporation, El Segundo, CA
24. **Nazli Kahveci** ‘Robust Adaptive Control for Unmanned Aerial Vehicles’
December 2007, Assistant Professor at Near East Technical University,
passed away June 5, 2015
25. **Matthew Kuipers** ‘Multiple Model Adaptive Control with Mixing’
April 1st, 2009 . Then Patent Lawyer.
26. **Jason Levin** ‘Practical Adaptive Control for Systems with Flexible Modes, Disturbances, and Time Delays’, Defense date: May 18, 2009, With General Atomics.
27. **Hwan Chang** ‘Reconfiguration strategies for mitigating the impact of port disruptions’
Defense date: May 19, 2009
28. **Ying Huo**, ‘Adaptive Reconfigurable Control with Mission Modification’
Defense September 15, 2009
29. **Yun Wang**, ‘Dynamic Variable Speed Limit Control: Design, Analysis and Benefits’
Defense May 2011, With Experian
30. **Ross Gadiant**, ‘Adaptive Control With Aerospace Applications’
Defense March 2013, With Boeing Aerospace
31. **Afshin Abadi**, ‘Optimum Multimodal Routing Under Normal Condition and Disruptions’
Defense September 2014, Currently with Ferum Networks
32. **Vadim Butakov**, ‘Personalized Driver Assistance Systems Based On Driver/Vehicle Models’
Defense October 2014, Industry
33. **Saeid Jafari**, ‘High-Accuracy Adaptive Vibrational Control For Uncertain Systems’ August 18, 2015. Industry
34. **Tooraj Rajabioun**, ‘Intelligent Transportation Technologies in Urban Environments’, March 2016, With Apple

35. **Yanbo Zhao**, ‘Intelligent Urban Freight Transportation’, June 2017, With Uber 5/1/2015
36. **Yihang Zhang**, ‘Integrated Control of Traffic Flow’ Oct. 2018, With Aptiv, California
37. **George Lympieropoulos**, ‘Distribute Adaptive Control with Application to Heating, Ventilation and Air Conditioning Systems’ August 2021, Industry
38. **Filipe Vital**, ‘Integration of Truck Scheduling and Routing with Parking Availability’ Dec. 2021, Industry
39. **Faisal Alasiri**, ‘Control of Mainstream Traffic Flow: Variable Speed Limit and Lane Change’, Dec. 2021, Academia
40. **Aristotelis Papadopoulos**, ‘Personalized Pareto-Improving Pricing-and-Routing Schemes with Preference Learning for Optimum Freight Routing’, Dec. 2021, Industry (Facebook)
41. **Pengfei Chen** ‘Co-simulation Optimization Approach and its Application in Freight and Shuttle Movement’ December 2023
42. **Tianchen Yuan**, ‘Coordinated Freeway and Arterial Traffic Flow Control’, May 2024
43. Muhammad Waqas, ‘Systematic and Provably Correct Control Design Methodology for Autonomous Vehicles’, May 2024
44. **Milad Pooladsanj**, ‘Microscopic Traffic Control: Throughput Maximizing Scheduling in UAM Systems’, Oct. 2024
45. **Jacob Stuart**, ‘Robust and Efficient Adaptive Control for Rejecting Sinusoidal Disturbances with Unknown Time-Varying Characteristics’, May 7, 2025
46. **Zheyu (David) Wang**, ‘Optimizing Urban Freight Routing: From Stochastic Routing Problems to Incentivized Coordination with Utility Learning’, August 2025
47. **Fernando Valladares Monteiro**, ‘Connected Autonomous Vehicles Coordination for Safe Lane Changes in Mixed-Traffic Highways’, May 2025

PUBLICATIONS

A.

1. P. A. Ioannou and P. V. Kokotovic, Adaptive Systems with Reduced Models, Springer-Verlag, 1983.
2. K. S. Tsakalis and P. A. Ioannou, Linear Time Varying Plants: Control and Adaptation, Prentice-Hall, 1993.
3. P. A. Ioannou and J. Sun, Robust Adaptive Control, Dover publications 2012 (originally Prentice Hall, 1996),
4. P.A. Ioannou and B. Fidan, Adaptive Control Tutorial, SIAM – Society for Industrial & Applied Mathematics, TJ217.I628, ISBN 0-89871-615-2, 2006.
5. Petros Ioannou, Mathematics and Tools for Financial Engineering, SIAM, 2021

B. Edited Books

6. Khallil, H., J. Chow and P. Ioannou, Proceedings of Workshop on Advances in Control and its Applications, Springer Verlag, Lecture Notes in Control and Information Sciences, Vol.208, 1996
7. P.A. Ioannou, Automated Highway Systems, Plenum, 1997
8. P.A. Ioannou Intelligent Freight Transportation, CRC Press, 2008
9. P. A. Ioannou and A. Pitsillides Modelling and Control of Complex Systems, CRC Press, 2007
10. Petros Ioannou (Ed.) Adaptive Control Theory and Applications, IntechOpen Print ISBN 978-0-85466-713-0, Online ISBN 978-0-85466-712-3, eBook (PDF) ISBN 978-0-85466-714-7, **2024**
11. Petros Ioannou and Andreas A. Malikopoulos (Editors), ‘*Transportation Mobility in Smart Cities*’, Springer Nature Switzerland AG, Springer Tracts on

C. Chapters in Books

1. P. A. Ioannou, "Design of Decentralized Adaptive Systems," in Advances in Large Scale Systems--Theory and Applications, Vol. 1, edited by J. B. Cruz, 1984, pp. 117-141.
2. P. A. Ioannou and K. S. Tsakalis, "Robust Discrete-Time Adaptive Control," in Adaptive and Learning Systems: Theory and Applications, Plenum Press, edited by K. S. Narendra, 1986, pp. 73-87.
3. P. A. Ioannou and A. Datta, "Robust Adaptive Control: Design, Analysis and Robustness Bounds," in Grainger Lectures, edited by P. V. Kokotovic, Springer-Verlag, 1991.
4. A. Datta and P. A. Ioannou, "Decentralized Adaptive Control," in High Performance Systems Techniques and Applications, Academic Press, Vol. 53, edited by C. T. Leondes, 1992.
5. G. Tao and P. A. Ioannou, "Stability and Robustness of Multivariable Model Reference Adaptive Control Schemes" in High Performance Systems Techniques and Applications, Academic Press, Vol. 53, edited by C. T. Leondes, 1992.
6. Polycarpou M. and P. Ioannou, "Stable Nonlinear System Identification Using Neural Network Models", in Neural Networks in Robotics, pp. 147-164, Eds. G. Bekey and K. Goldberg, Kluwer Academic Publishers, 1993
7. P. Ioannou, "Model Reference Adaptive Control" in The Handbook of Brain Theory and Neural Networks Ed. M. Arbib, The MIT Press, 1995
8. P. Ioannou, "Model Reference Adaptive Control" in The Control Handbook, Ed. W. Levine, CRC Press and IEEE Press, 1996
9. P. Ioannou and A. Bose, "Automated Vehicle Control" Handbook of Transportation Science, Ed. R. Hall, pp.187-233, 1999, Kluwer Academic Publishers
10. P. Ioannou and E. Kosmatopoulos, "Adaptive Control", Encyclopedia of Electrical and Electronics Engineering, Ed. J.G. Webster, John Wiley and Sons, 1999

2002

11. Haojian Xu, Pirre Leung, Maj Mirmirani, Helen Boussalis and Petros Ioannou, 'Adaptive Sliding Mode Control of a Hypersonic Flight Vehicle' Ed. L. D'Amario, L. Sackett, D. Scheeres and B. Williams, Vo. 108, Part II Advances in the Astronautical Sciences, American Astronautical Society, pp. 1947-1961
12. Petros Ioannou and Arnab Bose 'Automated Vehicle Control' Handbook of Transportation Science, Ed. R. Hall, pp.193-241, 2002 2nd Edition , Kluwer Academic Publishers

2005

13. P. Ioannou and A. Bose 'Automated Vehicle Control' in The Future of Automated Freight Transport: Concepts, Design and Implementation Eds R. Konings, H. Priemus and P. Nijkamp, Edward Elgar Publishing, Inc. 2005, pp.113-129

2007

14. P. Ioannou, Y. Wang and H. Chang 'Modeling, Simulation and Control of Transportation Systems' Chapter 13 pp.407-437 in the book Modeling and Control of Complex Systems, CRC Press, 2007 ed. P. Ioannou and A. Pitsillides, 2007
15. M. Lestas, A. Pitsillides and P. Ioannou, 'Congestion Control in Computer Networks' Chapter 7 pp.203-246 in the book Modeling and Control of Complex Systems, CRC Press, 2007 ed. P. Ioannou and A. Pitsillides, 2007

2008

16. P. Ioannou, 'Introduction to Intelligent Freight Transportation' Chapter 1, pp.1-6 in the book Intelligent Freight Transportation, CRC Press, 2008 ed. P. Ioannou
17. Petros Ioannou and Hossein Jula, 'Automated Container Terminal Concepts' Chapter 2, pp 7-33, in the book Intelligent Freight Transportation, CRC Press, 2008 ed. P. Ioannou

18. Hossein Jula, Hwan Chang, Anastasios Chassiakos, and Petros Ioannou, ‘ Empty Container Reuse’ Chapter 13 pp. 211-227, in the book Intelligent Freight Transportation, CRC Press, 2008 ed. P. Ioannou

2010

19. Ioannou P.A. ‘Model Reference Adaptive Control’ The Control Handbook: Control System Advanced Methods, 2nd Edition Edited by W.S. Levine, CRC Press, 2011, pp.34-1 to34-19
20. Ioannou P. A. & Baldi S. ‘Robust Adaptive Control’ The Control Handbook: Control System Advanced Methods, 2nd Edition Edited by W.S. Levine, CRC Press, 2011, pp.35-1 to 35-21

2015

21. P. Ioannou, ‘Adaptive Control for Linear Time-Invariant Systems’, Chapter 3 in Encyclopedia of Systems and Control, Eds J. Baillieul and T. Samad, 2015

2021

22. Jafari S., Ioannou P. Robust Adaptive Disturbance Attenuation. In: Jiang ZP., Prieur C., Astolfi A. (eds) Trends in Nonlinear and Adaptive Control. Lecture Notes in Control and Information Sciences, vol 488, pp. 135-188, 2021 Springer
https://doi.org/10.1007/978-3-030-74628-5_6

2024

23. Pengfei Chen and Petros Ioannou, ‘ [Centrally Coordinated Routing of Freight in Smart Cities](#)’ chapter in book ‘*Transportation Mobility in Smart Cities*’, Springer 2024 edited by Petros Ioannou and Andreas A. Malikopoulos.
24. Petros Ioannou , ‘[Introductory Chapter: Robust and Adaptive Control](#)’ in book Ioannou (Ed.) Adaptive Control Theory and Applications, IntechOpen, 2024

2025

25. Petros Ioannou, Robust Adaptive Control, Encyclopedia of Systems and Control Engineering, Elsevier

D. Refereed Journal Papers

1980

1. M. H. Patel and P. A. Ioannou, "Comparative Performance Study of Paddle-and Wedge-Type Wave Generators," Journal of Hydronautics, Vol. 14, No. 1, January 1980, pp. 5-9.

1981

2. P. A. Ioannou, "Robustness of Absolute Stability," International Journal of Control, 1981, Vol. 34, No. 5, pp. 1027-1033.

1982

3. P. A. Ioannou and P. V. Kokotovic, "An Asymptotic Error Analysis of Identifiers and Adaptive Observers in the Presence of Parasitics," IEEE Trans. on Automatic Control, Vol. 27, No. 4, August 1982, pp. 921-927.

1983

4. P. A. Ioannou and C. R. Johnson, Jr., "Reduced-Order Performance of Parallel and Series-Parallel Identifiers with Weakly Observable Parasitics," Automatica, Vol. 19, January 1983, pp. 75-80.

1984

5. P. A. Ioannou and P. V. Kokotovic, "Robust Redesign of Adaptive Control," IEEE Trans. on Automatic Control, Vol. 29, No. 3, March 1984, pp. 202-212.
6. P. A. Ioannou and P. V. Kokotovic, "Instability Analysis and Improvement of Robustness of Adaptive Systems," Automatica, Vol. 20, No. 5, September 1984, pp. 583-594.

1985

7. P. A. Ioannou and P. V. Kokotovic, "Decentralized Adaptive Control of Interconnected Systems with Reduced-Order Models," Automatica, Vol. 21, No. 4, July 1985, pp. 401-412.

1986

8. P. A. Ioannou, "Decentralized Adaptive Control of Interconnected Systems," IEEE Trans. on Automatic Control, Vol. AC-31, No. 4, April 1986, pp. 291-299.
9. P. A. Ioannou, "Robust Adaptive Controller with Zero Residual Tracking Errors," IEEE Trans. on Automatic Control, Vol. AC-31, No. 8, August 1986, pp. 773-776.
10. P. A. Ioannou and K. S. Tsakalis, "A Robust Direct Adaptive Controller," IEEE Trans. on Automatic Control, Vol. 31, No. 11, November 1986.
11. P. A. Ioannou, "Adaptive Stabilization of Not Necessarily Minimum Phase Plants," Systems and Control Letters, Vol. 7, No. 4, pp. 281-287, July 1986.

1987

12. P. A. Ioannou and G. Tao, "Frequency Domain Conditions for Strictly Positive Real Functions," IEEE Trans. on Automatic Control, Vol. AC-32, No. 1, pp. 53-54, January 1987.
13. K. S. Tsakalis and P. A. Ioannou, "Adaptive Control of Time-Varying Plants," Automatica, Vol. 23, No. 4, pp. 459-468, July 1987.

1988

14. P. A. Ioannou and J. Sun, "Theory and Design of Robust Direct and Indirect Adaptive Control Schemes," International Journal of Control, Vol. 47, No. 3, pp. 775-813, 1988.
15. J. Reed and P. A. Ioannou, "Discrete-Time Decentralized Adaptive Control," Automatica, Vol. 24, No. 3, pp. 419-421, 1988.
16. G. Tao and P. A. Ioannou, "Strictly Positive Real Matrices and the Lefschetz-Kalman-Yakubovich Lemma," IEEE Trans. on Automatic Control, Vol. 33, No. 12, pp. 1183-1185, December 1988.
17. G. Tao and P. A. Ioannou, "Robust Model Reference Adaptive Control for Multivariable Plants," International Journal of Adaptive Control and Signal Processing, Vol. 2, pp. 217-248, 1988.
18. K. S. Tsakalis and P. A. Ioannou, "Adaptive Control of Time-Varying Plants: Simple Examples," Int. J. of Adaptive Control and Signal Processing, Vol. 2, pp. 291-309, 1988.

1989

19. K. S. Tsakalis and P. A. Ioannou, "Adaptive Control of Linear Time-Varying Plants: A New Model Reference Controller Structure," IEEE Trans. on Automatic Control, Vol. 34, No. 10, pp. 1038-1047, October 1989.
20. P. A. Ioannou and G. Tao, "Dominant Richness and Improvement of Performance of Robust Adaptive Control," Automatica, Vol. 25, No. 2, pp. 287-291, 1989.
21. J. S. Reed and P. A. Ioannou, "Instability Analysis and Robust Adaptive Control of Robotic Manipulators," IEEE Journal of Robotics and Automation, Vol. 5, No. 3, pp. 381-386, June 1989.
22. G. Tao and P. A. Ioannou, "Robust Adaptive Control of Bilinear Plants," Int. J. of Control, Vol. 50, No. 4, pp. 1153-1167, 1989.
23. G. Tao and P. A. Ioannou, "Robust Stability and Performance Improvement of Discrete-Time Multivariable Adaptive Control Systems," Int. J. of Control, Vol. 50, No. 5, pp. 1835-1855, 1989.

1990

24. G. Tao and P. A. Ioannou, "Persistence of Excitation and Overparametrization in Model Reference Adaptive Control," IEEE Trans. on Automatic Control, Vol. 35, No. 2, pp. 254-256, February 1990.
25. K. S. Tsakalis and P. A. Ioannou, "A New Indirect Adaptive Control Scheme for Time-Varying Plants," IEEE Trans. on Automatic Control, June 1990.
26. G. Tao and P. A. Ioannou, "Necessary and Sufficient Conditions for Strictly Positive Real Matrices," Proc. of the IEE, Vol. 137, No. 5, pp. 360-366, October 1990.
27. P. A. Ioannou, "Reply on 'Comments on the Robust Stability Analysis of Adaptive Controllers Using Normalizations,' by P. Khargonekar and R. Ortega," IEEE Trans. on Automatic Control, Vol. 35, No. 10, p. 1184, October 1990

1991

28. G. Tao and P. A. Ioannou, "Robust Adaptive Control of Plants with Unknown Order and High Frequency Gain," Int. J. Control, Vol. 53, No.3, March 1991, pp. 559-578.

29. G. Tao and P.A. Ioannou, "Robust Adaptive Control-A Modified Scheme," Int. J. Control, Vol.54, No.1, July 1991, pp.241-256.
30. F. Ahmed-Zaid, P. A. Ioannou, K. Gousman and R. Rooney, "Accommodation of Failures in the Flight Control System of the F-16 Aircraft Using Adaptive Control," IEEE Control Systems Magazine, Vol. 11, No. 1, Jan. 1991, pp. 73-78.
31. P.A. Ioannou and A. Datta, "Robust Adaptive Control: A Unified Approach," Proceedings of the IEEE, Vol. 79, No. 12, Dec. 1991, pp. 1735-1768.
32. A. Datta and P. A. Ioannou, "Decentralized Indirect Adaptive Control of Interconnected Systems," International Journal of Adaptive Control and Signal Processing, Vol.5, pp. 259-281, 1991.
- 1992**
33. J. Sun and P. A. Ioannou, "Robust Adaptive LQ Control Schemes," IEEE Trans. on Automatic Control, Vol. 37, No. 1, Jan. 1992 pp. 100-106.
34. M. Polycarpou and P. A. Ioannou, "Learning and Convergence Analysis of Neural-Type Structured Networks," IEEE Trans. on Neural Networks, Vol. 3, No.1, Jan. 1992, pp. 39-51.
- 1993**
35. G. Tao and P. A. Ioannou, "Model Reference Adaptive Control for Plants with Unknown Relative Degree," IEEE Trans. on Automatic Control, Vol. 38, No. 6, June 1993, pp. 976-982.
36. T. Tsao and P.A. Ioannou "On the Stability Proof of Adaptive Schemes with Static Normalizing Signals and Parameter Projection," IEEE Trans. on Automatic Control, Vol. 38, No. 1, 1993, pp. 170-173.
37. F. Giri, P.A. Ioannou and F. Ahmed-Zaid "A Stable Indirect Adaptive Control Scheme for First-Order Plants with No Apriori Knowledge on the Parameters," IEEE Trans. on Automatic Control, Vol. 38, No. 5, May 1993, pp. 766-771.
38. M. Polycarpou and P. A. Ioannou, "On the Existence and Uniqueness of Solutions in Adaptive Control Systems," IEEE Trans. on Automatic Control, Vol. 38, No. 3, March 1993, pp. 474-479.
39. P. A. Ioannou and C. C. Chien, "Intelligent Cruise Control," IEEE Trans. on Vehicular Technology, Vol. 42, No. 4, Nov. 1993, pp. 657-672.
- 1994**
39. A. Datta and P.A. Ioannou, "Performance Analysis and Improvement in Model Reference Adaptive Control," IEEE Trans. on Automatic Control. Vol.39, No.12, December 1994, pp. 2370-2388.
40. P. Ioannou and Z. Xu, "Throttle and Brake Control Systems for Automatic Vehicle Following," IVHS Journal, Vol.1 (4), pp.345-377, 1994
41. Swaroop D, Hedrick J K, Chien C C, and Ioannou P. A. 'Comparison of Spacing and Headway Control Laws for Automatically Controlled Vehicles, Vehicle System Dynamics: International Journal of Vehicle Mechanics and Mobility, 1994, 23:1, 597
- 1995**
42. A. Datta and P. Ioannou, "Directly Computable L2 and L-infinity Performance Bounds for Morse's Dynamic Certainty Equivalence Adaptive Controller" International Journal of Adaptive Control and Signal Processing, Vol.9, pp. 423-432, 1995
40. A. Economides, P. Ioannou and J. Sylvester "Dynamic Routing and Admission Control for Virtual Circuit Networks" Journal of Networks and Systems Management, Vol. 3, no. 2, 1995, pp.173-194
41. A. Economides, P. Ioannou and J. Sylvester "Adaptive Virtual Circuit Routing" Computer Networks and ISDN Systems 28, 1995 pp.1430-1438
43. E. Kosmatopoulos, M. Polycarpou, P. Ioannou, and M. Christodoulou, "High-Order Neural Network Structures for Identification of Dynamical Systems," IEEE Trans. on Neural Networks. Vol. 6, No.2, pp. 422-431, March 1995
- 1996**
44. M. Polycarpou and P. Ioannou, "A Robust Adaptive Nonlinear Control Design" Automatica, Vol. 32, No. 3, pp.423-427, March 1996.

45. Y. Zhang and P.A. Ioannou, "A New Class of Nonlinear Robust Adaptive Controller". International Journal of Control. Vol. 65, no. 5, pp. 745-769, 1996
46. Y. Zhang, P.A. Ioannou, and C.C. Chien. Parameter convergence of a new class of adaptive controllers, IEEE Transactions on Automatic Control. Vol. 41 pp. 1489-1493, 1996
47. Fu-Sheng Ho and P. Ioannou " Traffic Flow Modeling and Control Using Artificial Neural Networks" IEEE Control Systems Magazine Vol. 16, No.5, pp. 16-27, Oct. 1996
48. Johansen T. A. and P. Ioannou " Robust Adaptive Control of Minimum Phase Non-Linear Systems", International Journal of Adaptive Control and Signal Processing, Vol. 10, pp. 61-78, 1996
49. Raza H. and P. Ioannou, " Vehicle Following Control Design for Automated Highway Systems ", IEEE Control Systems Magazine, Special Issue on Automotive Control Systems, Vol. 16, No.6, pp. 43-61, Dec. 1996
- 1997**
50. C.C. Chien, Y. Zhang, and P.A. Ioannou, "Traffic Density Control for Automated Highway Systems". Automatica, Vol. 33, No. 7, pp. 1273-1285, 1997.
51. Raza H., Z. Xu, B. Yang and P. Ioannou, " Modeling and Control Design for a Computer Controlled Brake System " IEEE Trans. on Control System Technology, Vol.5, No.3, pp.279-297, May 1997
52. Kosmatopoulos E., M. Christodoulou and P. Ioannou, "Dynamical Neural Networks that Ensure Exponential Identification Error Convergence", Neural Networks, Vol.10, No.2, pp.299-314, 1997
- 1998**
53. 54 Y. Zhang and P.A. Ioannou, "Robustness and Performance of a Modified Adaptive Backstepping Controller". International Journal of Adaptive Control and Signal Processing, 12, pp 247-265, 1998.
54. A. Bose and P. Ioannou, "Issues and Analysis of Mixed Semi-Automated/Manual Traffic", SAE Technical Paper #981943, SAE Transactions-Journal of Passenger Cars, 1998.
- 1999**
55. Zhang Y. and P. Ioannou, " Robustness of Nonlinear Control Systems with Respect to Unmodeled Dynamics" IEEE Trans. on Automatic Control, Vol. 44, No.1 pages 119-124, January 1999
56. Huang C.H., P. Ioannou, J. Maroulas and M. Safonov, " The Design of Strictly Positive Real Systems using Constant Output Feedback " IEEE Trans. On Automatic Control, Vol. 44, No. 3, March 1999, pp. 569-573
57. Y. Zhang, E. Kosmatopoulos and P.A. Ioannou, "Autonomous Intelligent Cruise Control Using Front and Back Information for Tight Vehicle Following Maneuvers", IEEE Transactions on Vehicular Technology, Vol. 48, No. 1, January 1999, pp. 319-329
58. E. Kosmatopoulos and P. Ioannou, "A Switching Adaptive Controller for Feedback Linearizable Systems", IEEE Trans. on Automatic Control, Vol. 44, No. 4, April 1999, pp. 742-751
59. C. Barnhart, P. Ioannou, G. Nemhauser and H. Richardson, "Mapping out a Transportation Plan" Institute of Operations Research and the Management Sciences, ORMS Today, Vol. 26, No. 1, February 1999, pp. 32-56
- 2000**
60. H. Jula, E. Kosmatopoulos and P. Ioannou, "Collision Avoidance Analysis for Lane Changing and Merging", IEEE Transactions on Vehicular Technology, Vol. 49, No.6, November 2000 pp 2295-2308
61. 62. Y. Zhang and P.A. Ioannou, "A New Linear Adaptive Controller: Design, Analysis and Performance", IEEE Transactions on Automatic Control, Vol. 45, No. 5, May 2000, pp 883-897
62. 63. K. Li, E. Kosmatopoulos, P. Ioannou and H. Boussalis, "Centralized, Decentralized, and Overlapping Control Designs for a Segmented Telescope", IEEE Control Systems Magazine, Vol. 20, No. 5, October 2000, pp 59-72
- 2001**

63. A. Kanaris, E. Kosmatopoulos and P. Ioannou "Strategies and Spacing Requirements for Lane Changing and Merging in Automated Highway Systems" IEEE Transactions on Vehicular Technology, Vol. 50, No. 6, November 2001, pp 1568-1582
64. A. Bose and P. Ioannou "Evaluation of the Environmental Effects of Intelligent Cruise Control Vehicles" Journal of the Transportation Research Board, No. 1774, 2001, pp 90-98

2002

65. E. Kosmatopoulos and P. Ioannou 'Robust Switching Adaptive Control of Multi-Input Nonlinear Systems' IEEE Trans. on Automatic Control, Vol. 47, No. 4, April 2002, pp610-625
66. Chin-I Liu and Petros Ioannou 'Petri Net Modeling and Analysis of Automated Container Terminal Using Automated Guided Vehicle Systems' Journal of the Transportation Research Board, No. 1782 Marine Transportation and Port Operations, 2002, pp.73-84
67. C. I. Liu, H. Jula, and P.A. Ioannou, "Design, simulation, and evaluation of automated container terminals," IEEE Transactions on Intelligent Transportation Systems, vol. 3, no. 1, March 2002 pp.12-27.

2003

68. Bose and P. Ioannou, "Mixed Manual/Semi-Automated Traffic: A Macroscopic Analysis" Transportation Research Part C 11 pp 439-462, ELSEVIER 2003
69. A. Bose and P. Ioannou "Analysis of Traffic Flow With Mixed Manual and Semi automated Vehicles", IEEE Trans. on Intelligent Transportation Systems, Vol. 4, No. 4, Dec. 2003, pp 173-189
70. Zhang Y., B. Fidan and P. Ioannou "Backstepping Control of Linear Time-Varying Systems with Known and Unknown Parameters" IEEE Trans. On Automatic Control, Vol. 48, No.11, Nov. 2003, pp1908-1926
71. Xu H. and P. Ioannou "Robust Adaptive Control for a Class of MIMO Nonlinear Systems with Guaranteed Error Bounds" IEEE Trans. On Automatic Control, Vol. 48, no. 5, May 2003, pp728-743
72. Petros Ioannou, Elias Kosmatopoulos and Alvin Despain 'Position Error Signal estimation at High sampling Rates Using Data and Servo Sector Measurements' IEEE Transactions on Control Systems Technology, Vol. 11, No. 3, May 2003, pp 325-334

2004

73. I. Liu, H. Jula, P.A. Ioannou, 'Automated Guided Vehicle System for Two Container Yard Layouts' Transportation Research Part C: Emerging Technologies, no.12, pp.349-368, 2004.
74. K. Li and P. Ioannou, " Modeling of Traffic Flow of Automated Vehicles" IEEE Transactions on Intelligent Transportation Systems, Vol. 5, No. 2, June 2004, pp 99-114
75. Haojian Xu and Petros A. Ioannou "Robust adaptive control of linearizable nonlinear single input systems" Automatica 40, 2004, pp. 1905-1911
76. H. Xu, M. Mirmirani, and P. A. Ioannou, "Adaptive Sliding Mode Control Design for a Hypersonic Flight Vehicle," AIAA Journal of Guidance, Control, and Dynamics, Vol 27, pp 829-838, September-October 2004.

2005

77. Pitsillides, P. Ioannou, M. Lestas, L. Rossides, "Integrated Dynamic Congestion Controller for a Differentiated-Services Framework", IEEE/ACM Transactions of Networking, Volume 13, Issue 1, Feb. 2005 Page(s):94 – 107
78. P. Ioannou and M. Stefanovic "Evaluation of the ACC Vehicles in Mixed Traffic: Lane Change Effects and Sensitivity Analysis" IEEE Transactions on Intelligent Transportation Systems Vol. 6, No.1 March 2005, pp 79-90
79. H. Xu, P. A. Ioannou and M. Mirmirani, "Decentralized-like adaptive control for a class of interconnected nonlinear systems", International Journal of Control, Vol.78, No. 17, Nov. 2005, pp.1359-1378

80. B. Fidan, Y. Zhang, and P.A. Ioannou, "Adaptive control of a class of slowly time varying systems with modeling uncertainties", IEEE Trans. on Automatic Control, Vol. 50, no. 6, pp. 915-920, June 2005.
81. H. Jula, M. Dessouky, P. Ioannou, and A. Chassiakos, "Container movement by trucks in metropolitan networks: modeling and optimization," Transportation Research – Part E, 41, 235-259, 2005.

2006

82. H. Jula, A. Chassiakos, and P. Ioannou, "Port dynamic empty container reuse," Transportation Research – Part E, Vol. 42, No. 1, pp. 43-60, Jan. 2006
83. J. Zhang, P.A. Ioannou and A. Chassiakos, "Automated Container Transport System between Inland Port and Terminals," ACM Transactions on Modeling and Computer Simulation, vol. 16, no. 12, pp. 95-118, 2006.
84. J. Zhang and P.A. Ioannou, "Longitudinal Control of Heavy Trucks in Mixed Traffic: Environmental and Fuel Economy Considerations," IEEE Transactions on Intelligent Transportation Systems, vol. 7, no. 1, pp. 92-104, 2006.
85. H. Jula, M. Dessouky, and P. Ioannou, "Truck route planning in non-stationary stochastic networks with Time Windows at Customer Locations," IEEE Transactions on Intelligent Transportation Systems, Vol. 7, No. 1, pp. 51-62, March 2006.

2007

86. P.A. Ioannou, H. Xu, and B. Fidan, "Identification and high bandwidth control of hard disk drive servo systems based on sampled data measurements," IEEE Trans. on Control Systems Technology, vol. 15, no. 6, pp. 1089-1095, November 2007
87. Lestas M., Ioannou P., Pitsillides A. and Hadjipollas G., "Adaptive Congestion Protocol: A New Congestion Control Protocol with Learning Capability", Computer Networks, Vol. 51, no13, September 2007, pp. 3773-3798.
88. Papageorgiou, G., Ioannou, P., Damianou, P., Aphames, T., Pitsillides, A., A Computer Simulation Scenario Analysis Approach as a Decision Support Tool for Transportation Systems Planning, Urban Transport 2007, Witpress, ISBN978-1-84564-087-3

2008

89. Hwan Chang, Hossein Jula, Anastasios Chassiakos and Petros Ioannou, "A heuristic solution for the empty container substitution problem," Transportation Research Part E, Vol. 44, no. 2, March 2008, pp. 203-216.
90. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "Adaptive LQ Control with Anti-windup Augmentation to Optimize UAV Performance in Autonomous Soaring Applications," IEEE Transactions on Control Systems Technology, vol. 16, no. 4, pp. 691-707, July 2008.
91. Papageorgiou, G., Ioannou, P., Damianou, P., Aphames, T., Pitsillides, A., Modelling & Analysis of Traffic and Impact of Dedicated Bus Lanes along Strovolos Avenue, IPSIPETIS, No. 17, pp. 31-35, February 2008.
92. H. Jula, M. Dessouky, and P. Ioannou, "Real-time estimation of travel times along the arcs and arrival times at the nodes of dynamic stochastic networks," IEEE Transactions on Intelligent Transportation Systems, Vol. 9, No. 1, pp.97-110, March 2008

2009

93. Levin, J., Ioannou, P., "Integrated adaptive mode suppression and disturbance rejection scheme with application to disk drives," IEEE Trans. on Control System Technology, Vol. 17, No 3, May 2009 pp620-633.
94. Levin, J., Perez Arancibia N. O., Ioannou, P., Tsao, T.-C., "A neural-network-based adaptive disturbance rejection and its application to the control of hard disk drives," IEEE Trans. on Control Magnetics, Vol.45, No.5, May 2009 pp 2140-2151
95. Papageorgiou G., Pantelis Damianou, Andreas Pitsillides, Thrasos Aphamis, Demetris Charalambous, Petros Ioannou, "Modelling and Simulation of Transportation Systems: a Scenario

Planning Approach', AUTOMATIKA: Journal for Control, Measurement, Electronics, Computing and Communications, Vol.50 No.1-2 April 2009, Pages 39 - 50.

96. Mihalios G. Markakis, Georgios D. Mitsis, George P. Papavassilopoulos, Petros A. Ioannou, Vasilis Z. Marmarelis, 'A switching control strategy for the attenuation of blood glucose disturbances' Optimal Control Applications and Methods, John Wiley & Sons, July 2009

2010

97. M. Kuipers and P. A. Ioannou, 'Multiple Model Adaptive Control With Mixing', IEEE Transactions on Automatic Control vol. 55, no. 8, pp.1822-1836, August 2010.

2011

98. Lestas M., Pitsillides A., Ioannou P. and Hadjipollas G., "A New Estimation Scheme for the Effective Number of Users in Internet Congestion Control", IEEE/ACM Transactions on Networking, Vol. 19, no. 5, October 2011, pp. 1499-1513,
99. Y. Wang and P. Ioannou, 'New Model for Variable Speed Limits', Transportation Research Record, Journal of the Transportation Research Board, no. 2249, Traffic Flow Theory, Simulation Modeling, 2011, pp. 38-44
100. J. Levin, N. O. Perez-Arancibia , and P. A. Ioannou, 'Adaptive Notch Filter using Real-Time Parameter Estimation', IEEE Transactions on Control Systems Technology, vol. 19, no. 3, pp. 673-681, May 2011.

2012

101. Baldi, S. Ioannou, P. A., and Kosmatopoulos, E. B., Adaptive Mixing Control with Multiple Estimators, International Journal of Adaptive Control and Signal Processing, 2012, Vol. 26, no. 8, pages 800-820
102. Baldi, S., Ioannou, P. A., and Mosca, E., Multiple Model Adaptive Mixing Control: the Discrete-time case, IEEE Trans. on Automatic Control, 2012, Vol. 57, no. 4, pages 1040-1045

2013

103. Kahveci N. and P. Ioannou, 'Adaptive steering control for uncertain ship dynamics and stability analysis', Automatica, vol. 49, no. 3, pp. 685-697, March 2013

2014

104. S. Baldi, I. Michailidis, E. B. Kosmatopoulos, A. Papachristodoulou and P. A. Ioannou, 'Convex Design Control for Practical Nonlinear Systems', IEEE Transactions on Automatic Control, 2014, Vol. 59 , no. 7, pp. 1692 – 1705
105. Simone Baldi, Iakovos Michailidis, Elias Kosmatopoulos, Petros A. Ioannou, A "plug and play" computationally efficient approach for control design of large-scale nonlinear systems using co-simulation: a combination of two "ingredients", IEEE Control Systems Magazine, Volume: 34 , Issue: 5, Page(s): 56 - 71, 2014
106. Vadim Butakov and Petros Ioannou "Driver/Vehicle Response Diagnostic System for the Vehicle Following Case," IEEE Transactions on Intelligent Transportation Systems, Vol.15, no.5, Oct. 2014, pp. 1947-1957
107. Petros A. Ioannou, Kumpati S. Narendra, Anuradha Annaswamy, Saeid Jafari, Lael Rudd, Romeo Ortega, Jovan D. Boskovic, "L1-Adaptive Control: Stability, Robustness, and Interpretations", IEEE Transactions on Automatic Control, Vol. 59, No. 11, Nov. 2014, pp.3075-3080.

2015

108. Y. Zhao and P. Ioannou, "Positive Train Control with Dynamic Headway Based on an Active Communication System", IEEE Transactions on Intelligent Transportation Systems, vol.16, no.6, pp. 3095-3103, Dec. 2015.
109. S. Jafari, P. A. Ioannou, and L. Rudd, "Adaptive Feedback Suppression of Unknown Periodic Components of Acoustic Noises with Time-Varying Characteristics," Journal of Vibration and Control, pp.1-13, 2015.
110. S.Jafari, P. A. Ioannou, B. Fitzpatrick, and Y. Wang, "Robustness and Performance of Adaptive Suppression of Unknown Periodic Disturbances," IEEE Transactions on Automatic Control, vol. 60, no. 8, pp. 2166-2171, 2015.

111. T. Rajabioun, P. Ioannou, " On-Street and Off-Street Parking Availability Prediction Using Multivariate Spatio-Temporal Mode ", IEEE Transactions on ITS, Vo.16, no.5, Oct. 2015, pp. 2913-2925
112. A. Abadi, R. Rajabioun, P. Ioannou, "Traffic Flow Prediction for Transportation Networks with Limited Traffic Data," IEEE Transactions on ITS, vo. 16, no. 2, April 2015, pp. 653-663
113. Vadim Butakov and Petros Ioannou, 'Personalized Driver/Vehicle Lane Change Models for ADAS', IEEE Transactions on Vehicular Technology, Vol.64, no. 10, Oct. 2015
114. Vadim A. Butakov and Petros Ioannou, 'Personalized Driver Assistance for Signalized Intersections Using V2I Communication' IEEE Trans. on Intelligent Transportation Systems, Vol. PP, Issue 99, July 2015
115. Mylonas Y., Lestas M., Pitsillides A., Ioannou P. and Papadopoulou V., " Speed Adaptive Probabilistic Flooding for Vehicular ad hoc Networks", IEEE Transactions on Vehicular Technology, 64(5), pages 1973-1990, May 2015

2016

116. Afshin Abadi, Petros Ioannou and Maged M. Dessouky, "Multimodal Dynamic Freight Load Balancing", IEEE Trans. on ITS , Febr. 2016, Vol. 17, no. 2, pp. 356-367
117. Yihang Zhang and Petros Ioannou, "Combined Variable Speed Limit and Lane Change Control for Highway Traffic," in IEEE Transactions on Intelligent Transportation Systems , vol.PP, no.99, pp.1-12, 2016
118. S. Jafari and P. A. Ioannou, "Robust Adaptive Attenuation of Unknown Periodic Disturbances in Uncertain Multi-input Multi-output Systems," *Automatica*, vol. 70, pp. 32-42, 2016.
119. S. Jafari and P. A. Ioannou, "Rejection of Unknown Periodic Disturbances for Continuous-Time MIMO Systems with Dynamic Uncertainties," *International Journal of Adaptive Control and Signal Processing*, vol. 30, pp. 1674–1688, 2016.
120. Baldi S. and Ioannou, P. A., "Stability Margins in Adaptive Mixing Control via a Lyapunov-based Switching Criterion". IEEE Transactions on Automatic Control, Vol. 61, pp. 1194-1207, 2016.
121. A. Castellanos-Silva, I. Landau, P. Ioannou, 'Robust Direct Adaptive Regulation of Unknown Disturbances in the Vicinity of Low Damped Complex Zeros - Application to Active Vibration Control', IEEE Transactions on Control Systems Technology, Volume 24, Issue 2, 2016

2017

122. Iakovos Michailidis, Simone Baldi, Elias Kosmatopoulos, Petros A. Ioannou "Adaptive Optimal Control for Large-Scale Non-linear Systems", IEEE Trans. on Automatic Control, Vol. 62, Issue:11, Nov. 2017, pp. 5567-5577
123. S. Jafari, P. A. Ioannou, and L. Rudd, "Adaptive Feedback Suppression of Unknown Periodic Components of Acoustic Noises with Time-Varying Characteristics," *Journal of Vibration and Control*, vol. 23, no. 4, pp. 526-538, 2017.
124. Yihang Zhang, Petros A. Ioannou, "Coordinated Variable Speed Limit, Ramp Metering and Lane Change Control of Highway Traffic", In IFAC-Papers OnLine, Volume 50, Issue 1, 2017, Pages 5307-5312
125. Yihang Zhang, Petros A. Ioannou. "Integrated Control of Highway Traffic Flow." *Journal of Control and Decision* (2017): 1-23.
126. Y. Zhang and P.A. Ioannou, 'Combined Variable Speed Limit and Lane Change Control for Highway Traffic', IEEE Transactions on ITS, Vol. 18, Issue 7, July 2017, pp 1657-1661.

2018

127. Saeid Jafari and Petros A Ioannou, Reference tracking control and attenuation of unknown periodic disturbances in the presence of noise for unknown minimum-phase LTI plants. *International Journal of Adaptive Control and Signal Processing*, 1–16, 2018.
128. Yihang Zhang and Petros A. Ioannou, ‘Stability analysis and variable speed limit control of a traffic flow model,’ *Transportation Research Part B: Methodological*, 118, 31-65, 2018.
129. Lympopoulos, G. & Ioannou, ”Model Reference Adaptive Control for Networked Distributed Systems with Strong Interconnections and Communication Delays”, *P. J Syst Sci Complex* (2018) 31: 38. <https://doi.org/10.1007/s11424-018-7172-2>.
130. Georgios Lympopoulos and Petros Ioannou, "Adaptive Aircraft Control in the Presence of Unstructured Dynamic Uncertainties", *Journal of Guidance, Control, and Dynamics*, Vol. 42, No. 1 (2019), pp. 153-162. <https://doi.org/10.2514/1.G003693>
131. Yanbo Zhao, Petros A. Ioannou and Maged M. Dessouky, 'Dynamic Multimodal Freight Routing Using a Co-simulation Optimization Approach,' in *IEEE Transactions on Intelligent Transportation Systems*, 2018. <https://ieeexplore.ieee.org/document/8527664>
132. Min Zhou, Hairong Dong, Yanbo Zhao, Petros A. Ioannou and Fei-Yue Wang, 'Optimization of crowd evacuation with leaders in urban Rail Transit Stations,' in *IEEE Transactions on Intelligent Transportation Systems*, 2018.

2019

133. Zhou Min, Hairong Dong, Petros A. Ioannou, Yanbo Zhao and Fei-Yue Wang, "Guided Crowd Evacuation: Approaches and Challenges," *IEEE/CAA J. Automatica. Sinica*, vol. 6, no. 5, pp. 1081-1094, Sept. 2019
134. Zhao Yanbo, Petros Ioannou, A co-simulation, optimization, control approach for traffic light control with truck priority, in *Annual Reviews in Control*, vol. 48, pp. 283-291, 2019
135. Papadopoulos Aristotelis-Angelos, Ioannis Kordonis, Maged Dessouky, Petros Ioannou, “Coordinated freight routing with individual incentives for participation”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 20, no. 9, pp. 3397-3408, 2019
136. Zhou M., Dong H, Zhao Y, Ioannou P A, Wang F-Y. “Optimization of Crowd Evacuation with Leaders in Urban Rail Transit Hub Stations”, *IEEE Transactions on Intelligent Transportation Systems*, DOI: 10.1109/TITS.2018.2886415, 2019

2020

137. Filipe de Almeida Araujo Vital, Petros Ioannou and Arti Gupta, "Survey on Intelligent Truck Parking: Issues and Approaches," in *IEEE Intelligent Transportation Systems Magazine*, doi: 10.1109/MITS.2019.2926259, January 2020
138. Baldi S., Azzollini I. A., and Ioannou P. A., “A distributed indirect adaptive approach to cooperative tracking in networks of uncertain single-input single-output systems”, *IEEE Transactions on Automatic Control*, scheduled for publication, 2021 doi:10.1109/TAC.2020.3038742
139. Ioannis Kordonis , Maged M. Dessouky , and Petros A. Ioannou, ‘Mechanisms for Cooperative Freight Routing: Incentivizing Individual Participation’, *IEEE Transactions on Intelligent Transportation Systems*, vol. 21, no. 5, May 2020
140. Jie Shi, Yuanqi Gao, Wei Wang, Nanpeng Yu and Petros Ioannou ‘Operating Electric Vehicle Fleet for Ride-Hailing Services With Reinforcement Learning’, *IEEE Transactions on Intelligent Transportation Systems*, November 2020, Vol. 21, Issue 11, pp. 4822-4834, [10.1109/TITS.2019.2947408](https://doi.org/10.1109/TITS.2019.2947408)

2021

141. Chen, Pengfei, Petros Ioannou, and Maged Dessouky. "Mixed Freight Dynamic Routing Using a Co-Simulation Optimization Approach." *IEEE Transactions on Intelligent Transportation Systems* (2021). <https://ieeexplore.ieee.org/document/9568773>.
142. F. Vital and P. Ioannou, "Scheduling and Shortest Path for Trucks with Working Hours and Parking Availability Constraints," *Transportation Research Part B: Methodological* 148 (2021): 1-37, doi:10.1016/j.trb.2021.04.002
143. Alasiri, Faisal, Yihang Zhang, and Petros A. Ioannou. "Robust variable speed limit control with respect to uncertainties." *European Journal of Control* 59 (2021): 216-226.
144. A.-A. Papadopoulos, I. Kordonis, M.M. Dessouky, and P.A. Ioannou, "Personalized Pareto-improving pricing-and-routing schemes for near-optimum freight routing: An alternative approach to congestion pricing", *Transportation Research Part C: Emerging Technologies*, vol. 125, p. 103004, 2021.
145. Panayiotis M. Papadopoulos, Georgios Lympieropoulos, Marios M. Polycarpou, Petros Ioannou, "Distributed Diagnosis of Sensor and Actuator Faults in Air Handling Units in Multi-Zone Buildings: A Model-Based Approach", *Energy and Buildings*, 2021, 111709, 19 November 2021), ISSN 0378-7788, doi: 10.1016/j.enbuild.2021.111709.
146. Simone Baldi, Ilario A. Azzollini, Petros A. Ioannou, 'A Distributed Indirect Adaptive Approach to Cooperative Tracking in Networks of Uncertain Single-Input Single-Output Systems', *IEEE Transactions on Automatic Control*, Vol. 66, Issue: 10, 2021.

2022

147. Roy S., S. Baldi, and P. A. Ioannou, 'An Adaptive Control Framework for Underactuated Switched Euler-Lagrange Systems' *IEEE Transactions on Automatic Control*, Vol. 67, No. 8, pp 4202-4210, August 2022, 2022 .
148. M. Waqas and P. Ioannou, "Automatic Vehicle Following Under Safety, Comfort, and Road Geometry Constraints," in *IEEE Transactions on Intelligent Vehicles*, doi: 10.1109/TIV.2022.3177176.
149. Zheyu Wang, Maged Dessouky, Tom Van Woensel, Petros Ioannou, Pickup and delivery problem with hard time windows considering stochastic and time-dependent travel times, *EURO Journal on Transportation and Logistics*, Volume 12, 100099, ISSN 2192-4376, <https://doi.org/10.1016/j.ejtl.2022.100099>.
150. Aristotelis-Angelos Papadopoulos; Ioannis Kordonis, Maged Dessouky; Petros Ioannou, Personalized Freight Route Recommendations With System Optimality Considerations: A Utility Learning Approach, <https://doi.org/10.1109/TITS.2022.3213773>, Oct. 2022
151. T. Yuan, F. Alasiri and P. A. Ioannou, "Selection of the Speed Command Distance for Improved Performance of a Rule-Based VSL and Lane Change Control," in *IEEE Transactions on Intelligent Transportation Systems*, vol. 23, no. 10, pp. 19348-19357, Oct. 2022, doi: 10.1109/TITS.2022.3157516.
152. M. Pooladsanj, K. Savla and P. Ioannou, "Vehicle Following On A Ring Road Under Safety Constraints: Role of Connectivity and Coordination," in *IEEE Transactions on Intelligent Vehicles*, doi: 10.1109/TIV.2022.3149972.

2023

153. M. Pooladsanj, K. Savla, and P. A. Ioannou, "Ramp metering to maximize freeway throughput under vehicle safety constraints," *Transportation Research Part C: Emerging Technologies*, vol. 154, p. 104267, 2023.
154. A. -A. Papadopoulos, I. Kordonis, M. Dessouky and P. Ioannou, "Personalized Freight Route Recommendations With System Optimality Considerations: A Utility Learning Approach," in *IEEE Transactions on Intelligent Transportation Systems*, vol. 24, no. 1, pp. 400-411, Jan. 2023, doi: 10.1109/TITS.2022.3213773.

155. Monteiro F. and P. Ioannou, 'Safe autonomous lane changes and impact on traffic flow in a connected vehicle environment', Elsevier, Transportation Research Part C 151 (2023) 104138
156. Z Wang, M Dessouky, T Van Woensel, P Ioannou, 'Pickup and delivery problem with hard time windows considering stochastic and time-dependent travel times', EURO Journal on Transportation and Logistics 12, 100099, 2023
157. F Alasiri, Y Zhang, PA Ioannou, 'Per-lane variable speed limit and lane change control for congestion management at bottlenecks', IEEE Transactions on Intelligent Transportation Systems, Aug. 22, 2023
158. Fei-Yue Wang, Yilun Lin, Petros A Ioannou, Ljubo Vlacic, Xiaoming Liu, Azim Eskandarian, Yisheng Lv, Xiaoxiang Na, David Cebon, Jiaqi Ma, Lingxi Li, Cristina Olaverri-Monreal, 'Transportation 5.0: The DAO to safe, secure, and sustainable intelligent transportation systems', IEEE Transactions on Intelligent Transportation Systems, Vol. 24, Issue 10, Oct. 2023, pages: 10262-10278

2024

159. Muhammad Waqas, Pierluigi Nuzzo, Petros Ioannou, 'Provably Safe Design Methodology for Automatic Longitudinal Control of Autonomous Vehicles, IEEE Transactions on Intelligent Vehicles, Jan. 29, 2024
160. Petros Ioannou, 'Connectivity, Automation and Safety in Transportation of the Future' IEEE Transactions on Intelligent Transportation Systems (Volume: 25, Issue: 4, April 2024)
161. Jacob Stewart and Petros Ioannou, '[Rejection of Sinusoidal Disturbances with Unknown Slowly Time-Varying Frequencies for Linear Time-Varying Systems](#)' Journal of Dynamic Systems, Measurement, and Control, Vol. 146, No. 4, March, 2024, p. 041003. ISSN: 0022-0434. url: <https://doi.org/10.1115/1.4064748>.
162. Ljubo Vlacic, Hailong Huang, Mariagrazia Dotoli, Yutong Wang, Petros A Ioannou, Lili Fan, Xingxia Wang, Raffaele Carli, Chen Lv, Lingxi Li, Xiaoxiang Na, Qing-Long Han, Fei-Yue Wang, '[Automation 5.0: The key to systems intelligence and industry 5.0](#)', IEEE/CAA Journal of Automatica Sinica, Vol. 11, No. 8, pages 1723-1727, July 19, 2024
163. Jacob Stewart, P Ioannou. 'Rejection of Sinusoidal Disturbances with Unknown Slowly Time-Varying Frequencies For Linear Time-Invariant Systems, ' IEEE Transactions on Automatic Control, Vol. 69, Issue 8 August 2024
164. Jacob Stewart et al. Adaptive Ankle Torque Control for Bipedal Humanoid Walking on Surfaces with Unknown Horizontal and Vertical Motion. 2024. arXiv: 2410.11799 [cs.RO]. url: <https://arxiv.org/abs/2410.11799>.

2025

165. J. Stewart and P. Ioannou "Rejection of Sinusoidal Disturbances with Unknown Slowly Time-Varying Parameters for MIMO Linear Time-Varying Systems" in IEEE Transactions on Automatic Control, 2025
166. W. Ni, H. Xiao, X. Liu, A. T. Chronopoulos and P. A. Ioannou, "Power-Aware User Association and Content Caching Algorithm for Delay-Energy Tradeoff in Cache-Enabled Heterogeneous Cellular Networks," in IEEE Systems Journal, doi: 10.1109/JSYST.2024.3524624, pages 1-12, Jan. 14, 2025
167. Liu, X., & Ioannou, P., 'Electric Trucks Under Real-World Constraints: Technologies, challenges, and corridor-level operational strategies', IEEE Electrification Magazine, 13(3), 28-35, 2025, DOI: 10.1109/MELE.2025.3592867

168. Hu, B., & Ioannou, P. A. Survey of Electric Truck Technologies and Infrastructure Support. *IEEE Intelligent Transportation Systems Magazine*, 2025
169. Hu, B., & Ioannou, P. Review and Analysis of Current and Future Battery Technologies for Heavy Duty Electric Vehicles.
170. G. Rostomyan, K. Savla and P. A. Ioannou, "Central Coordination of Connected Autonomous Vehicles at a Signal Free Intersection," in *IEEE Transactions on Intelligent Transportation Systems*, DOI: 10.1109/TITS.2025.3640559.
171. M. Pooladsanj, K. Savla and P. A. Ioannou, "Throughput Maximizing Takeoff Scheduling for eVTOL Vehicles in On-Demand Urban Air Mobility Systems," in *IEEE Transactions on Intelligent Transportation Systems*, DOI: 10.1109/TITS.2025.3640561.
172. Tianchen Yuan and Petros A. Ioannou, 'Integrated Freeway and Arterial Traffic Control to Improve Freeway Mobility without Compromising Arterial Traffic Conditions Using Q-Learning' *IEEE Transactions on Intelligent Transportation Systems*, April 22, 2025 DOI: 10.1109/TITS.2025.3559893
173. Zelin Guo , Siqi Wang, Yonglin Tian, Jing Yang , Hui Yu , Xiaoxiang Na, Levente Kovács , Li Li, Petros Ioannou, Fei-Yue Wang, ' SR-LLM: An incremental symbolic regression framework driven by LLM-based retrieval-augmented generation' *Proceedings of the National Academy of Sciences (PNAS), Computer Sciences*, Dec. 2025, Vol. 122, No.52 <https://doi.org/10.1073/pnas.2516995122>
174. Kaili Xiang, Yongduan Song and Petros Ioannou, 'Nonlinear Auto-Tuning PI Control With Desired Precision Within User-Specifiable Time' *IEEE Transactions on Cybernetics*, Dec. 2025, DOI: <https://doi.org/10.1109/TCYB.2025.3636913>
175. Weiyi Ni, Yiling He, Hailin Xiao, A. Chronopoulos and P. Ioannou, 'Spectral Efficiency Analysis for Cell-Free Massive MIMO Systems With Low-Resolution ADCs Under Imperfect CSI', *IEEE Internet of Things Journal*, Vol. 12, no.15, June 2025, DOI: 10.1109/JIOT.2025.3575754
176. H. Ye, Y. Song, J. Lam and P. A. Ioannou, "Decentralized Prescribed-Time Control of Robotic Arm-Finger Systems for Grasping and Moving Tasks," in *IEEE Transactions on Cybernetics*, vol. 55, no. 9, pp. 4386-4399, Sept. 2025, doi: 10.1109/TCYB.2025.3586153
177. Fernando V. Monteiro, Ketan Savla, Petros Ioannou, "Optimal coordinated platoon lane change in highways with mixed traffic", *Vehicular Communications*, Volume 54, 2025, 100924, ISSN 2214-2096, <https://doi.org/10.1016/j.vehcom.2025.100924>.

Refereed Conference Papers

1981

1. P. A. Ioannou and P. V. Kokotovic, "Error Bounds for Model-Plant-Mismatch in Identifiers and Adaptive Observers," *JACC*, Charlottesville, VA, June 17-19, 1981.
2. P. V. Kokotovic and P. A. Ioannou, "Robustness Redesign of Continuous-Time Adaptive Schemes," *The 20th IEEE Conf. on Decision and Control*, San Diego, December 1981.

1982

3. C. R. Johnson, Jr. and P. A. Ioannou, "Reduced-Order Adaptive Parameter Identification," *The 6th IFAC Symposium on Identification and System Parameter Estimation*, Washington, DC, June 7-11, 1982.

1983

4. P. A. Ioannou and P. V. Kokotovic, "Decentralized Adaptive Control in the Presence of Multiparameter Singular Perturbations and Bounded Disturbances," *American Control Conference*, San Francisco, CA, June 1983, pp. 553-558.
5. P. A. Ioannou and Ph. Opdenacker, "Design of Adaptive Controllers for a Continuous Anaerobic Fermentation Process," *21st Annual Allerton Conference on Communication, Control, and Computing*, October 1983, pp. 703-712.

6. P. A. Ioannou, "Design of Decentralized Adaptive Controllers," The 22nd Conference on Decision and Control, December 1983, pp. 205-210.

1984

7. P. A. Ioannou, "Adaptive Control of Large Scale Systems with Reduced Models," First International Workshop on the Real Time Control of Large Scale Systems, Patras, Greece, July 1984, pp. 386-398.

1985

8. P. A. Ioannou, "Robustness of the Positive Real Lemma and its Application to Adaptive Control," Proc. of IEE Int'l. Conf. Control '85, Cambridge, England, July 1985, pp. 625-631.
9. P. A. Ioannou, "Robust Adaptive Controller with Zero Residual Tracking Errors," Proc. of 24th IEEE Conf. on Decision and Control, Fort Lauderdale Florida, December 1985, pp. 135-140.

1986

10. K. S. Tsakalis and P. A. Ioannou, "Adaptive Control of Time Varying Plants," Proc. of 2nd IFAC Workshop on Adaptive Systems in Control and Signal Processing, Lund, Sweden, July 1-3, 1986, pp. 233-238.
11. P. A. Ioannou and K. S. Tsakalis, "A Robust Discrete-Time Adaptive Controller," Proc. 25th IEEE Conf. on Decision and Control, Athens, Greece, December 1986.
12. K. M. Sobel, H. P. Lee and P. A. Ioannou, "Application of Robust Direct Adaptive Control to the Longitudinal Dynamics of a Fighter Aircraft," Proc. 25th IEEE Conf. on Decision and Control, Athens, Greece, December 1986.
13. J. Sun, P. A. Ioannou, E. Falagas and H. Woo, "Robust Adaptive Control of a Large Flexible Structure," Proc. 2nd IASTED International Conf. on Applied Control and Identification, Los Angeles, CA, December 1986.

1987

14. P. A. Ioannou, "Robust Adaptive Control Algorithms With and Without Persistence of Excitation," Proc. 10th World Congress on Automatic Control, Vol. 10, pp. 46-52, July 1987.
15. K. S. Tsakalis and P. A. Ioannou, "On the Model Reference Adaptive Control of Time-Varying Plants," The 26th IEEE Conference on Decision and Control, Los Angeles, CA, December 9-11, 1987.

1988

16. G. Tao and P. A. Ioannou, "Robust Model Reference Adaptive Control for Multivariable Plants," American Control Conference, Atlanta, Georgia, pp. 749-753, June 1988.
17. A. Economides, P. A. Ioannou and J. A. Silvester, "Decentralized Adaptive Routing for Virtual Circuit Networks Using Stochastic Learning Automata," Proc. of IEEE Infocom'88, New Orleans, March 1988.
18. K. S. Tsakalis and P. A. Ioannou, "A New Indirect Adaptive Control Scheme for Time-Varying Plants," Proc. 27th IEEE Conf. on Decision and Control, Austin, TX, pp. 2419-2425, December 1988.
19. G. Tao and P. A. Ioannou, "Persistency of Excitation and Overparametrization in Model Reference Adaptive Control," Proc. 27th IEEE Conf. on Decision and Control, Austin, TX, pp. 1607-1611, December 1988.
20. A. Chassiakos, P. A. Ioannou, M. Safonov, M. Nugent and D. Moore, "Adaptive Roll Control of a Dynamic Wind Tunnel Model," Proc. of AIAA on Atmospheric Flight Mechanics, pp. 385-393, August 1988.

1989

21. G. Tao and P. A. Ioannou, "Model Reference Adaptive Control for Plants with Unknown Relative Degree," Proc. 1989 American Control Conference, Pittsburgh, PA, June 1989, pp. 2297-2302.
22. G. Tao and P. A. Ioannou, "A MRAC for Multivariable Plants with Zero Residual Tracking Error," Proc. 28th IEEE Conf. on Decision and Control, December 1989, Tampa, FL, pp. 1597-1600.

23. A. Economides, P. A. Ioannou and J. A. Silvester, "Adaptive Routing and Congestion Control for Window Flow Controlled Virtual Circuit Networks," Proc. 27th Annual Allerton Conf. on Communications, Control and Computing, Urbana-Champaign, IL, September 1989.
24. P. A. Ioannou, K. Gousman and B. Rooney, "Surface Failure Detection and Evaluation of Control Law for Reconfiguration of Flight Control Systems," Proc. AIAA Guidance and Navigation Control Conference, Boston, MA, August 1989, pp. 733-740.

1990

25. A. Datta and P. A. Ioannou, "Decentralized Indirect Adaptive Control of Interconnected Systems," Proc. 1990 American Control Conference, San Diego, CA, May 1990, pp. 55-60.
26. F. Ahmed-Zaid, P. A. Ioannou, K. Gousman and B. Rooney, "Adaptive Control and Accommodation to Failures in the Flight Control System of the F-16 Aircraft," Proc. 1990 American Control Conference, San Diego, CA, May 1990, pp. 764-769.
27. A. Datta and P. A. Ioannou, "Robustness Analysis of Commonly Used Adaptive Control Structures," Proc. 29th IEEE Conf. on Decision and Control, Honolulu, HI, December 5-7, 1990, pp. 3220-3225.

1991

28. M. Polycarpou and P. A. Ioannou, "A Neural-Type Parallel Algorithm for Fast Matrix Inversion," Proc. 1991 International Parallel Processing Symposium, Anaheim, CA, April-May 1991.
29. A. Datta and P. A. Ioannou, "Performance Improvement versus Robust Stability in Model Reference Adaptive Control", Proc. 30th IEEE Conf. on Decision and Control, December 1991, Brighton, England.
30. Giri F., P. A. Ioannou and F. Ahmed-Zaid, "Model Reference Adaptive Control for First-Order Plants with No Prior Knowledge on the High Frequency Gain." Proc. 30th IEEE Conf. on Decision and Control, December 1991, Brighton, England.

1992

31. F. Zaid, P. A. Ioannou, and F. Giri, "A Stable Indirect Adaptive Control of Continuous-Time Systems with no Apriori Knowledge on the Parameters," 4th IFAC International Symposium on Adaptive Systems in Control and Signal Processing, July 1-3, 1992, Grenoble, France.
32. M. Polycarpou and P. A. Ioannou, "Modeling, Identification, and Stable Adaptive Control of Continuous-Time Nonlinear Dynamical Systems Using Neural Networks", Proc. 1992, American Control Conference, Chicago, IL, June 1992, pp. 36-41.
33. M. Demetriou, I. G. Rosen, P. A. Ioannou, "Adaptive Parameter Estimation for a Class of Distributed Parameter Systems with Persistence of Excitation", Proc. of the 31st IEEE Conf. on Decision and Control, Dec. 1992, pp. 1742-1744.
34. M. Polycarpou and P. A. Ioannou, "Neural Networks and On-line Approximators for Adaptive Control," Proc. of the 7th Yale Workshop on Adaptive and Learning Systems, May 1992, pp. 93-98.
35. F. Ahmed-Zaid, P. A. Ioannou, M. Polycarpou, and H. Youssef, "Identification and Control of Aircraft Dynamics Using Radial Basis Function Neural Networks," Proc. of the AIAA Guidance, Navigation Control Conference, Hilton Head, SC, Aug.10-12, 1992.

1993

36. M. Polycarpou and P. Ioannou, "A Robust Adaptive Nonlinear Control Design," Proc. of the American Control Conf., San Francisco, CA, June 1993.
37. M. Demetriou and P. A. Ioannou, "Adaptive Parameter Estimation of Parabolic Distributed Parameter Systems with Unknown Input Operator," Proc. of the International Conf. on Computer Applications to Engineering Systems, Nicosia, Cyprus, July 14-16, 1993.
38. E. Kosmatopoulos, M. Christodoulou and P. Ioannou, "Learning Laws with Exponential Error Convergence for Recurrent Neural Networks," Proc. of the 32nd Conference on Decision and Control, San Antonio, Texas, Dec. 1993.

1994

39. C.C. Chien, Y. Zhang, A. Stotsky, and P.A. Ioannou. "Roadway Traffic Controller Design for Automated Highway Systems" In Proc. IEEE Conference on Decision and Control, Orlando, FL, December 1994. pp. 2425-2430.
40. Y. Zhang, P.A. Ioannou, and C.C. Chien. "Parameter Convergence of a Class of Adaptive Controllers". In Proc. American Control Conference, Baltimore, MD, June 1994 pp.1248-1252

1995

41. Y. Zhang and P.A. Ioannou. "Stability and Performance of Nonlinear Robust Adaptive Control". In Proc. IEEE Conference on Decision and Control, New Orleans, LA, December 1995 pp. 3941-3946.
42. Y. Zhang and P.A. Ioannou. "Comparison of a Nonlinear Adaptive Controller with Certainty-Equivalence Type Adaptive Controllers". In Proc. IEEE Conference on Decision and Control, New Orleans, LA, December 1995 pp.3444-3445.
43. Y. Zhang and P.A. Ioannou. "A Robust Modification of a New Class of Adaptive Controllers." In Proc. American Control Conference, Seattle, WA, June 1995, pp.2510-2514
44. C.C. Chien, Y. Zhang, A. Stotsky, S.R. Dharmasena, and P.A. Ioannou. "Macroscopic Roadway Traffic Controller Design". In Third IEEE Mediterranean Symposium on New Directions in Control and Automation, Limassol, Cyprus, July 1995 pp.228-236.

1996

45. Y. Zhang and P.A. Ioannou. "Linear Robust Adaptive Control Design Using a Nonlinear Approach. IFAC World Congress, San Francisco, CA, June 1996.
46. Y. Zhang and P. A. Ioannou. " Nonlinear Control Design for Linear Time Varying Systems", In Proc. IEEE Conf. on Decision and Control, pp. 3353-3358, Kobe, Japan, Dec. 1996
47. Y. Zhang and P. A. Ioannou. " Adaptive Nonlinear Control Design for Linear Time Varying Systems", In Proc. IEEE Conf. on Decision and Control, pp. 837- 842, Kobe, Japan, Dec. 1996
48. Y. Zhang and P. A. Ioannou. " Robustness of Nonlinear Control Systems with Respect to Unmodeled Dynamics ", In Proc. IEEE Conf. on Decision and Control, pp. 837- 842, Kobe, Japan, Dec. 1996
49. F. Ho and P.A. Ioannou. "Traffic Flow Modeling and Control Using Artificial Neural Networks". IFAC World Congress, San Francisco, CA, June 1996.
50. Raza H., Z. Xu, B. Yang and P. Ioannou " Modeling and Control Design for a Computer Controlled Brake System " 11th IEEE International Symposium on Intelligent Control, Dearborn, MI, 1996.

1997

51. Raza H. and P. Ioannou, "Macroscopic Modeling of Automated Highway Systems" 36th IEEE Conference on Decision and Control, San Diego, California, Dec. 10-12, 1997, pp.4764-4770
52. A. Kanaris, P. Ioannou and F.S. Ho, "Spacing and Capacity Evaluation for Different AHS Concepts", 1997 American Control Conference, Albuquerque, NM, June 4-6, 1997
53. Y. Zhang and P. Ioannou, "Robustness of the Adaptive Backstepping Controllers for Linear Systems", 1997 American Control Conference, Albuquerque, NM, June 4-6, 1997
54. Raza H. and P. Ioannou, "Macroscopic Traffic Flow Modeling of Automated Highway Systems" The 5th IEEE Mediterranean Conference on Control and Systems, Paphos, Cyprus, July 21-23, 1997
55. E. Kosmatopoulos, A. Chassiakos, H. Boussalis. and P. Ioannou, "Robust Neural Stabilizers for Unknown Systems" 36th IEEE Conference on Decision and Control, San Diego, California, Dec. 10-12, 1997, pp. 1579-1585
56. E. Kosmatopoulos, H. Boussalis. and P. Ioannou, "Switching Adaptive Control for Nonlinear Systems" 36th IEEE Conference on Decision and Control, San Diego, California, Dec. 10-12, 1997, pp. 4145-4151
57. Raza H. and P. Ioannou, "Vehicle Following Control Design for Automated Highway Systems" IEEE 47th Vehicular Technology Conference, Phoenix Arizona, 1997

1998

58. A. Bose and P. Ioannou, "Issues and Analysis of Mixed Semi-Automated/Manual Traffic" Future Transportation Technology Conference and Exposition, Costa Mesa, California, August 11-13, 1998, SAE Technical Paper Series No. 981943
59. A. Bose and P. Ioannou, "Evaluation of Mixed Semi-Automated/Manual Traffic" IEEE International Conference on Control Applications, Trieste, Italy, Sept. 1-4, 1998
60. E. Kosmatopoulos, A. Chassiakos, H. Boussalis, M. Mirmirani and P. Ioannou, "Robust, Decentralized, Adaptive and Neural Control of a Large Segmented Reflector" 37th IEEE Conference on Decision and Control, Florida, Dec. 1998
61. E. Kosmatopoulos, A. Chassiakos, and P. Ioannou, "Robust Neural Stabilizers for Unknown Systems" 37th IEEE Conference on Decision and Control, Florida, Dec. 1998
62. E. Kosmatopoulos and P. Ioannou, "Robust Switching Adaptive Control using Control Lyapunov Functions" 37th IEEE Conference on Decision and Control, Florida, Dec. 1998
63. K. Li, E. Kosmatopoulos, P. Ioannou, H. Boussalis, M. Mirmirani and A. Chassiakos "Control Techniques for a Large Segmented Reflector," Proceedings of the 37th IEEE Conference on Decision and Control, 1998, pp. 813-818
64. A. Bose and P. Ioannou, "Evaluation of Mixed Semi-Automated/Manual Traffic", Proceedings of the 1998 IEEE International Conference on Control Applications, pp. 868-872, vol. 2, 1998.

1999

65. A. Bose and P. Ioannou, "Analysis of traffic flow with mixed manual and semi-automated vehicles", Proceedings of the 1999 American Control Conference, pp. 2173-2177, San Diego, June 1999.
66. K. Li, E. Kosmatopoulos, P. Ioannou and H. Boussalis "Centralized, Decentralized and Overlapping Approaches for the Control of a large Segmented Telescope," Proceedings of the 1999 IEEE International Symposium on Intelligent Control Intelligent Systems and Semiotics, pp. 173-178.

2000

67. H. Jula and P. Ioannou "Container Terminals Using Automated Shuttles Driven by Linear Motors," 9th IFAC Symposium on Control in Transportation Systems 2000.
68. A. Bose and P. Ioannou, "Shock Waves in Mixed Traffic Flow", 9th IFAC Symposium on Control in Transportation Systems 2000.
69. A. Bose and P. Ioannou "Environmental Evaluation of Intelligent Cruise Control (ICC) Vehicles", Proc. of the IEEE Conference on Intelligent Transportation Systems, Dearborn, Oct. 1-3 , 2000, pp 352-357
70. C. Liu, H. Jula, K. Vukadinovic and P.A. Ioannou, "Comparing Different Technologies for Container Movement in Marine Container Terminals" Proc. of the IEEE Conference on Intelligent Transportation Systems, Dearborn, Oct. 1-3 , 2000 pp. 488-493

2001

71. Haojian Xu, Maj Mirmirani, and Petros Ioannou, "Robust Adaptive Sliding Control of Linearizable Systems" American Control Conference, June 2001, Arlington, Virginia, June 25-27, 2001
72. Haojian Xu, Pierre Leung, Maj Mirmirani, Helen Boussalis and Petros Ioannou "Design of a Controller for Hypersonic Flight Vehicle Using Sliding Mode Control Method" AAS/AIAA Space Flight Mechanics Meeting, Santa Barbara, California, February 11-15, 2001
73. Pitsillides A., P.A. Ioannou and Loukas Rossides "Congestion Control for Differentiated-Services using Non-linear Control Theory", Proceedings of the Sixth IEEE Symposium on Computers & Communications, ISCC 2001, July 3-5, 2001, Hammamet, Tynisia, pp. 726-733
74. Liu C. I. , Jula H. and P. A Ioannou ' A Simulation Approach for Performance Evaluation of Proposed Automated Container Terminals" Proc. of the 2001 Intelligent Transportation Systems Conference, Oakland, CA August 25-29, 2001, pp 563-568
75. Haojian Xu, P. A. Ioannou, M. Mirmirani, and H. Boussalis, 'Robust adaptive sliding control of linearizable systems', Proceedings of the *American Control Conference*, Arlington, Virginia, June 2001, pp. 4351-4356.

2002

76. Chin-I Liu, and Petros A. Ioannou 'A Petri Net modeling and Analysis of Automated Container Terminal Using AGVS' Transportation Research Board Annual Meeting, January 2002 (CD-ROM) pp 1-30
77. Chin-I Liu, and Petros A. Ioannou 'A Petri Net Based Approach For AGV Dispatch Scheduling and Fleet Size Determination' IFAC 15th Triennial World Congress, Barcelona, Spain, July 2002, (CD-ROM) pp 1-6
78. Petros Ioannou, Elias Kosmatopoulos and Alvin Despain 'Position Error Signal estimation at High sampling Rates Using Data and Servo Sector Measurements' 41st IEEE Conference on decision and Control Proceedings, Las Vegas, Nevada, USA Dec. 10-13, 2002, pp.67-72
79. Haojian Xu and Petros Ioannou 'Robust Adaptive Control of Linearizable Nonlinear Single Input Systems' IFAC 15th Triennial World Congress, Barcelona, Spain, July 2002, (CD-ROM) pp 1-6
80. Haojian Xu and Petros Ioannou 'Adaptive Control for a Class of MIMO Nonlinear Systems' 41st IEEE Conference on decision and Control Proceedings, Las Vegas, Nevada, USA Dec. 10-13, 2002, pp.3049-3054
81. Baris Fidan, Youping Zhang and Petros Ioannou 'A New Robust Adaptive Control Scheme for Linear Time Varying Systems' 41st IEEE Conference on decision and Control Proceedings, Las Vegas, Nevada, USA Dec. 10-13, 2002, pp.3061-3066
82. Baris Fidan, Elias Kosmatopoulos and Petros Ioannou 'A Switching Controller for a Multivariable LTI Systems with Known and Unknown Parameters' 41st IEEE Conference on decision and Control Proceedings, Las Vegas, Nevada, USA Dec. 10-13, 2002, pp.3688-3693
83. Arnab Bose and Petros Ioannou 'Adaptive Cruise Control (ACC) for Passenger Vehicles and Trucks: Performance and Environmental Impact' International Congress on Freight Transport Automation and Multimodality, Delft, May 23-24, 2002, pp. 1-37
84. Chin-I Liu and Petros Ioannou 'A Comparison of Different AGV Dispatching Rules in an Automated Container Terminal' The IEEE 5th International Conference on Intelligent Transportation Systems, Sept. 3-6, 2002, Singapore.

2003

85. P. A. Ioannou, H. Xu, and B. Fidan, "Servo control design for a hard disk drive based on estimated head position at high sampling rates", Proceedings of the 2003 American Control Conference, Vol.1, June 4-6, 2003, pp.731 – 736
86. Haojian Xu, P. A. Ioannou and M. Mirmirani, 'Decentralized-like adaptive control for a class of MIMO nonlinear systems', 4th IFAC Workshop on Robust Control Design, Milan, Italy, June 2003.
87. P. A. Ioannou and H. Xu, "Identification of the continuous-time transfer function of a system from sampled data measurements with application to hard disk drives", IEEE 11th Mediterranean Conference on Control and Automation MED'03, Rhodes, Greece, June 18-20, 2003.
88. H. Xu, M. Mirmirani, and P. A. Ioannou, "Robust neural adaptive control of a hypersonic aircraft", AIAA Guidance, Navigation, and Control Conference, Austin, Texas, August 2003.
89. H. Jula, M. Dessouky, P. Ioannou, and R. Hall, "Full-truck-load assignment and route planning in deterministic and stochastic environments," NSF Design, Service, Manufacture and Industrial Innovation Research Conference, Birmingham, Al., Jan 2003.
90. Andreas Pitsillides, Petros Ioannou, Marios Lestas, "Estimation of the Number of Virtual Connections in a Rate Based Flow Control Problem" Australian Telecommunications, Networks and Applications Conference (ATNAC), 2003.
91. A. Abdullah and P. Ioannou "Real-Time Control of a Segmented Telescope Test-Bed" Proc. Of the 42nd IEEE Conference on Decision and Control, Maui, Hawaii, Dec. 2003 pp 762-767
92. A. Abdullah and P. Ioannou "Decentralized Reconfigurable Control for Large-Scale Systems with Application to a Segmented Telescope Test-Bed" Proc. Of the 42nd IEEE Conference on Decision and Control, Maui, Hawaii, Dec. 2003 pp 768-773

2004

93. B. Fidan, M. Mirmirani, and P. A. Ioannou, "Air-Breathing Hypersonic Flight Control," 16th IFAC Symposium on Automatic Control in Aerospace, vol. 1, pp. 571-576, June 2004.
94. J. Zhang, P. Ioannou and A. Chassiakos, "Automated Container Transport System Between Inland Port and Terminals", 83rd TRB Annual Meeting, Washington, D.C., January 2004.
95. A. Abdullah and P. Ioannou "Control Design for F-16 Longitudinal Motion" 16th IFAC Symposium on Automatic Control in Aerospace, June 2004.
96. Marios Lestas, Petros Ioannou, Andreas Pitsillides, "A Congestion Control Algorithm for Max-Min Resource Allocation and Bounded Queue Sizes", American Control Conference, 2004
97. Lestas M. , Ioannou P., Pitsillides A. "A congestion control algorithm for max-min resource allocation and bounded queue sizes" Proceedings of 2004 ACC, vol 2 July 2004, Boston, pp 1683-1688
98. Lestas M. , Ioannou P. Pitsillides A. "On a hybrid model for max-min congestion controllers" Proceedings of the 43rd Conf. Decision and Control, December 2004, Bahamas, pp 543-548
99. J. Zhang, P. Ioannou, "Longitudinal Control of Heavy Trucks: Environmental and Fuel Economy Considerations", 7th IEEE Conference on Intelligent Transportation Systems, Washington DC, 2004.
100. J. Zhang, P. Ioannou and A. Chassiakos, "Automated Container Transport System Between Inland Port and Terminals", 83rd TRB Annual meeting, Washington DC, 2004

2005

101. J. Zhang, P. Ioannou, "Intelligent Cruise Control Design with Disturbance Rejection", IFAC 16th World Congress in Prague, 2005
102. J. Zhang and P.A. Ioannou, "Adaptive Vehicle Following Control System with Variable Time Headways," Proceedings of the 44th IEEE Conference on Decision and Control and European Control Conference, Seville, Spain Dec. 12-15, 2005, pp. 3880-3885.
103. J. Zhang, A. Boitor and P.A. Ioannou, "Design and Evaluation of a Roadway Controller for Freeway Traffic," Proceedings of the 8th IEEE Conference on Intelligent Transportation Systems, pp. 543-548, Vienna, Austria, September 2005
104. P.A. Ioannou and J. Zhang, "Roadway/Vehicle Integrated Transportation System," Workshop on Modeling and Control of Complex Systems, Ayia Napa, Cyprus, June 30 - July 1, 2005
105. Hwan Chang, Hossein Jula, Anastasios Chassiakos, and Petros Ioannou, "Empty Containers Interchange in the Los Angeles/Long Beach Port Area", INFORMS Annual Meeting 2005, San Francisco, CA, Nov 13-16, 2005.
106. Hwan Chang, Hossein Jula, Anastasios Chassiakos, and Petros Ioannou, "Empty Container Reuse in the Los Angeles/Long Beach Port Area", NUFC 2006, Long Beach, CA, Feb 1-3, 2006.

2006

107. J. Zhang and P.A. Ioannou, "Non-Identifier Based Adaptive Control with Guaranteed Stability," the 25th American Control Conference, Minneapolis, Minnesota, June 14-16, 2006.
108. J. Zhang and P.A. Ioannou, "A Simple Efficient Roadway Controller for Freeway Traffic," the 25th American Control Conference, Minneapolis, Minnesota, June 14-16, 2006
109. J. Zhang and P.A. Ioannou, "Safe Adaptive Control for Performance Improvement," the 45th IEEE Conference on Decision and Control, San Diego, California, Dec 13-15, 2006
110. Jianlong Zhang, Hwan Chang, Petros Ioannou, "A Simple Roadway Control System for Freeway Traffic", 2006 American Control Conference, Minneapolis, Minnesota, June 14-16, 2006
111. Ying Huo, Petros Ioannou, and Majdedin Mirmirani, 'An intelligent Flight Control Design with Guaranteed Flying Quality' 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, Nevada, Jan. 9-12, 2006
112. Hwan Chang, Hossein Jula, Anastassios Chassiakos, and Petros Ioannou, "Empty Container Reuse in the Los Angeles/Long Beach Port Area," NUFC 2006, Long Beach, CA, Feb 1-3, 2006.
113. H. Chang, H. Jula, A. Chassiakos, and P. Ioannou, "Handling Empty Containers in the Los Angeles/Long Beach Port Area," National Urban Freight Conference, Long Beach, CA, Feb. 2006

114. Y. Huo, M. Mirmirani, P. Ioannou, and M. Kuipers, 'Altitude and Velocity Tracking Control for an Airbreathing Hypersonic Cruise Vehicle', AIAA-2006-6695, AIAA Guidance, Navigation, and Control Conference and Exhibit, Keystone, Colorado, Aug. 21-24, 2006.
115. P. Ioannou 'Intelligent Vehicles: Closing the Loop with the Highway' 11th IFAC Symposium in Control of Transportation Systems, Delft, Netherlands, Aug. 28-Sept. 1st, 2006
116. Chassiakos, H. Chang, P. Ioannou, H. Jula, and F. Murgolol, "Evaluation of truck movement concepts on terminal efficiency and traffic flow: a simulation approach." In Proceedings of the 2nd National Urban Freight Conference, Long Beach, CA, Dec. 2007.
117. Hwan Chang, Yun Wang, Jianlong Zhang, and Petros A. Ioannou, "An Integrated Roadway Controller and its Evaluation by Microscopic Simulator VISSIM," European Control Conference 2007, Kos, Greece, July 2-5, 2007
118. Wang Y. and P. Ioannou, 'Real-time Parallel Parameter Estimators for a Second-order Macroscopic Traffic Flow Model', in Proceedings of the 9th IEEE Intelligent Transportation Systems Conference, Toronto, Canada, Year 2006, pp. 1466-1470.
119. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "Optimal Static Soaring of UAVs Using Vehicle Routing with Time Windows," 45th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, Jan. 2007
120. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "A Robust Adaptive Control Design for Gliders Subject to Actuator Saturation Nonlinearities," 2007 American Control Conference, New York, July 2007
121. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "A Stochastic Approach to Optimal Soaring Problem and Robust Adaptive LQG Control," AIAA Infotech@Aerospace 2007 Conference and Exhibit, Rohnert Park, CA, May 2007
122. Y. Huo, P. Ioannou, and M. Mirmirani, 'An Intelligent Flight Control Design with Guaranteed Flying Quality', AIAA-2006-1477, 44th AIAA Aerospace Sciences Meeting and Exhibit, Reno, Nevada, Jan. 9-12, 2006
123. Y. Huo, M. Mirmirani, P. Ioannou, and M. Kuipers, "Altitude and velocity tracking control for an airbreathing hypersonic cruise vehicle," in Proc. AIAA Guidance, Navigation, and Control Conf., AIAA Paper 2006-6695, 2006.
124. B. Fidan, M. Kuipers, P. Ioannou, and M. Mirmirani, "Longitudinal Motion Control of Air-Breathing Hypersonic Vehicles Based on Time-Varying Models," in Proc. 14th AIAA/AHI Space Planes and Hypersonic Systems and Technologies Conference, Canberra, Australia, 2006.

2007

125. Lestas M., Pitsillides A., Ioannou P. and Hadjipollas G., 'Queue Length Based Internet Congestion Control', IEEE International Conference on Networking, Sensing and Control (ICNSC2007), will appear April 2007.
126. Chassiakos, H. Chang, P. Ioannou, H. Jula, and F. Murgolol, "Evaluation of truck movement concepts on terminal efficiency and traffic flow: a simulation approach." In Proceedings of the 2nd National Urban Freight Conference, Long Beach, CA, Dec. 2007.
127. Hwan Chang, Yun Wang, Jianlong Zhang, and Petros A. Ioannou, "An Integrated Roadway Controller and its Evaluation by Microscopic Simulator VISSIM," Proceeding of the 2007 European Control Conference 2007, Kos, Greece, July 2-5, 2007.
128. Hwan Chang, Yun Wang, and Petros A. Ioannou, "The Use of Microscopic Traffic Simulation Model for Traffic Control Systems," Proceedings of the 2007 International Symposium on Information Technology Convergence, JeonJu, Koera, Nov. 23-24, 2007.
129. Anastasios Chassiakos, Hwan Chang, Petros Ioannou, Hossein Jula, and Frank Murgolo, "Evaluation of Truck Movement Concepts on Terminal Efficiency and Traffic Flow: A Simulation Approach," Proceedings of the 2007 National Urban Freight Conference, Long Beach, CA, Dec. 5-7, 2007

130. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "Optimal Static Soaring of UAVs Using Vehicle Routing with Time Windows," 45th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, 8-11 Jan. 2007
131. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "A Stochastic Approach to Optimal Soaring Problem and Robust Adaptive LQG Control," AIAA Infotech@Aerospace 2007 Conference and Exhibit, Rohnert Park, CA, 7-10 May 2007
132. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "A Robust Adaptive Control Design for Gliders Subject to Actuator Saturation Nonlinearities," 2007 American Control Conference, New York City, 11-13 July 2007, pp. 492-497
133. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "A Heuristic Search Algorithm for Maneuvering of UAVs across Dense Thermal Areas," AIAA Guidance, Navigation and Control Conference and Exhibit, Hilton Head, SC, 20 - 23 Aug. 2007
134. Nazli E. Kahveci, Petros A. Ioannou, Maj D. Mirmirani, "Adaptive Control of Unmanned Aerial Vehicles in Atmospheric Flight with Reduced Models," 2007 SAE AeroTech Congress and Exhibition, Los Angeles, CA, 17-20 Sept. 2007
135. Nazli E. Kahveci, Petros A. Ioannou, "An Indirect Adaptive Control Design with Anti-windup Compensation: Stability Analysis," 46th IEEE Conference on Decision and Control, New Orleans, LA, 12-14 Dec. 2007, pp. 1294-1299
136. Lestas M., Pitsillides A., Ioannou P. and Hadjipollas G., "Queue Length based Internet Congestion Control", Proc. 2007 International Conference on Networking Sensing and Control, London, April 2007, pp. 584-589.
137. M. Kuipers, M. Mirmirani, P. Ioannou, and Y. Huo, 'Adaptive Control of an Aeroelastic Airbreathing Hypersonic Cruise Vehicle', in Proc. AIAA Guidance, Navigation, and Control Conf., AIAA Paper 2007-6326, Aug 2007.

2008

138. Hadjipollas G., Hadjipollas M., Lestas M., Ioannou P. and Pitsillides A., "Evaluation of new ramp metering and variable speed algorithms on the Cyprus Highway network", Proc. 1st European Easyway Conference, Taorminia-Giardini Naxos, October 14-16, 2008
139. Levin J., Perez Arancibia N. O., Ioannou P., Tsao T.-C., "Adaptive disturbance rejection for disk drives using neural networks," Proc of American Control Conference, Seattle, WA, Jun. 2008.
140. Levin, J., Ioannou, P. , "Multirate adaptive notch filter with an adaptive bandwidth controller for disk drives," Proc of American Control Conference, Seattle, WA, Jun. 2008.
141. Levin, J., Ioannou, P., Mirmirani, M. D., "Adaptive mode suppression for an aeroelastic airbreathing hypersonic cruise vehicle," in Proc of AIAA Guidance, Navigation, and Control Conference, Honolulu, HI, Aug. 2008
142. Nazli E. Kahveci, Petros A. Ioannou, "Flight Trajectory Optimization for Multiple Autonomous Glider Unmanned Aerial Vehicles," 46th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV, 7-10 Jan. 2008
143. Nazli E. Kahveci, Petros A. Ioannou, "Optimal Flight Trajectories Through Recursive Thermal Streets with Uncertain Climb Rates," 10th AIAA Non-Deterministic Approaches Conference, Schaumburg, IL, 7-10 Apr. 2008
144. Nazli E. Kahveci, Petros A. Ioannou, "Indirect Adaptive Control for Systems with Input Rate Saturation," 2008 American Control Conference, Seattle, WA, 11-13 June 2008, pp. 3396-3401
145. Nazli E. Kahveci, Petros A. Ioannou, "Genetic Algorithms for Shortest Path Routing of Autonomous Gliders," AIAA Guidance, Navigation and Control Conference and Exhibit, Honolulu, HI, 18-21 Aug. 2008
146. M. Kuipers and P. Ioannou, "Multiple Model Adaptive Control With Mixing: A Pedagogical Example," Proc. of the 47th IEEE Conference on Decision and Control, Cancun, Mexico, pp. 3239-3244, December 2008.

147. M. Kuipers, P. A. Ioannou, B. Fidan, and M. Mirmirani, "Robust Adaptive Multiple Model Controller Design for an Airbreathing Hypersonic Vehicle Model," in Proc. AIAA Guidance, Navigation and Control Conf., AIAA Paper 2008-7142, Honolulu, Hawaii, Aug 2008.
148. M. Kuipers and P. A. Ioannou, "Practical Robust Adaptive Control: Benchmark Example," Proc. American Control Conference, Seattle, Washington, pp. 5168 – 5173, June 2008.
- 2009**
149. M. Kuipers, P. A. Ioannou, B. Fidan, and M. Mirmirani, "Analysis of an Adaptive Mixing Control Scheme for an Airbreathing Hypersonic Vehicle Model," American Control Conference, St. Louis, Missouri, June 2009.
150. M. Kuipers and P.A. Ioannou, 'Robust Adaptive Controller Scheduling Using Mixing', 17th Mediterranean Conference on Control and Automation, Thessaloniki Greece, June 24-26, 2009.
151. Levin, J., Ioannou, P., "Adaptive Control with Neuro-Adaptive Disturbance Rejection," in Proc of Mediterranean Conference on Control and Automation, Thessaloniki Greece, June 24-26, 2009.
152. Yun Wang, Hwan Chan, Petros A. Ioannou, 'Lane Change Guidance for Freeway Incident Management', 12th IFAC Symposium on Transportation Systems, Redondo Beach, CA, USA, September 2-4, 2009, pp 7-11
153. Hwan Chang, Hossein Jula, Anastasios Chassiakos, and Petros Ioannou, 'Integrated simulation of freeway traffic flow and container terminal operation:framework and case study' 12th IFAC Symposium on Transportation Systems, Redondo Beach, CA, USA, September 2-4, 2009, pp 123-129
154. Afshin Abadi, Mithun Baphana, and Petros Ioannou, 'Simulation Models for Evaluation of Terminal Operations and Traffic Flow on Adjacent Road Network' 12th IFAC Symposium on Transportation Systems, Redondo Beach, CA, USA, September 2-4, 2009, pp129-137
155. George Papageorgiou, Petros Ioannou , Andreas Pitsillides, Thrasos Aphasimis, Athanasios Maimaris Development and Evaluation of Bus Priority Scenarios via Microscopic Simulation Models', 12th IFAC Symposium on Transportation Systems, Redondo Beach, CA, USA, September 2-4, 2009 pp 434-441
156. Nazli E. Kahveci, Petros A. Ioannou , 'Adaptive Control Design for Cargo Ship Steering with Limited Rudder Angle' 12th IFAC Symposium on Transportation Systems, Redondo Beach, CA, USA, September 2-4, 2009, pp505-512
157. H. Jula, H. Chang, A. Chassiakos, and P. Ioannou, "Multiple Berth Allocation Problem," 23rd European Conference on Operations Research, Bonn, Germany, July 2009.
158. H. Chang, H. Jula, A. Chassiakos, and P. Ioannou, "Modeling and Mitigating Port Disruptions," National Urban Freight Conf., Long Beach CA., October 2009.
159. Nazli E. Kahveci, Petros A. Ioannou, "Aircraft Dynamics with Input Rate Constraints: An Adaptive Flight Control Application," AIAA Guidance, Navigation and Control Conference and Exhibit, Chicago, IL, 10-13 Aug. 2009.
- 2010**
160. Nazli E. Kahveci, Petros A. Ioannou, "Advanced Static Soaring Flight Controls for Input Constrained Aircraft," 48th AIAA Aerospace Sciences Meeting and Exhibit, Orlando World Center Marriott, Orlando, FL, 4-7 Jan. 2010.
161. Baldi S., Ioannou P. A., & Mosca E. 'Evaluation of Identifier based and Non-identifier based Adaptive Supervisory Control using a Benchmark Example' Proceedings of the 4th International Symposium on Communications, Control and Signal Processing, ISCCSP 2010, Limassol, Cyprus, 3-5 March 2010.
162. Ioannou P. A., Mosca E., & Baldi S. 'Multiple Model Adaptive Control with Mixing: Discrete-time Case', Stochastic Modeling Techniques and Data Analysis International Conference, SMTDA2010, Chania, Crete Greece, June 8-11 2010.
163. Papageorgiou, G, Maimaris A., Ioannou P., Pitsillides A. and Aphames T, 'Introduction of Bus Rapid Transit in Cyprus: Evaluation of Bus Priority Scenarios', TRB 89th Annual Meeting, Report no. 10-0629, January 2010

164. Nazli E. Kahveci, Petros A. Ioannou, "Handling Qualities of the F-8 Digital Fly-by- Wire Aircraft and Adaptive Control for Longitudinal Dynamics," Infotech@Aerospace 2010 Conference and Exhibit, The Westin Buckhead Atlanta, Atlanta, GA, 20-22 Apr. 2010.
165. Nazli E. Kahveci, Petros A. Ioannou, "Cruise Control with Adaptation and Wheel Torque Constraints to Improve Fuel Economy," 2010 IEEE Intelligent Vehicles Symposium, University of California, San Diego, CA, 21-24 June 2010.
166. Nazli E. Kahveci, Petros A. Ioannou, "Parameter Identification and Adaptive Control for Improved Vehicle Yaw Stability Performance," 49th IEEE Conference on Decision and Control, Atlanta, GA, 15-17 Dec. 2010.
167. Michael D. Orosz, Carl Southwell, Anthony Barrett, Jennifer Chen, Petros Ioannou, Afshin Abadi, Isaac Maya, ' PortSec: A Port Security Risk Analysis and Resource Allocation System' IEEE International Conference on Technologies for Homeland Security, Nov. 8-10, 2010, Waltham, MA, USA

2011

168. Yun Wang, Petros Ioannou and George Papageorgiou, 'New Model for Variable Speed Limits' TRB 90th Annual Meeting, Pres. # 11-2888 , January 23-27, 2011, Washington DC.
169. S. Baldi, E. B. Kosmatopoulos, K. Aboudolas, D. Rovas, A. Papachristodoulou and P. A. Ioannou, 'Nonlinear Control of Large Scale Complex Systems Using Convex Optimization Tools and Self-Adaptation', 2011 50th IEEE Conference on Decision and Control and European Control Conference (CDC-ECC), Orlando, FL, USA, December 12-15, 2011, pp. 5407-5412
170. A. Chassiakos, P. Ioannou, H.Jula, H. Chang, 'Recovery Methods for Port Disruptions as a Multi-Berth Allocation Problem' 4th National Urban Freight Conference, October 12-14, 2011, Long Beach, CA
171. A. Abadi, P. Ioannou, ' Reducing the Impact of Port Disruptions by Service Network Optimization for Goods Movement', 4th National Urban Freight Conference, October 12-14, 2011, Long Beach, CA
172. A. Abadi, P. Ioannou, James Moore II, Jean-Pierre Bardet, Cost Impact of Earthquakes on Port Operations and the Adjacent Traffic Flows, 4th National Urban Freight Conference, October 12-14, 2011, Long Beach, CA
173. N. Kahveci and P. Ioannou, 'Backstepping Control Design for Intelligent Actuation Systems', IEEE Conference on Intelligent Transportation Systems - ITSC 2011, October 5-7, 2011, Washington, DC, USA
174. Y. Wang and P. Ioannou, ' The Impact of Variable Speed Limits on Freeway Traffic', 4th National Urban Freight Conference, October 12-14, 2011, Long Beach, CA
175. E. Kosmatopoulos, K. Aboudolas, D. Rovas, A. Papachristodoulou, P. Ioannou, "Nonlinear Control of Large Scale Complex Systems: The AGILE Control Design Approach" The 19th IEEE Mediterranean Conference on Control and Automation, June 20-23, 2011, Corfu, Greece
176. Kosmatopoulos, E. B. and Baldi, S. and Aboudolas, K. and Rovas, D. V. and Papachristodoulou, A. and Ioannou, P. A., 'Nonlinear Control of Large Scale Complex Systems Using Convex Control Design Tools', The 19th IEEE Mediterranean Conference on Control and Automation, MED2011, June 20th-23rd, Aquis Corfu Holiday Palace, Corfu, Greece, 2011, pp. 1022 -1027
177. S. Baldi, P. Ioannou and E. Mosca, 'Discrete-time Adaptive Mixing Control with Stability-preserving Interpolation: the Output Regulation Problem', 18th IFAC World Congress, Milan, Italy, August/September, 2011, Milan, Italy, 2011, Volume# 18, Part# 1, pp. 102-107
178. Mylonas Y., Lestas M., Pitsillides A. and Ioannou P., 'Speed Adaptive Probabilistic Flooding for Vehicular Ad-Hoc Networks', 22nd annual IEEE International Symposium on

Personal, Indoor and Mobile and Radio Communications, pp. 719-723, Toronto, Canada, September, 2011.

2012

179. Baldi, S. Ioannou, P. A. and Kosmatopoulos, E. B., A Scalable Iterative Convex Design for Nonlinear Systems, The 2012 American Control Conference, June 27th-29th, Montréal, Canada, 2012
180. Baldi, S. and Ioannou, P. A., Stability Margins in Adaptive Mixing Control via a Lyapunov-based Switching Criterion, 51st IEEE Conference on Decision and Control, December 10th-13th, Maui, Hawaii, USA, 2012
181. Butakov V., P. Ioannou, M. Toppelhofer and J. Camhi, 'Driver/vehicle Response Diagnostic System for Vehicle Following Based on Gaussian Mixture Model', 51st IEEE Conference on Decision and Control, December 10th-13th, Maui, Hawaii, USA, 2012
182. Maimaris A., G. Papageorgiou, P. Ioannou and T. Aphas, 'Planning for Effective Bus Rapid Transit Systems: A Scenario Simulation Modeling Based Approach', IFAC 13th Symposium on Control in Transportation Systems, Sofia, Bulgaria, September 12-14, 2012

2013

183. S. Baldi, E. Kosmatopoulos and P. Ioannou, 'Semiglobal Stabilization of Nonlinear Uncertain Systems via a Lyapunov-based Switching Logic', 52nd IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013
184. S. Baldi, I. Michaelides, H. Jula, E. Kosmatopoulos and P. Ioannou, "'Plug-n-Play" Computationally Efficient Approach for Control Design of Large-Scale Nonlinear Systems using co-Simulation', 52nd IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013
185. S. Jafari, P. Ioannou, B. Fitzpatrick and Y. Wang, 'Robust Stability and Performance of Adaptive Jitter Suppression in Laser Beam Pointing', 52nd IEEE Conference on Decision and Control, Firenze, Italy, December 10-13, 2013
186. A. Georgiou, P. Ioannou and P. Christodoulides, 'Electricity Consumption and the Awareness Factor' 4th International Conference on Renewable Energy Sources and Energy Efficiency: New Challenges, paper no. 1342, Nicosia, Cyprus, June 6-7, 2013
187. Saeid Jafari, Petros A Ioannou, Lael Rudd, 'What is L1 Adaptive Control', AIAA Guidance, Navigation, and Control (GNC) Conference, pp. 1-9, Boston, USA, August 19-22, 2013.
188. Saeid Jafari, Petros A Ioannou, Lael Rudd, 'Control of a Flexible Aircraft using a Lyapunov-based Switching Scheme with a Guaranteed Stability Margin', AIAA Guidance, Navigation, and Control (GNC) Conference, pp. 1-7, Boston, USA, August 19-22, 2013.
189. A. Abadi and P. Ioannou, 'Port Mitigation Strategies' 5th International Urban Freight Conference, Long Beach, CA, October 8-10, 2013
190. S. Jafari and P. Ioannou, 'Adaptive Suppression of Periodic Disturbances in MIMO Linear Systems, 21st Mediterranean Conference on Control and Automation, Crete, Greece, June 25-28, 2013, pp. 995-1001
191. T. Rajabioun, F. Brandon and P. Ioannou, ' Intelligent Parking Assist', 21st Mediterranean Conference on Control and Automation, Crete, Greece, June 25-28, 2013, pp. 1156-1161

2014

192. Silva, A.C., I.D. Landau and P.A Ioannou, ' Direct Adaptive Regulation in the Vicinity of Low Damped Complex Zeros-Application to Active Vibration Control', 22nd Mediterranean Conference on Control and Automation, Palermo, Italy, June 16-19, 2014, pp. 255-260
193. A. Abadi and P.A. Ioannou, 'Optimization Strategies for Resilient Freight Transport and Sustainability' 53rd IEEE Conference on Decision and Control, Dec. 15-17, 2014, Los Angeles, CA

194. S. Jafari and P. Ioannou, 'Adaptive Rejection of Noise-corrupted Periodic Disturbance Components with Unknown Frequencies' 6th International Symposium on Communications, Control, and Signal Processing: Special Session on Recent Advances in Control and Applications, May 21-23, 2014, Athens, Greece

2015

195. Y. Zhang and P. A. Ioannou, "Combined variable speed limit and lane change control for truck-dominant highway segment," Proceeding of 2015 IEEE 18th International Conference on ITS, Las Palmas, Spain, Sept. 2015, pp. 1163–1168.
196. G. Papageorgiou, A. Maimaris and P. Ioannou, 'Analysis and Evaluation of Intelligent Bus Rapid Transit Systems in Cyprus', Proceeding of 2015 IEEE 18th International Conference on ITS, Las Palmas, Spain, Sept. 2015, pp. 1163–1168.
197. V. Butakov and P. Ioannou, 'Driving Autopilot with Personalization Feature for Improved Safety and Comfort', Proceeding of 2015 IEEE 18th International Conference on ITS, Las Palmas, Spain, Sept. 2015.
198. Y. Zhang and P. A. Ioannou, 'Highway Traffic Flow Control with High Volume of Trucks' 2015 International Urban Freight Conference, October 21-23, 2015, Long Beach, CA.
199. Y. Zhao and P. A. Ioannou, 'Positive Train Control with Active Communication System', 2015 International Urban Freight Conference, October 21-23, 2015, Long Beach, CA.
200. Y. Zhao, T. Rajabioun, F. Vital and P. A. Ioannou, 'Evaluation of Traffic Light Priority for Trucks on Traffic Flow, 2015 International Urban Freight Conference, October 21-23, 2015, Long Beach, CA.
201. Castellano Silva, I. Landau, L. Dugard and P. Ioannou, 'Robustness enhancing for active vibration control in the presence of damped complex zeros-A Youla-Kucera approach', International Conference on Advances in Vibrations, March 30-April 1, 2015, Porto Portugal

2016

202. Yihang Zhang, Petros A. Ioannou, "Environmental Impact of Combined Variable Speed Limit and Lane Change Control: A Comparison of MOVES and CMEM Model," 14th IFAC Symposium on Control in Transportation Systems (CTS 2016), Istanbul, Turkey, May 18-20 2016, vol. 49, no. 3, pp. 323-328.
203. Baldi S., Kosmatopoulos E. B., Pitsillides A., Lestas M., and Ioannou P. A., "Adaptive Optimization for Active Queue Management supporting TCP Flows", The 2016 American Control Conference, July 6th–8th, Boston, MA, USA, pp. 751-756, 2016.
204. P. Ioannou and Y. Zhang. "Intelligent driver assist system for urban driving," IEEE Digital Media Industry & Academic Forum (DMIAF), Santorini, Greece, July 4-6 2016, pp. 128-134
205. G. Lympferopoulos and P. Ioannou, "Adaptive control of Networked Distributed Systems with unknown interconnections", in Proc. of the 55th IEEE Conference on Decision and Control, Las Vegas, Nevada, USA, December 2016.
206. Yanbo Zhao, Petros Ioannou, A Traffic Light Signal Control System with Truck Priority, 14th IFAC Symposium on Control in Transportation Systems, Istanbul, Turkey, 18—20 May 2016.

2017

207. Y. Zhao, P. Ioannou, and M. M. Dessouky, Routing of Multimodal Freight Transportation Using a Co-simulation Optimization Approach, 96th Annual Meeting of Transportation Research Board, Washington D.C., January 2017.
208. S. Jafari and P. A. Ioannou, "Overparameterized robust MRAC for rejection of unknown periodic disturbances acting on unknown plants in the presence of noise," 2017 25th Mediterranean Conference on Control and Automation (MED), Valletta, 2017, pp. 822-827. <http://ieeexplore.ieee.org/document/7984220/>

209. Y. Zhao, P. Ioannou, and M. M. Dessouky, "A Hierarchical Co-Simulation Optimization Control System for Multimodal Freight Routing," in Proceedings of 2017 IEEE 20th International Conference on Intelligent Transportation Systems, Yokohama, Japan, October, 2017.
210. Y. Zhang, P. A. Ioannou, "Integrated Control of Highway Traffic Flow", 2017 International Urban Freight Conference (I-NUF), Long Beach, October, 2017
211. Y. Zhang, I. I. Sirmatel, F. Alasiri, P. A. Ioannou, N. Geroliminis "Comparison of Feedback Linearization & Model Predictive Techniques for Variable Speed Limit Control", 2017 IEEE 20th International Conference on Intelligent Transportation Systems, Yokohama, October, 2017.
212. G. Lymperopoulos and P. Ioannou, "Adaptive networked distributed model reference control systems with strong interconnections and delays," 2017 IEEE 56th Annual Conference on Decision and Control (CDC), Melbourne, VIC, 2017, pp. 4783-4788.
- 2018**
213. Fernando V Monteiro and Petros Ioannou, On-Street Parking Prediction Using Real-Time Data, IEEE Conference on Intelligent Transportation Systems, Proceedings, 2478-2483, 2018
214. Yihang Zhang, Isik I. Sirmatel, Faisal Alasiri, Petros A. Ioannou and Nikolas Geroliminis, 'Comparison of Feedback Linearization and Model Predictive Techniques for Variable Speed Limit Control,' 2018 21st International Conference on Intelligent Transportation Systems (ITSC), Maui, HI, USA, 2018, pp. 3000-3005.
215. Min Zhou, Hairong Dong, Yanbo Zhao, Yihang Zhang and Petros A. Ioannou, 'Optimal number and location planning of evacuation leader in subway stations,' 15th IFAC Symposium on Control in Transportation Systems (CTS), Savona, Italy, 2018, pp. 410-415.
- 2019**
216. Aristotelis-Angelos Papadopoulos, Ioannis Kordonis, Maged Dessouky, Petros Ioannou, 'A coordination mechanism for the freight routing problem with discrete time intervals', European Control Conference (ECC 19), Naples, Italy, 2019.
217. G. Lymperopoulos and P. Ioannou, "Distributed adaptive control of multi-zone HVAC systems," 27th Mediterranean Conference on Control and Automation (MED), IEEE, July 2019.
218. G. Lymperopoulos and P. Ioannou, "Distributed Adaptive HVAC Control for Multi-Zone Buildings," 58th IEEE Conference on Decision and Control (CDC), IEEE, Dec 2019.
219. F. Vital, and P. Ioannou, "Long-Haul Truck Scheduling with Driving Hours and Parking Availability Constraints," 2019 IEEE Intelligent Vehicles Symposium (IV), Paris, France. June 9-12, 2019.
220. F. Vital, and P. Ioannou, "Including Parking Availability Constraints in the Truck Driver Scheduling Problem," PSR UTC Congress 2019, Tucson, Arizona. April 8-9, 2019.
221. F. Vital, and P. Ioannou, "Truck Driver Shortest Path and Scheduling Problem with Working Hours and Parking Availability Constraints," 8th METRANS International Urban Freight Conference, October 2019
- 2020**
222. F. Vital and P. Ioannou, "Truck Routing under Rest Area Parking Constraints," 2020 IEEE 23rd International Conference on Intelligent Transportation Systems (ITSC), Rhodes, Greece, 2020, pp. 1-6, doi: 10.1109/ITSC45102.2020.9294253.
223. Fernando Monteiro and Petros Ioannou 'Cooperative Gap Generation for Safe Lane Changes in Connected Environments', 2020 IEEE Intelligent Vehicles Symposium (IV) (IV 2020)
224. Panayiotis M. Papadopoulos, Giorgios Lymperopoulos, Marios M. Polycarpou, Petros Ioannou, 'Model-based Fault Detection and Localization Algorithm for Air Handling Units

in Large-Scale Buildings, The 16th Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2020) COEX, Seoul, Korea | July 20 - 24, 2020 Indoor Air 2020 conference (Virtual)

225. M. Pooladsanj, K. Savla, P. Ioannou, "Vehicle Following Over a Closed Ring Road under Safety Constraint", in *2020 IEEE Intelligent Vehicles Symposium (IV)*, Oct 2020.
226. Aristotelis Angelos Papadopoulos and Ioannis Kordonis and Maged Dessouky and Petros A. Ioannou, 'Pareto-Improving Pricing Schemes for Route Assignment of Heterogeneous Users' 21st IFAC World Congress, 2020, (IFAC 2020)
227. Faisal Alasiri, Yihang Zhang, Petros Ioannou, 'Lane Change Control for Congestion Management at Bottlenecks', 2020 IEEE Intelligent Transportation Systems Conference (ITSC), September 20 – 23, 2020 (Virtual)
228. Georgios Lympelopoulou, Panayiotis Papadopoulos, Petros A. Ioannou, Marios M. Polycarpou 'Distributed Adaptive Control of Air Handling Units for Interconnected Building Zones' 2020 American Control Conference, Denver, Colorado, USA, July 1-3, 2020

2021

229. F. Vital and P. Ioannou, "Effects of Working Hour Regulations and Parking Shortages on Truck Electrification," *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)*, 2021, pp. 3360-3365, doi: 10.1109/ITSC48978.2021.9564810.
230. Yuan, Tianchen, Faisal Alasiri, Yihang Zhang, and Petros A. Ioannou. "Evaluation of Integrated Variable Speed Limit and Lane Change Control for Highway Traffic Flow." 16th IFAC Symposium on Control in Transportation Systems CTS 2021, pages 107-113.
231. Monteiro, F. V. and Ioannou, P, Safe Lane Change and Merging Gaps in Connected Environments, 16th IFAC Symposium on Control in Transportation Systems CTS 2021, pages 69-74

2022

232. Yihang Zhang, Aristotelis-Angelos Papadopoulos, Pengfei Chen, Faisal Alasiri, Tianchen Yuan, Jin Zhou, and Petros Ioannou, *Integrated Traffic Simulation-Prediction System using Neural Network with Application to the Los Angeles International Airport Road Network, IEEE Conference on Decision and Control, Cancun, Mexico, Dec. 2022*
233. M. Waqas, N. Naik, P. Ioannou, P. Nuzzo, "Contract-Based Control Synthesis with Barrier Functions for Vehicular Mission Planning", *2022 Conference on Decision and Control (CDC)*, 2022
234. M. Waqas, M. Ali Murtaza, P. Nuzzo and P. Ioannou, "Correct-By-Construction Design of Adaptive Cruise Control with Control Barrier Functions Under Safety and Regulatory Constraints," *2022 American Control Conference (ACC)*, 2022, pp. 5140-5146, doi: 10.23919/ACC53348.2022.9867464.
235. M. Waqas, F. V. Monteiro and P. Ioannou, "Trade-off Between Safety and Traffic Flow for Connected Autonomous Vehicles in the Presence of Traffic Signals," *2022 IEEE 25th International Conference on Intelligent Transportation Systems (ITSC)*, 2022, pp. 2642-2647, doi: 10.1109/ITSC55140.2022.9922391.
236. P. Ioannou, Z. Wang and M. Dessouky, 'Time-dependent pickup and delivery problems with stochastic travel times and hard time windows via branch-price-and-cut', 9th International Urban Freight Conference (I-NUF), May 2022, Long Beach, CA
237. Pengfei Chen, P. Ioannou and M. Dessouky, 'Distributed load balancing freight routing with a co-simulation optimization method', 9th International Urban Freight Conference (I-NUF), May 2022, Long Beach, CA

2023

238. M. Pooladsanj, K. Savla and P. A. Ioannou, "Throughput of Freeway Networks under Ramp Metering Subject to Vehicle Safety Constraints," 2023 American Control Conference

(ACC), San Diego, CA, USA, 2023, pp. 4425-4430, doi: 10.23919/ACC55779.2023.10156545.

239. Gary Rostomyan Ketan Savla Petros A. Ioannou 'Decreasing Delay at Signal Free Intersection Through High Order Reference Trajectories' IEEE ITS Conference, Bilbao Spain 2023
240. G Rostomyan, K Savla, PA Ioannou, 'Bottleneck management using pricing under constraints', 2023 American Control Conference (ACC), 4405-4411

2024

241. M Pooladsanj, Z Li, K Savla, P Ioannou, 'Performance Evaluation of Ramp Metering Under Different Traffic Measurement Scenarios' Transportation Research Board 103rd Annual Meeting Transportation Research Board, 2024
242. P. Chen, P Ioannou, M Dessouky, G Giuliano, 'Freight Routing for System Efficiency and Sustainability, 2024 Forum for Innovative Sustainable Transportation Systems (FISTS), 1-7, Univ. of California Riverside, 2024
243. Tianchen Yuan, Petros A. Ioannou, 'An Integrated Approach for Freeway and Arterial Traffic Control Using Q-Learning Framework', 2024 IEEE 27th International Conference on Intelligent Transportation Systems (ITSC), September 24- 27, 2024, Edmonton, Canada
244. Filipe de Almeida Araujo Vital and Petros Ioannou, 'Parking Costs and Long-Haul Truck Parking Demand', 2024 IEEE 27th International Conference on Intelligent Transportation Systems (ITSC), September 24- 27, 2024, Edmonton, Canada
245. Gary Rostomyan, K. Savla and Petros Ioannou, 'Centrally Coordinated Vehicles In A Signal Free Intersection', 2024 IEEE 27th International Conference on Intelligent Transportation Systems (ITSC), September 24- 27, 2024, Edmonton, Canada

2025

246. J. Stewart, I. Chang, Y. Gu, and P. Ioannou, "Adaptive Ankle Torque Control for Bipedal Humanoid Walking on Surfaces with Unknown Horizontal and Vertical Motion," in Proceedings of the American Control Conference, Denver, CO, USA, 2025.

Invited Conference Papers

1981

1. P. A. Ioannou and C. R. Johnson, Jr., "Reduced-Order Performance of Parallel and Series-Parallel Identifiers of Two-Time Scale Systems," Proc. of the Workshop on Applications of Adaptive Systems Theory, Yale University, May 1981, pp. 169-175.

1982

2. P. A. Ioannou and P. V. Kokotovic, "Reduced-Order Adaptive Control," IFAC Workshop on Singular Perturbations and Robustness of Control Systems, Lake Ohrid, Yugoslavia, July 1982.
3. P. A. Ioannou and P. V. Kokotovic, "Singular Perturbations and Robust Redesign of Adaptive Control," The 21st Conference on Decision and Control, Orlando, FL, December 1982.

1983

4. P. A. Ioannou, "Robust Redesign of Adaptive Control in the Presence of Disturbances and Unmodeled Dynamics," The IFAC Workshop on Adaptive Systems in Control and Signal Processing, June 1983 (presented at the Plenary Session). Invited paper.
5. P. A. Ioannou, "Adaptive Control of Interconnected Systems in the Presence of Disturbances," The Third Yale Workshop on Applications of Adaptive Systems Theory, June 1983, pp. 164-167.
6. P. A. Ioannou and P. V. Kokotovic, "Improvement of Robustness of Adaptive Schemes," The Third Yale Workshop on Applications of Adaptive Systems Theory, June 1983. Invited paper, pp. 148-153.

1984

7. P. A. Ioannou and M. DePonte, Jr., "Adaptive Control Techniques for a Class of Large-Scale Systems," American Control Conference, San Diego, CA, June 1984.

8. P. A. Ioannou, "Robust Adaptive Control," American Control Conference, San Diego, CA, June 1984.
9. P. A. Ioannou, "Robust Direct Adaptive Control," The 23rd Conference on Decision and Control, December 1984.

1986

10. P. A. Ioannou and J. Sun, "Robust Adaptive Tuning of Controllers," Proc. 25th IEEE Conf. on Decision and Control, Athens, Greece, December 1986.

1987

11. J. Sun and P. A. Ioannou, "The Theory and Design of Robust Adaptive Controllers," Proc. Fifth Yale Workshop on Applications of Adaptive Systems Theory, May 1987.

1988

12. J. S. Reed and P. A. Ioannou, "Instability Analysis and Robust Adaptive Control of Robotic Manipulators," Proc. 27th IEEE Conf. on Decision and Control, pp. 1607-1611, December 1988.
13. P. A. Ioannou and K. S. Tsakalis, "The Class of Unmodeled Dynamics in Robust Adaptive Control," American Control Conference, Atlanta, Georgia, pp. 337-342, June 1988.
14. K. S. Tsakalis and P. A. Ioannou, "Parameter Estimation and Pole-Placement Control of Time-Varying Plants," American Control Conference, Atlanta, Georgia, pp. 1636-1641, June 1988.

1989

15. J. Sun and P. A. Ioannou, "Robust Adaptive LQ Control Schemes," Proc. 1989 American Control Conference, Pittsburgh, PA, June 1989, pp. 987-993.
16. A. Chassiakos, A. Pak and P. A. Ioannou, "Non-linear Robust Adaptive Control of a SCARA Manipulator," Proc. 1989 American Control Conference, Pittsburgh, PA, June 1989, pp. 1469-1475.
17. P. A. Ioannou and J. Sun, "Robust Adaptive Control: A Unified Approach," Proc. 28th IEEE Conf. on Decision and Control, December 1989, Tampa, FL.

1990

18. J. Sun and P. A. Ioannou, "Parameter Convergence of Modified Adaptive Laws with Persistent Excitation," Proc. 1990 American Control Conference, San Diego, CA, May 1990, p. 565-566.
19. P. Ioannou, "Robust Adaptive Control," The Sixth Yale Workshop on Applications of Adaptive Systems Theory, August 1990, p. 32-39.

1992

20. C. C. Chien and P. A. Ioannou, "Automatic Vehicle-Following," Proc. 1992, American Control Conference, Chicago, IL, June 1992, pp. 1748-1752.
21. P. A. Ioannou, C. C. Chien, and J. Hauser, "Autonomous Intelligent Cruise Control," Proc. of the IVHS America 1992 Annual Meeting, Newport Beach, CA, May, 1992, pp. 97-112.
22. M. Polycarpou and P. A. Ioannou, "Neural Networks as On-line Approximators of Nonlinear Systems," Proc. of the 31st IEEE Conference on Decision and Control, Dec. 1992, pp. 7-13.
23. E. Kosmatopoulos, M. Christodoulou, and P. A. Ioannou, "Identification of Nonlinear Systems Using New Dynamic Neural Network Structures," Proc. of the 31st IEEE Conference on Decision and Control, Dec. 1992, pp. 20-26.

1993

24. P. Ioannou, Z. Xu, S. Eckert, D. Clemons, and T. Sieja, "Intelligent Cruise Control: Theory and Experiment," Proc. of the 32nd Conference on Decision and Control, San Antonio, Texas, Dec. 1993.

1994

23. C. Chien, Y. Zhang, A. Stotsky, and P. Ioannou, "Roadway Traffic Controller Design for Automated Highway Systems," Proc. of the 33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, December 1994.
24. A. Stotsky, C. Chien and P. Ioannou, "Robust Platoon-Stable Control Design for Autonomous Intelligent Vehicle," Proc. of the 33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, December 1994.

2002

25. H. Jula, C.I. Liu, and P.A. Ioannou, "Design, analysis, simulation, and evaluation of advanced container terminals," Digital Government 2002 conference, Los Angeles, CA, May 2002.

Book Reviews

1. Review of the textbook Adaptive Filtering, Prediction and Control, by Goodwin and Sin, Automatica, September 1985.
2. Review of the book Adaptive Control, by Chang C. Hang, Tong H. Lee and Weng K. Ho Automatica, Vol.33, No.4, pp. 749-751, 1997
3. Review of the book Adaptive Control of Systems with Actuator and Sensor Nonlinearities by Gang Tao and Petar Kokotovic, Automatica 37, 2001, pp1685-1687

Patents

1. 'Servo Control and Method Using Absolute Value Input Signals. Petros Ioannou, Elias Kosmatopoulos, Alvin Despain. Patent Number US 6, 545,836 B1, April 2003
2. 'Adaptive Notch Filter ', Levin Jason and Petros Ioannou, Patent No. 8392000, Issue Date: 3/5/2013
3. Distributed adaptive control of a multi-zone HVAC system. P Ioannou, G Lymperopoulos, US Patent 12,072,114, 2024/8/27

Pending

4. 'Real-Time Parking Availability Prediction And Forecasting', T. Rajabioun and P. Ioannou, US Provisional Application 61/838,200, USC 13-793, MWE 028080-0921
5. Automatic vehicle following under predetermined preference parameters and road geometry constraints by Muhammad Waqas and Petros Ioannou, Serial No. 63/402,324, Filed 8/2022, revised 2023 pending

Research Reports

1994

1. Ioannou *P. and Z. Xu*, '*Throttle And Brake Control Systems For Automatic Vehicle Following*', *Link: <https://escholarship.org/uc/item/1vb6380h>*

2016

2. Ioannou, P., Zhang, Y., & Zhao, Y. (2016). Traffic Flow Models and Impact of Combined Lane Change and Speed Limit Control on Environment in Case of High Truck Traffic Volumes. UC Davis: National Center for Sustainable Transportation. Retrieved from <https://escholarship.org/uc/item/0d33t3j6>

2018

3. Ioannou, P. (2018). Modeling for Local Impact Analysis. UC Davis: National Center for Sustainable Transportation. Retrieved from <https://escholarship.org/uc/item/7959p38n>
4. Ioannou, P., & de Almeida Araujo Vital, F. (2018). Intelligent Parking Assist for Trucks with Prediction. UC Davis: National Center for Sustainable Transportation. Retrieved from <https://escholarship.org/uc/item/7dm0x5mr>
5. Ioannou, P. & Zhang, Y. (2018). Reducing Truck Emissions and Improving Truck Fuel Economy via Intelligent Transportation System Technologies. UC Davis: National Center for Sustainable Transportation. Retrieved from <https://escholarship.org/uc/item/2rr3b8mz>

2020

6. Ioannou, P., Giuliano, G., Dessouky, M., Chen, P., & Dexter, S. (2020). Freight Load Balancing and Efficiencies in Alternative Fuel Freight Modes. UC Davis: National

- Center for Sustainable Transportation. <http://dx.doi.org/10.7922/G2JD4V25> Retrieved from <https://escholarship.org/uc/item/3ns4b894>
7. Ioannou, P., Giuliano, G., Dessouky, M., Chen, P., & Dexter, S. (2020). Cost, Congestion, and Emissions Benefits of Centralized Freight Routing and Efficiencies in Alternative Fuel Freight Modes. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2H41PQD> Retrieved from <https://escholarship.org/uc/item/1m62h1dd>
 8. Ioannou, P. (2020). Using Combined Lane Change and Variable Speed Limit Control Techniques Can Ease Congestion and Reduce Fuel Use and Emissions. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2GB229Q> Retrieved from <https://escholarship.org/uc/item/69w5g2h9>
 9. Ioannou, P., & Monteiro, F. (2020). Intelligent, Predictive Parking Assist for Trucks. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2707ZPP> Retrieved from <https://escholarship.org/uc/item/7js0f595>

2022

10. Yuan, T., & Ioannou, P. (2022). Variable Speed Limit Control to Reduce Traffic Congestion in the Face of Uncertainty. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G22B8WBN> Retrieved from <https://escholarship.org/uc/item/2sz308jc>
11. Yuan, T., Alasiri, F., & Ioannou, P. A. (2022). Robust Design, Analysis and Evaluation of Variable Speed Limit Control in a Connected Environment with Uncertainties: Performance Evaluation and Environmental Benefits. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2X065CZ> Retrieved from <https://escholarship.org/uc/item/2q60p994>

2023

12. Yuan, T., & Ioannou, P. A. (2023). Coordinated Traffic Flow Control in a Connected Environment. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2B27SNS> Retrieved from <https://escholarship.org/uc/item/6q67f9z4>
13. Ioannou, P., & Chen, P. (2023). Centrally Coordinated Schedules and Routes of Airport Shuttles with LAX Terminals as Application Area. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2CC0Z03> Retrieved from <https://escholarship.org/uc/item/6gg7r6c5>
14. Vital, F., & Ioannou, P. (2022). Optimizing Fuel Consumption and Pollutant Emissions in Truck Routing with Parking Availability Prediction and Working Hours Constraints. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2S75DPP> Retrieved from <https://escholarship.org/uc/item/8rw99523>
15. Vital, F., & Ioannou, P. (2022). A Truck Routing Model to Reduce Fuel Consumption and Emissions while Accounting for Parking Availability and Working Hours Constraints. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2959FVT> Retrieved from <https://escholarship.org/uc/item/4xj5w07g>
16. Vital, F., & Ioannou, P. (2022). Balancing of Truck Parking Demand by a Centralized Incentives/Pricing System. *UC Davis: National Center for Sustainable Transportation*. <http://dx.doi.org/10.7922/G2NG4NZZ> Retrieved from <https://escholarship.org/uc/item/3zv2s5jr>

2024

17. Petros Ioannou, and Zheyu Wang. "Learning Drivers' Utility Functions in a Coordinated Freight Routing System Based on Drivers' Actions."
(2024). Link: <https://escholarship.org/content/qt6qb516n9/qt6qb516n9.pdf>

2025

18. Ioannou, P., Liu, X., Waqas, M., Barth, M., Boriboonsomsin, K., & Peng, D. (2025). Electric Truck Fleet Management under Limited and Uncertain Charging Infrastructure Availability. Institute of Transportation Studies, UC Davis. Link: <https://doi.org/10.5061/dryad.6hdr7srby>
19. Hu Bingtao and P. Ioannou, 'Review and Analysis of Current and Future Battery Technologies for Heavy Duty Electric Vehicles'(2025). Link: <https://doi.org/10.7922/G2736P76>

Additional project research reports can be found at

https://www.metrans.org/research-projects.aspx?ddl_center_id=0&ddl_topicarea_id=0&txt_phrase=Ioannou&ddl_year=