

Prof. Ioannis Papamichail

PERSONAL INFORMATION

Address: School of Production Engineering and Management
Technical University of Crete
GR-73100 Chania, Greece
Tel: +30 2821037422, +30 6979142764
email: ipapa@dssl.tuc.gr; ipapamichail@tuc.gr

Date of birth: 12/02/1976
Place of birth: Toronto, Ontario, Canada
Nationality: Greek, Canadian
Marital status: Married to Angeliki Stathopoulou, two sons and one daughter.

EDUCATION

Imperial College of Science, Technology and Medicine, London, UK 10/1999-12/2002
Department of Chemical Engineering and Chemical Technology
Doctor of Philosophy of the University of London
PhD Thesis: Global optimisation of dynamic systems for chemical engineering applications

Imperial College of Science, Technology and Medicine, London, UK 10/1998-09/1999
Department of Chemical Engineering and Chemical Technology
MSc in Process Systems Engineering with Distinction
MSc Thesis: Optimisation of crystallisation processes in perfectly mixed devices
Diploma of Imperial College in Process Systems Engineering

National Technical University of Athens, Athens, Greece 09/1993-07/1998
Department of Chemical Engineering
Diploma in Chemical Engineering with Distinction, GPA 9.19 / 10.00
Diploma Thesis: Supercritical fluid extraction of celery seed oil using carbon dioxide

PROFESSIONAL POSITIONS

Technical University of Crete, Chania, Greece 08/2021-present
School of Production Engineering and Management
Dynamic Systems and Simulation Laboratory
Director

Technical University of Crete, Chania, Greece 06/2021-present
School of Production Engineering and Management
Dynamic Systems and Simulation Laboratory
Professor

Technical University of Crete, Chania, Greece 09/2016-06/2021
School of Production Engineering and Management
Dynamic Systems and Simulation Laboratory
Associate Professor

University of California, Berkeley, CA, USA 09/2010-01/2011
Institute of Transportation Studies
California Partners for Advanced Transit and Highways (PATH) Program
Short Term Scholar

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|---|------------------------|
| Technical University of Crete, Chania, Greece School of Production Engineering and Management Dynamic Systems and Simulation Laboratory Assistant Professor (tenured since 08/2013) | 11/2009-09/2016 |
| Technical University of Crete, Chania, Greece Department of Production Engineering and Management Dynamic Systems and Simulation Laboratory Lecturer | 09/2005-11/2009 |
| Technical University of Crete, Chania, Greece Department of Production Engineering and Management Adjunct Lecturer | 09/2004-08/2005 |
| Hellenic Army, Greece Mandatory Military Service Chemical Engineer | 02/2003-02/2004 |
| Imperial College of Science, Technology and Medicine, London, UK Centre for Process Systems Engineering Research Assistant | 10/1999-12/2002 |
| Hellenic Aspropyrgos Refinery SA, Athens, Greece Student Associate | 10/1997-11/1997 |
| Krems Chemie AG – R&D Dept., Krems, Austria Student Associate (International Association for the Exchange of Students for Technical Experience) | 07/1997-08/1997 |
| Delta SA - Ice Cream Unit, Athens, Greece Student Associate | 07/1996-08/1996 |

TEACHING AND ACADEMIC ACTIVITIES

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|--|------------------------|
| Technical University of Crete, Chania, Greece School of Production Engineering and Management | 09/2004-present |
| <ul style="list-style-type: none"> • Lectures on: <ul style="list-style-type: none"> – Advanced Nonlinear Programming (Postgraduate course, since 10/2006) – Data Structures and Algorithms – Introduction to Computer Programming (until 09/2009) – Introduction to Industrial Processes (until 09/2006) – Nonlinear Programming (since 10/2022) – Probability and Statistics for Engineers (until 09/2005) – Project and Production Management and Scheduling (since 09/2009) • Supervisor of 5 PhD students and member of 11 PhD committees • Supervisor of 9 MSc theses and 18 Diploma theses • Advisor of 15 Post-docs • Evaluator of candidate faculty members • Examiner of several PhD, MSc and Diploma theses • Member of the General Assembly of the Department of Production Engineering and Management (since 09/2005) • Member of the Summer Employment Committee of the Department of Production Engineering and Management (09/2006-08/2008) • Member of the Undergraduate Studies Committee of the Department of Production Engineering and Management (09/2007-08/2008) • Departmental coordinator for the ERASMUS program of the Department of Production Engineering and Management (09/2008-08/2010) | |

- Member of the Postgraduate Studies Committee of the Department of Production Engineering and Management (09/2009-08/2010)
- Member of the Procurement Receipt Committee of the Department of Production Engineering and Management (01/2012-12/2012)
- Member of the Computing Center Committee of the Technical University of Crete (since 04/2014)
- Member of the Committee for Traffic Issues of the Municipality of Chania (since 2014)
- Member of the Research Committee of the Technical University of Crete (since 11/2016)
- Member of the Committee on Sustainable Urban Mobility Plan of the Municipality of Chania (since 2019).
- Member of the PhD Studies Committee of the Department of Production Engineering and Management (since 2023)
- Member of the Technology Transfer, Innovation and Entrepreneurship Committee of the Technical University of Crete (since 22/12/2023)

Imperial College of Science, Technology and Medicine, London **10/1999-12/2002**

Department of Chemical Engineering and Chemical Technology

- Tutorials on GAMS program
- Teaching assistant for the course "Optimisation Techniques in Advanced Process Synthesis"

PARTICIPATION IN RESEARCH PROGRAMS

iDriving **07/2024- present**

Intelligent & digital roadway infrastructure for vehicles integrated with next-gen technologies, Funded by the European Commission (CINEA), Horizon Research and Innovation Action, **Principal Investigator**.

TRACE **06/2023-present**

Integration and Harmonization of Logistics Operations, Funded by the European Commission (CINEA), Horizon Innovation Action, **Principal Investigator**.

FRONTIER **05/2021-04/2024**

Next generation traffic management for empowering CAVs integration, cross-stakeholders collaboration and proactive multi-modal network optimization, Funded by the European Commission, Horizon 2020 Research and Innovation Action, Mobility for Growth, **Principal Investigator**.

TrafficFluid **12/2019-11/2025**

Lane-free artificial-fluid environment for vehicular traffic, Funded by the European Commission, European Research Council Executive Agency, Advanced Grant with Principal investigator Prof. Markos Papageorgiou.

INFRAMIX **06/2017-05/2020**

Road Infrastructure ready for mixed vehicle traffic, Funded by the European Commission, Horizon 2020 Research and Innovation Action, Automated Road Transport (H2020-ART).

Local4Global **10/2013-12/2016**

Development, application, testing and evaluation of a generic methodology/system for globally optimising Technical Systems of Systems (TSoS) via local control actions, Funded by the European Commission (DG Connect), Cooperation Programme, Information and Communication Technologies (ICT).

COST Action TD1207 **04/2013-03/2017**

Mathematical optimization in the decision support systems for efficient and robust energy networks, Funded by the European Commission COST Programme.

- TRAMAN21** **03/2013-02/2018**
Traffic management for the 21st century, Funded by the European Commission, European Research Council Executive Agency, Advanced Grant with Principal Investigator Prof. Markos Papageorgiou.
- DIANA - ARCHIMEDES III - 3** **09/2012-09/2014**
Development of novel algorithms and decision support systems for designing urban transport systems, Co-funded by the European Commission and the Greek Government, Ministry of Education.
- ARCHIMEDES III - 2** **07/2012-06/2015**
Real time public transport priority, Co-funded by the European Commission and the Greek Government, Ministry of Education.
- MCS-PERTH** **06/2012-06/2013**
Modelling, configuration and simulation testing for managed freeways pilot project using a meso-model, Funded by the Australian Road Research Board (ARRB Group) as a subcontract for Main Roads Western Australia, **Principal Investigator**.
- SMOOTH - ARCHIMEDES III - 1** **03/2012-02/2015**
Development of a software system for automatic selection of macroscopic traffic models for urban and interurban motorways, Co-funded by the European Commission and the Greek Government, Ministry of Education.
- ARTS COST Action TU1102** **09/2011-10/2015**
Towards autonomic road transport support systems, Funded by the European Commission COST Programme, Work Group 2 Chair.
- AGILE (ICT-2009-257806)** **09/2010-12/2013**
Development and applications of advanced adaptive automatic control methods, Funded by the European Commission (DG INFOS), R&D Programme Networked Embedded and Control Systems.
- TUC Kifisias – Attiki Odos** **05/2009-06/2010**
Application of the traffic signal control strategy TUC to the subnetwork Kifisias – Attiki Odos, Funded by Attiki Odos.
- sFLY (ICT-2008-231855)** **01/2009-12/2009**
Swarm of micro FLYing robots, Funded by the European Commission (DG INFOS), R&D Programme Information and Communication Technologies.
- NEARCTIS (ICT-2008-224272)** **07/2008-06/2013**
A Network of Excellence for Advanced Road Cooperative Traffic management in the Information Society, Funded by the European Commission (DG INFOS), R&D Programme Information and Communication Technologies, Task 2.2 Leader.
- ANTREOFF** **08/2007-12/2008**
Off-line application of the RENAISSANCE tool to the motorway network around Antwerp, Funded by the Mobility and Public Works Department of the Flemish Government (Belgium).
- EURAMP (IST-2004-507645)** **07/2005-10/2007**
Ramp metering for Motorway Networks, Funded by the European Commission (DG INFOS), R&D Programme Information Society Technologies.
- PYTHAGORAS II** **07/2005-12/2007**
Development of an integrated motorway network control system and its evaluation via microscopic simulation, Funded by the Greek Government, Ministry of National Education.
- Global Optimisation: From Theoretical Foundations to Eng. Tool** **10/1999-12/2002**
Funded by the Engineering and Physical Sciences Research Council, UK (GR/R52312/01) in collaboration with BASF AG, BP Ltd and BOC Gases.

EDITORSHIP AND REVIEWING ACTIVITIES

Editorship

- **Associate Editor** for Transportation Research Part C: Emerging Technologies (since 2023)
- Viti F., Papamichail I., Menendez M. and Wang M., Guest Editorial for the Special Issue on Managing Future Motorway and Urban Traffic Systems, Transportation Research Part C, Vol. 142, Article 103786, 2022.
- **Associate Editor** for IEEE Transactions on Intelligent Transportation Systems (since 2016)
- Wang Y., Papamichail I., De Schutter B. and Wang D., Guest Editorial for the Special Issue on Advanced Road Traffic Control, Transportation Research Part C, Vol. 58, pp. 429-430, 2015.
- Member of the Editorial Advisory Board for Transportation Research Part C: Emerging Technologies (2013-2022)

Member of the International Program Committee

- 37th IEEE Intelligent Vehicles Symposium (IV 2026), Ann Arbor, MI, USA, June 22-25, 2026.
- 10th International Symposium and 32nd National Conference on Operational Research (HELORS 2025), Chania, Greece, November 20-22, 2025.
- X International Scientific Conference New Horizons of Transport and Communications 2025, Doboj, Republic of Srpska, Bosnia and Herzegovina, November 5-8, 2025.
- 9th International IEEE Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS2025), Kirchberg, Luxemburg, September 8-10, 2025.
- 13th Symposium of the European Association for Research in Transportation (hEART 2025), Munich, Germany, June 10-12, 2025.
- 27th IEEE International Conference on Intelligent Transportation Systems (ITSC 2024), Edmonton, Canada, September 24-27, 2024.
- 5th Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2024), Heraklion, Greece, September 4-6, 2024.
- Conference in Emerging Technologies in Transportation Systems, Heraklion, Greece, September 2-4, 2024
- 17th IFAC Symposium on Control of Transportation Systems (CTS 2024), Ayia Napa, Cyprus, July 1-3, 2024.
- 12th Symposium of the European Association for Research in Transportation (hEART 2024), Espoo, Finland, June 18-20, 2024.
- 35th IEEE Intelligent Vehicles Symposium (IV 2024), Jeju Island, Korea, June 2-5, 2024.
- 26th IEEE Intelligent Transportation Systems Conference (ITSC 2023), Bilbao, Bizkaia, Spain, September 24-28, 2023.
- 22nd IFAC World Congress 2023 (Technical Associate Editor), Yokohama, Japan, July 9-14, 2023.
- 4th Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2022), Dresden, Germany, November 30 - December 2, 2022.
- 25th IEEE Intelligent Transportation Systems Conference (ITSC 2022), Macau, China, October 8-12, 2022.
- 24th IEEE Intelligent Transportation Systems Conference (ITSC 2021), Indianapolis, IN, USA, September 19-22, 2021.
- 7th International IEEE Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2021), Heraklion, Greece, June 16-18, 2021.
- 16th IFAC Symposium on Control in Transportation Systems (CTS 2021), Lille, France, June 8-10, 2021.
- IEEE Forum on Intelligent and Sustainable Transportation Systems (ISTS) 2020, Delft, The Netherlands, November 3-5, 2020.

- 23rd IEEE International Conference on Intelligent Transportation Systems (ITSC 2020), Rhodes, Greece, September 20-23, 2020.
- 23rd European Working Group on Transportation 2020 (EWGT 2020), Paphos, Cyprus September 16-18, 2020.
- 21st IFAC World Congress 2020 (Technical Associate Editor), Berlin, Germany, July 12-17, 2020.
- 3rd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2020), Luxembourg, July 4-5, 2020.
- 22nd IEEE Intelligent Transportation Systems Conference (ITSC 2019), Auckland, New Zealand, October 27-30, 2019.
- 1st IFAC Workshop on Control of Transportation Systems (WCTS 2019), Haifa, Israel, June 30 - July 1, 2019.
- 6th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2019), Kraków, Poland, June 5-7, 2019.
- 21st IEEE Intelligent Transportation Systems Conference (ITSC 2018), Maui, Hawaii, November 4-7, 2018.
- 22nd International Conference on System Theory, Control and Computing, Sinaia, Romania, October 10-12, 2018.
- 2nd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018), Ispra, Italy, June 11-12, 2018.
- 15th IFAC Symposium on Control in Transportation Systems (CTS 2018), Savona, Italy, June 6-8, 2018.
- 4th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS), Funchal, Madeira-Portugal, March 16-18, 2018.
- International Conference Automatics and Informatics 2017, Sofia, Bulgaria, October 4-6, 2017.
- 20th IEEE Intelligent Transportation Systems Conference (ITSC 2017), Yokohama, Japan, October 16-19, 2017.
- 3rd International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS), Porto, Portugal, April 23-24, 2017.
- 19th IEEE Intelligent Transportation Systems Conference (ITSC 2016), Rio de Janeiro, Brazil, November 1-4, 2016.
- 19th EURO Working Group on Transportation Meeting (EWGT 2016), Istanbul, Turkey, September 5-7, 2016.
- 1st Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2016), Chania, Greece, June 2-3, 2016.
- 14th IFAC Symposium on Control in Transportation Systems (CTS 2016), Istanbul, Turkey, May 18-20, 2016.
- 2nd International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS), Rome, Italy, April 23-24, 2016.
- Advanced Computing for Innovation - AComIn 2015, Sofia, Bulgaria, November 10-11, 2015.
- 2015 IEEE International Conference on Vehicular Electronics and Safety (ICVES 2015), Yokohama, Japan, November 5-7, 2015
- 19th International Conference on System Theory, Control and Computing, Cheile Gradistei, Romania, October 14-16, 2015.
- 18th Intern. IEEE Conference on Intelligent Transportation Systems (ITSC 2015), Las Palmas De Gran Canaria, Spain, September 15-18, 2015.
- 17th International IEEE Conference on Intelligent Transportation Systems (ITSC 2014), Qingdao, Shandong, China, October 8-11, 2014.
- 16th International IEEE Conference on Intelligent Transportation Systems (ITSC 2013), The Hague, The Netherlands, October 6-9, 2013.

- 15th IASTED Conference on Control and Applications (CA 2013), Honolulu, Hawaii, USA, August 26-28, 2013.
- 13th IFAC Symposium on Control in Transportation Systems (CTS 2012), Sofia, Bulgaria, September 12-14, 2012.
- 14th IASTED Conference on Control and Applications (CA 2012), Crete, Greece, July 18-20, 2012.
- Organised/Special Sessions Co-Chair for the 13th International IEEE Conference on Intelligent Transportation Systems (ITSC 2010), Madeira Island, Portugal, September 19-22, 2010.
- 12th IASTED Conference on Control and Applications (CA 2010), Banff, Alberta, Canada, July 15-17, 2010.
- 11th IASTED Conference on Control and Applications (CA 2009), Cambridge, UK, July 13-15, 2009.
- 2008 IEEE International Conference on Systems, Man and Cybernetics (SMC 2008), Singapore, October 12-15, 2008.
- 10th IASTED Conference on Control and Applications (CA 2008), Quebec City, Quebec, Canada, May 26-28, 2008.
- 2nd International Conference on Performance Evaluation Methodologies and Tools, Valuetools 2007, Nantes, France, October 23-25, 2007.
- 2007 IEEE International Conference on Systems, Man and Cybernetics (SMC 2007), Montreal, Canada, October 7-10, 2007.
- 9th IASTED Conference on Control and Applications (CA 2007), Montreal, Quebec, Canada, May 30 - June 1, 2007.
- 5th IFAC-DECOM-TT Workshop, Izmir, Turkey, May 17-18, 2007.
- 2006 IEEE International Conference on Systems, Man and Cybernetics (SMC 2006), Taipei, Taiwan, October 8-11, 2006.

Reviewing for Journals

- AIChE Journal
- Automatica
- Computers and Chemical Engineering (One of the Top Reviewers in 2012-2013 and Award for Outstanding Contribution in Reviewing, 2015)
- EURO Journal on Transportation and Logistics
- Frontiers of Information Technology & Electronic Engineering
- IEEE Magazine on Intelligent Transportation Systems
- IEEE Open Journal of Intelligent Transportation Systems
- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Intelligent Transportation Systems
- IET Intelligent Transport Systems
- International Journal of Robust and Nonlinear Control
- International Journal of Transportation Science and Technology
- Journal of Global Optimization
- Journal of Transportation Engineering, Part A: Systems
- Operational Research – An International Journal
- Optimal Control, Applications and Methods
- Simulation Modelling Practice and Theory
- Transport Problems – International Scientific Journal
- Transportation Research Part A
- Transportation Research Part B
- Transportation Research Part C
- Transportation Research Record
- Transportmetrica A: Transport Science

Reviewing for Books

- Traffic Simulation, E. Chung and A.-G. Dumont (Editors), EPFL Press, 2009

Reviewing for Conferences

- American Control Conferences
- European Control Conferences
- IASTED Conferences on Control and Applications
- IEEE Conferences on Decision and Control
- IEEE International Conferences on Intelligent Transportation Systems
- IEEE International Conferences on Systems, Man and Cybernetics
- IFAC-DECOM-TT Workshops
- IFAC Symposiums on Control in Transportation Systems
- IFAC World Congresses
- Mediterranean Conferences on Control and Automation
- Transportation Research Board Annual Meetings

ACADEMIC & RESEARCH EVALUATION

Invited external evaluator of candidate faculty members

- Democritus University of Thrace (2025)
- National Technical University of Athens, Greece (2020, 2023)
- University of Cyprus, Cyprus (2022)
- University of Macedonia, Greece (2022, 2025)
- University of Patras, Greece (2022)
- University of the Aegean, Greece (2022, 2025)
- University of West Attica, Greece (2022)
- University of Western Macedonia, Greece (2018, 2021, 2025)

Invited external examiner of doctoral theses

- National Technical University of Athens, Greece (2021, 2022)
- TU Delft, The Netherlands (2023)
- Université Gustave Eiffel, France (2022)
- University of Cyprus, Cyprus (2019)
- University of Genova, Italy (2025)
- University of Malta, Malta (2019)
- University of Sydney, Australia (2025)

Evaluation of research proposals

- METRANS Transportation Center, USC & CSULB, USA (2018, 2019)
- Swiss National Science Foundation, Switzerland (2023)
- UCLA Institute of Transportation Studies, USA (2017)

AWARDS - SCHOLARSHIPS

IFAC Young Author Award

2024

Awarded at the 17th IFAC Symposium on Control in Transportation Systems (CTS 2024) to the PhD student Niloufar Dabestani for the paper: Dabestani N., Typaldos P., Papamichail I. and Papageorgiou M., Joint vehicle path planning for interruptible 1-D snake-like platoons and 2-D flocks in lane-free traffic.

"Matthew Karlaftis" Award

2021

Awarded at the 10th ICTR (International Congress on Transportation Research) to the PhD student Panagiotis Typaldos for the paper: Typaldos P., Volakakis V., Papageorgiou M. and

Papamichail I., A discrete differential dynamic programming approach for GLOSA systems with stochastic switching times.

1st prize of Best Conference Paper Award **2020**

Awarded at the 2020 IEEE Intelligent Transportation Systems Conference for the paper: Cao J., Hu Y., Manolis D., Zhang S., Wang Y., Guo J., Papamichail I., Papageorgiou M., Zhang L., Hu J., A max pressure approach to urban network signal control with queue estimation using connected vehicle data.

IEEE ITS Outstanding Application Award **2018**

Awarded by the IEEE Intelligent Transportation Systems Society to Markos Papageorgiou and the TRAMAN21 Team for contributions in Vehicle Automation and Communication Systems and Applications (member of the team).

Best TRB Freeway Operations Paper Award **2014**

Awarded by the Transportation Research Board (TRB) Freeway Operations Committee for the paper: Faulkner L., Dekker F., Gyles D., Papamichail I. and Papageorgiou M., Evaluation of HERO coordinated ramp metering installation at the M1/M3 Freeway in Queensland, Australia.

TRA 2012 Best Paper Award **2012**

Awarded at the Transportation Research Arena 2012 for the best paper (in Pillar II: Transport, Mobility and Infrastructure): Keyvan-Ekbatani M., Kouvelas A., Papamichail I. and Papageorgiou M., Congestion control in urban networks via feedback gating.

IEEE ITS Institutional Lead Award **2011**

Awarded by the IEEE Intelligent Transportation Systems Society to the Dynamic Systems and Simulation Laboratory for outstanding contributions and successful implementations in traffic flow modeling and control (member of the Lab since 2005).

IEEE CSS Transition to Practice Award **2010**

Prize awarded by the IEEE Control Systems Society for the development and implementation of ramp metering algorithms, in particular at the Monash Freeway, Melbourne, Australia (received jointly with Prof. Markos Papageorgiou).

Gold Medal at the YEAR 2010 (Young European Arena of Research) competition **2010**

The gold medal (under the Pillar II: Mobility and Intermodality) was awarded to the PhD student Rodrigo Castelan Carlson for the article: Carlson, R.C., Papamichail, I., Papageorgiou, M., A local feedback controller for mainstream traffic flow control using variable speed limits.

Eugenides Foundation Scholarship **1998-99**

Scholarship for postgraduate studies

Dimitriou Thomaidi Award **1997-98**

First on the exams in the Department of Chemical Engineering, NTUA

Scholarship from the Georgiou Fr. Zografaki Scholarships Foundation **1997-98**

First on the exams in the Department of Chemical Engineering, NTUA

Technical Chamber of Greece Award **1997-98**

First on the exams in the Department of Chemical Engineering, NTUA

Scholarship from the State Scholarships Foundation **1995-96**

Third on the 3rd year exams in the Department of Chemical Engineering, NTUA

Scholarship from the State Scholarships Foundation **1993-94**

Second on the 1st year exams in the Department of Chemical Engineering, NTUA

Nikolaou I. Kritikou Scholarship **1993-94**

First on the 1st year exams of Math-related courses in the Department of Chemical Engineering, NTUA

LANGUAGES

Greek: Mother tongue

English: Fluently

COMPUTER SKILLS

Operating systems: MS Windows, UNIX, LINUX

Commercial programs: MS Office, Matlab, LATEX, GAMS, METANET, AMOC, RENAISSANCE, AIMSUN, TUC, SUMO

Programming languages: FORTRAN, C/C++, Visual Basic, Matlab

OTHER INFORMATION

Memberships

- Technical Chamber of Greece (since 03/2004)
- IFAC Technical Committee on Transportation Systems - TC 7.4. (since 06/2009)

Organisation of Special/Tutorial Sessions in Conferences

- Control of connected and automated vehicles in lane-free environments, (Special session), 25th IEEE International Conference on Intelligent Transportation Systems (ITSC 2022), Macau, China, October 8-12, 2022.
- Traffic management for future mobility – CAVs in a mixed traffic environment (Workshop session), 23rd IEEE International Conference on Intelligent Transportation Systems (ITSC 2020), Virtual conference, September 20-23, 2020.
- Advances in motorway traffic control (Special session), 18th IEEE International Conference on Intelligent Transportation Systems (ITSC 2015), Las Palmas de Gran Canaria, Spain, September 15-18, 2015.
- Optimal control of motorways (Special session), 20th Conference of the International Federation of Operational Research Societies (IFORS2014), Barcelona, Spain, July 13-18, 2014.
- Variable speed limits for freeway management and control (Special session), 14th International IEEE Conference on Intelligent Transportation Systems (ITSC 2011), Washington, DC, USA, October 5-7, 2011.
- Ramp metering (Special session), 13th International IEEE Conference on Intelligent Transportation Systems (ITSC 2010), Madeira Island, Portugal, September 19-22, 2010.
- Variable speed limits for freeway management and control (Special session), 13th International IEEE Conference on Intelligent Transportation Systems (ITSC 2010), Madeira Island, Portugal, September 19-22, 2010.
- Motorway traffic surveillance and control (Tutorial session), European Control Conference 2007 (ECC07), Kos, Greece, July 2-5, 2007.

PUBLICATIONS

International Journal Papers

- J1. Papamichail I., Louli V. and Magoulas K.
Supercritical fluid extraction of celery seed oil
Journal of Supercritical Fluids, Vol. 18, pp. 213-226, 2000.
- J2. Papamichail I. and Adjiman C.S.
A rigorous global optimization algorithm for problems with ordinary differential equations
Journal of Global Optimization, Vol. 24, pp. 1-33, 2002.

- J3. Papamichail I. and Adjiman C.S.
Global optimization of dynamic systems
Computers and Chemical Engineering, Vol. 28, pp. 403-415, 2004.
- J4. Papamichail I. and Adjiman C.S.
Proof of convergence for a global optimization algorithm for problems with ordinary differential equations
Journal of Global Optimization, Vol. 33, pp. 83-107, 2005.
- J5. Papageorgiou M., Kosmatopoulos E., Papamichail I. and Wang Y.
ALINEA maximizes motorway throughput – An answer to flawed criticism
Traffic Engineering and Control, Vol. 48, pp. 271-276, 2007.
- J6. Papamichail I., Papageorgiou M. and Wang Y.
Motorway traffic surveillance and control
European Journal of Control, Vol. 13, pp. 297-319, 2007.
- J7. Papamichail I. and Papageorgiou M.
Traffic-responsive linked ramp-metering control
IEEE Transactions on Intelligent Transportation Systems, Vol. 9, pp. 111-121, 2008.
- J8. Papageorgiou M., Kosmatopoulos E., Papamichail I. and Wang Y.
A misapplication of the local ramp metering strategy ALINEA
IEEE Transactions on Intelligent Transportation Systems, Vol. 9, pp. 360-365, 2008.
- J9. Papageorgiou M., Papamichail I., Spiliopoulou A.D. and Lentzakis A.F.
Real-time merging traffic control with applications to toll plaza and work zone management
Transportation Research Part C, Vol. 16, pp. 535-553, 2008.
- J10. Papageorgiou M. and Papamichail I.
Overview of traffic signal operation policies for ramp metering
Transportation Research Record: Journal of the Transportation Research Board, No. 2047, pp. 28-36, 2008.
- J11. Papageorgiou M., Kosmatopoulos E. and Papamichail I.
Effects of variable speed limits on motorway traffic flow
Transportation Research Record: Journal of the Transportation Research Board, No. 2047, pp. 37-48, 2008.
- J12. Spiliopoulou A.D., Papamichail I. and Papageorgiou M.
Toll plaza merging traffic control for throughput maximization
Journal of Transportation Engineering - ASCE, Vol. 136, pp. 67-76, 2010.
- J13. Carlson R.C., Papamichail I., Papageorgiou M. and Messmer A.
Optimal mainstream traffic flow control of large-scale motorway networks
Transportation Research Part C, Vol. 18, pp. 193-212, 2010.
- J14. Carlson R.C., Papamichail I., Papageorgiou M. and Messmer A.
Optimal motorway traffic flow control involving variable speed limits and ramp metering
Transportation Science, Vol. 44, pp. 238-253, 2010.
- J15. Papamichail I., Kotsialos A., Margonis I. and Papageorgiou M.
Coordinated ramp metering for freeway networks – A model-predictive hierarchical control approach
Transportation Research Part C, Vol. 18, pp. 311-331, 2010.
- J16. Papamichail I., Papageorgiou M., Vong V. and Gaffney J.
Heuristic ramp-metering coordination strategy implemented at Monash Freeway, Australia
Transportation Research Record: Journal of the Transportation Research Board, No. 2178, pp. 10-20, 2010.

- J17. Spiliopoulou A.D., Manolis D., Papamichail I. and Papageorgiou M.
Queue management techniques for metered freeway on-ramps
Transportation Research Record: Journal of the Transportation Research Board, No. 2178, pp. 40-48, 2010.
- J18. Wang Y., Papageorgiou M., Gaffney J., Papamichail I., Rose G. and Young W.
Local ramp metering in random-location bottlenecks downstream of a metered on-ramp
Transportation Research Record: Journal of the Transportation Research Board, No. 2178, pp. 90-100, 2010.
- J19. Papamichail I. and Papageorgiou M.
Balancing of queues or waiting times on metered dual-branch on-ramps
IEEE Transactions on Intelligent Transportation Systems, Vol. 12, pp. 438-452, 2011.
- J20. Carlson R.C., Papamichail I. and Papageorgiou M.
Local feedback-based mainstream traffic flow control on motorways using variable speed limits
IEEE Transactions on Intelligent Transportation Systems, Vol. 12, pp. 1261-1276, 2011.
- J21. Keyvan-Ekbatani M., Kouvelas A., Papamichail I. and Papageorgiou M.
Exploiting the fundamental diagram of urban networks for feedback-based gating
Transportation Research Part B, Vol. 46, pp. 1393-1403, 2012.
- J22. Carlson R.C., Papamichail I. and Papageorgiou M.
Comparison of local feedback controllers for the mainstream traffic flow on freeways using variable speed limits
Journal of Intelligent Transportation Systems, Vol. 17, pp. 268-281, 2013.
- J23. Christofa E., Papamichail I. and Skabardonis A.
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- C122. Titakis G., Karafyllis I., Theodosis D., Papamichail I. and Papageorgiou M.
Numerical approximations to a macroscopic automated-vehicle traffic flow model
 21st International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2023), Heraklion, Greece, September 11-17, 2023, AIP Conf. Proc. 3315, pp. 400016 1-4.
- C123. Papamichail I., Schoenn-Anchling N., Malekzadeh M., Markantonakis V. and Papageorgiou M.
Macroscopic traffic flow model calibration for lane-free automated vehicle traffic
 26th IEEE International Conference on Intelligent Transportation Systems (ITSC 2023), Bilbao, Bizkaia, Spain, September 24-28, 2023, pp. 3485-3492.

- C124. Dabestani N., Typaldos P., Yanumula V.K., Papamichail I. and Papageorgiou M.
Joint trajectory optimization for multiple automated vehicles in lane-free traffic with vehicle nudging
26th IEEE International Conference on Intelligent Transportation Systems (ITSC 2023), Bilbao, Bizkaia, Spain, September 24-28, 2023, pp. 5954-5961.
- C125. Chrysomallis I., Troullinos D., Chalkiadakis G., Papamichail I. and Papageorgiou M.
Deep reinforcement learning with implicit imitation for lane-free autonomous driving
26th European Conference on Artificial Intelligence (ECAI 2023), Krakow, Poland, September 30 - October 4, 2023, Gal, K., Nowé, A., Nalepa, G.J., Fairstein, R., Rădulescu, R., (eds), Frontiers in Artificial Intelligence and Applications, Vol. 372. IOS Press, pp. 461-468.
- C126. Naderi M., Mavroei M.K., Papamichail I. and Papageorgiou M.
Optimal orientation for automated vehicles on large lane-free roundabouts
62nd IEEE Conference on Decision and Control (CDC 2023), Marina Bay Sands, Singapore, December 13-15, 2023, pp. 8207-8214.
- C127. Malekzadeh M., Papamichail I. and Papageorgiou, M.
Feedforward extension to improve LQR performance in internal boundary control
32nd Mediterranean Conference on Control and Automation (MED 2024), Chania, Greece, June 11-14, 2024, pp. 13-18.
- C128. Titakis G., Karafyllis I., Theodosis D., Papamichail I. and Papageorgiou, M.
The effects of cruise controlled vehicles on traffic density
32nd Mediterranean Conference on Control and Automation (MED 2024), Chania, Greece, June 11-14, 2024, pp. 31-36.
- C129. Dabestani N., Typaldos P., Papamichail I., Papageorgiou M.
Joint trajectory planning for 1-D snake-like interruptible vehicle platoons in lane-free traffic
12th Symposium of the European Association for Research in Transportation (hEART 2024), Espoo, Finland, June 18-20, 2024, 10p.
- C130. Dabestani N., Typaldos P., Papamichail I., Papageorgiou M.
Joint vehicle path planning for interruptible 1-D snake-like platoons and 2-D flocks in lane-free traffic
17th IFAC Symposium on Control in Transportation Systems (CTS 2024), Ayia Napa, Cyprus, July 1-3, 2024, IFAC-PapersOnLine 58 (10), pp. 61-68.
- C131. Malekzadeh M., Papamichail, I. and Papageorgiou M.
Ramp metering in lane-free vehicular traffic via variable speed limits
TRC-30: Conference for the 30th Anniversary of Transportation Research Part C, Heraklion, Greece, September 2-4, 2024, paper No. 110.
- C132. Kostopoulou E., Christofa E. and Papamichail I.
Emission based signal control optimization on arterials
TRC-30: Conference for the 30th Anniversary of Transportation Research Part C, Heraklion, Greece, September 2-4, 2024, paper No. 294.
- C133. Niels T., Bogenberger K., Papageorgiou M. and Papamichail I.
Optimization-based autonomous intersection management: A real-world simulation study
TRC-30: Conference for the 30th Anniversary of Transportation Research Part C, Heraklion, Greece, September 2-4, 2024, paper No. 307.
- C134. Markantonakis V., Tsouros I., Papamichail I. and Tsimpa A.
Traffic dynamics in the presence of abrupt or planned events
5th Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2024), Heraklion, Greece, September 4-6, 2024, paper No. 1624.

- C135. Chrysomallis I., Chalkiadakis G., Papamichail I. and Papageorgiou, M.
Deep implicit imitation reinforcement learning in heterogeneous action settings
39th Association for the Advancement of Artificial Intelligence Conference (AAAI 2025), Philadelphia, PA, USA, February 25 - March 4, 2025, pp. 16055-16063.
- C136. Troullinos D., Chalkiadakis G., Papamichail I. and Papageorgiou M.
Conditional max-sum for asynchronous multiagent decision making
24th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2025), Detroit, MI, USA, May 19-23, 2025, pp. 2060-2068.
- C137. Matsioris G., Papamichail I., Fouskitakis G. and Doitsidis L.
Addressing reward hacking in autonomous navigation using a soft actor critic approach
6th International Conference in Electronic Engineering & Information Technology (EEITE 2025), Chania, Greece, June 4-6, 2025, pp. 1-7.
- C138. Dabestani, N., Troullinos, D., Papamichail, I., Papageorgiou, M
Distributed model predictive control of automated vehicles, platoons and flocks in lane-free traffic
23rd European Control Conference (ECC 2025), Thessaloniki, Greece, June 24-27, 2025, pp. 2609-2616.

Scientific Presentations (presented by *)

- P1. Papamichail I.*, Boukouvalas C., Magoulas K. and Tassios D.
Supercritical fluid extraction applications (Εφαρμογές της υπερκρίσιμης εκχύλισης)
2nd Symposium of the Institute of Physical Chemistry: Research and Technology in Chemistry, NCSR "DEMOKRITOS", Athens, Greece, December 3-5, 1997.
- P2. Folas G., Papamichail I., Louli V.*, Boukouvalas C. and Magoulas K.
Supercritical CO₂ extraction of celery and parsley seed oil
17th European Seminar on Applied Thermodynamics, Vilamoura, Portugal, May 13-16, 1999.
- P3. Papamichail I.
Global optimisation of DAE systems
Annual Consortium Meeting, Centre for Process Systems Engineering, London, UK, September 2000.
- P4. Papamichail I.
Global optimisation of ODE systems
Annual Consortium Meeting, Centre for Process Systems Engineering, London, UK, September 2001.
- P5. Papamichail I.* and Adjiman C.S.
A global optimization algorithm for systems described by ODEs
AIChE Annual Meeting, Reno, November 4-9, 2001.
- P6. Papamichail I.* and Adjiman C.S.
A global optimization algorithm for optimal control and parameter estimation problems
SIAM Conference on Optimization, Toronto, Canada, May 20-22, 2002.
- P7. Papamichail I.* and Adjiman C.S.
A new convex relaxation for systems described by ordinary differential equations
AIChE Annual Meeting, Indianapolis, November 3-8, 2002.
- P8. Adjiman C.S.* and Papamichail I.
A deterministic global optimization algorithm for problems with nonlinear dynamics
4th International Conference on Frontiers in Global Optimization, Santorini, June 8-12, 2003.
- P9. Adjiman C.S.* and Papamichail I.
Deterministic global optimization algorithm and nonlinear dynamics
Global Optimization Theory Institute, Argonne National Laboratory, Argonne, IL, USA, September 8-10, 2003.

- P10. Papageorgiou M.*, Papamichail I., Margonis I. and Kotsialos A.
Optimal coordinated ramp metering for freeway networks
 21st European Conference on Operational Research (EURO XXI), Reykjavik, Iceland, July 2-5, 2006.
- P11. Papageorgiou M.*, Papamichail I., Messmer A. and Carlson R.C.
Optimal mainstream traffic flow control of large-scale motorway networks
 11th International IEEE Conference on ITS, Beijing, China, October 12-15, 2008.
- P12. Carlson R.C., Papamichail I., Papageorgiou M.* and Messmer A.
Optimal mainstream traffic flow control of large scale motorway networks
 2nd NEARCTIS Workshop, University College London, London, UK, November 13, 2009.
- P13. Carlson R.C.*, Papamichail I., Papageorgiou M.
Local feedback-based mainstream traffic flow control on motorways using variable speed limits
 3rd NEARCTIS Workshop, EPFL, Lausanne, Switzerland, June 11, 2010.
- P14. Papamichail I.* and Papageorgiou M.
Coordinated ramp metering strategy HERO: Field implementation at the Monash freeway in Melbourne, Australia
 Invited talk, TOPL Group Meeting, University of California at Berkeley, CA, USA, October 8, 2010.
- P15. Papamichail I.* and Papageorgiou M.
Coordinated ramp metering strategy HERO: Field implementation at the Monash freeway in Melbourne, Australia
 Invited talk, SENSYS Networks Inc., Berkeley, CA, USA, November 23, 2010.
- P16. Ekbatani M.K.*, Kouvelas A., Papamichail I., Papageorgiou M.
Congestion control in urban networks under saturated conditions via feedback gating
 4th NEARCTIS Workshop, IFSTTAR, Lyon, France, June 10, 2011.
- P17. Carlson R.C.*, Papamichail I., Papageorgiou M.
 Mainstream traffic flow control on motorways using variable speed limits
 Workshop "Dynamic Traffic Management in Belgium: can we take more out of variable speed limits?", 2nd International Conference on Models and Technologies for ITS, Leuven, Belgium, June 24, 2011.
- P18. Papamichail I.
Traffic control using microscopic simulation tools
 Invited lecture, 4th MULTITUDE Summer School 2013, Maria Tsakos Foundation, Chios, Greece, September 5, 2013.
- P19. Kouvelas A., Manolis D., Kosmatopoulos E.B., Papamichail I.* and Papageorgiou M.
A fully-autonomic methodology for embedding self-tuning competence in online traffic control systems
 1st International Systems Competition on Autonomic Features and Technologies for Road Traffic Flow Modelling and Control System, The Hague, The Netherlands, October 9, 2013.
- P20. Roncoli C.*, Papageorgiou M. and Papamichail I.
 Optimisation of multi-lane motorways in presence of vehicle automation and communication systems
 20th Conference of the International Federation of Operational Research Societies (IFORS), Barcelona, Spain, July 13-18, 2014.
- P21. Kouvelas A., Manolis D., Kosmatopoulos E.B., Papamichail I.* and Papageorgiou M.
An autonomic methodology for embedding self-tuning competence in online traffic control systems – Field results for the urban network of Chania, Greece
 COST ARTS Workshop WGs 2 and 3, Sofia, Bulgaria, September 11, 2014.

- P22. Papageorgiou M.*, Diakaki C., Iordanidou G.R., Karafyllis I., Nikolos I., Ntousakis I.A., Papamichail I. and Roncoli C.
Traffic management in presence of Vehicle Automation and Communication Systems: the project TRAMAN21
 94th Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 11-15, 2015.
- P23. Papamichail I.
Integrated feedback-based ramp metering and mainstream traffic flow control for multiple bottlenecks on motorways
 Invited presentation, IPAM Workshop III: Traffic Control, Institute of Pure and Applied Mathematics (IPAM), University of California at Los Angeles, Los Angeles, CA, USA, October 29, 2015.
- P24. Papamichail I.
Feedback-based integrated motorway traffic flow control
 Invited plenary talk, International Conference on Advanced Computing for Innovation – ACOMIN2015, Sofia, Bulgaria, November 10, 2015.
- P25. Iordanidou G.-R., Papamichail I.*, Roncoli C. and Papageorgiou M.
Feedback-based integrated motorway traffic flow control
 1st Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2016), Chania, Greece, June 2-3, 2016.
- P26. Manolis D., Michailidis I., Diakaki C.*, Papamichail I., Kosmatopoulos E. and Papageorgiou M.
Simulation study of an adaptive decentralised approach for the signal control of large-scale urban traffic networks
 5th Symposium of the European Association for Research in Transportation (hEART), Delft, The Netherlands, September 13-16, 2016.
- P27. Manolis D., Papamichail I. and Papageorgiou M.*
Automated tuning of ITS algorithms: Results from real-life application
 2nd ITS Hellas Conference on Intelligent Transport Systems and Developments in Greece, Athens, Greece, December 19-20, 2016.
- P28. Typaldos P., Mountakis K.S.*, Papageorgiou M. and Papamichail I.
MPC-based optimal path planning for automated vehicles in realistic simulation
 2nd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018), Ispra, Italy, June 11-12, 2018.
- P29. Typaldos P.*, Papamichail I. and Papageorgiou M.
Minimization of fuel consumption for vehicle trajectories
 2nd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018), Ispra, Italy, June 11-12, 2018.
- P30. Markantonakis V.*, Skoufoulas D., Papamichail I. and Papageorgiou M.
Integrated motorway traffic control using variable speed limits and lane change control
 2nd Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018), Ispra, Italy, June 11-12, 2018.
- P31. Stylianopoulou E., Kontorinaki M., Papageorgiou M. and Papamichail I.*
A linear quadratic integral regulator for local ramp metering in the case of distant downstream bottlenecks
 7th Symposium of the European Association for Research in Transportation (hEART 2018), Athens, Greece, September 5-7, 2018.
- P32. Papamichail I.
Road Infrastructure ready for mixed vehicle traffic flows
 Invited presentation, Webinar on Scientific Exchange in Traffic Management organized by ECTRI Thematic Group on Traffic Management, January 22, 2019.

- P33. Papageorgiou M.*, Kalogianni I., Makantasis M., Mountakis K.-S., Nikolos I., Ntousakis I., Papamichail I. and Typaldos P.
Optimal control approaches to vehicle trajectory planning
 6th International Conference on Models and Technologies for Intelligent Transportation Systems, Kraków, Poland, June 5-7, 2019.
- P34. Typaldos P.*, Kalogianni I., Mountakis K., Papamichail I. and Papageorgiou, M.
Vehicle trajectory specification in presence of traffic lights with known or uncertain switching times
 99th Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 12-16, 2020.
- P35. Zhang S., Diamantis M., Wang Y.*, Cao J., Hu Y., Guo J., Papamichail I., Papageorgiou M., Zhang L. and Hu S.
Joint queue estimation and max-pressure control for signalized urban networks with connected vehicles
 99th Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 12-16, 2020.
- P36. Wang Y.*, Guo J., Zhao M., Hu Y., Papamichail I., Papageorgiou M., Bertini R.
What if many smart cars conduct ego-efficient lane changes in traffic flow: An answer provided by reinforcement learning
 99th Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 12-16, 2020.
- P37. Typaldos P.*, Papageorgiou M. and Papamichail I.
Path-planning for automated vehicles in a cooperative framework
 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, July 6-7, 2020. (Virtual conference)
- P38. Doko A., Markantonakis V., Papamichail I.*, Papageorgiou M., Schrab K., Neubauer M. and Protzmann R.
A dynamic lane assignment strategy for mixed vehicle traffic – A simulation-based investigation
 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, July 6-7, 2020. (Virtual conference)
- P39. Markantonakis V.*, Doko A., Papamichail I., Papageorgiou M., Schrab K., Neubauer M. and Protzmann R.
Traffic control algorithms for mixed vehicle traffic – A simulation-based investigation
 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, July 6-7, 2020. (Virtual conference)
- P40. Wang Y.*, Papamichail I. and Papageorgiou M.
Ego-efficient lane changes of smart vehicles with impacts on traffic flow
 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, July 6-7, 2020. (Virtual conference)
- P41. Papamichail I.
Panel Discussion on Autonomous vs. human drivers: What will be the right mix?
 Invited participation, 3rd Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, July 6-7, 2020. (Virtual conference)
- P42. Papamichail I.*, Markantonakis V., Doko A., Papageorgiou M., Schrab K., Neubauer M. and Protzmann R.
Traffic control algorithms for mixed vehicle traffic
 Invited presentation, Tutorial Session on "Innovative topics and future challenges in traffic control", 1st Virtual IFAC World Congress (IFAC-V 2020), July 13-17, 2020.

- P43. Malekzadeh M.* , Papageorgiou M., Papamichail I. and Bogenberger K.
Optimal control of internal road boundary for lane-free automated vehicle traffic
Invited presentation, Workshop on "Network impacts of emerging mobility trends", 2020 IEEE Intelligent Transportation Systems Conference (ITSC), Rhodes, Greece, September 20-23, 2020. (Virtual conference)
- P44. Typaldos P.* , Kalogianni I, Mountakis K.S., Papageorgiou M. and Papamichail I.
Online road vehicle trajectory specification in presence of traffic lights with stochastic switching times
Invited presentation, Workshop on "Traffic management for future mobility - CAVs in a mixed traffic environment", 2020 IEEE Intelligent Transportation Systems Conference (ITSC), Rhodes, Greece, September 20-23, 2020. (Virtual conference)
- P45. Typaldos P.* , Papageorgiou M. and Papamichail I.
Optimization-based path-planning for connected and non-connected automated vehicles
Invited presentation, Workshop on "Modeling and control tools for sustainable and connected mobility in smart cities", 29th Mediterranean Conference on Control and Automation (MED2021), Bari, Italy, June 22-25, 2021. (Virtual conference)
- P46. Nikolic G., Graham S., Deletsu J.-M., Pringle R.* , Jacob C., Bekkers M., Papamichail I., Papageorgiou M., Volet P. and Bélisle F.
"Smart expressway management" Improving operation through ramp metering
2021 TAC Conference & Exhibition, September 20 - October 1, 2021. (Online conference)
- P47. Papamichail I.
Real-time control measures for over-spilling freeway off-ramps.
7th ITS Hellas Conference: Transportation & Logistics 4.0, Athens, Greece, December 8-9, 2021.
- P48. Troullinos, D., Chalkiadakis G., Manolis D., Papamichail I.* and Papageorgiou M.*
A lane-free microscopic simulation tool for connected and automated vehicles
101st Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 9-13, 2022.
- P49. Martínez I.* , Markantonakis V., Papamichail I.* , Papageorgiou M.* and Jin W.-L.
Stationary states and capacity drop at lane-drop bottlenecks with the Intelligent Driver Model
101st Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 9-13, 2022.
- P50. Papamichail I.* , Markantonakis V., Typaldos P. and Papageorgiou M.
Traffic control for freeways in the presence of CAVs – Simulation experiments using AIMSUN
Invited presentation, AIMSUN Workshop: Modelling and Simulation for CAVs and Emerging Mobility Solutions, 10th Symposium of the European Association for Research in Transportation (hEART), Leuven, Belgium, May 31, 2022.
- P51. Mpimis T., Perakis H. * , Gikas V., Kapsis T.T., Guo Y., Joswig N., Panagopoulos A.D., Dovis F., Ruotsalainen L. and Papamichail I.
RobPos4VApp: Low-cost Cooperative DGNSS-based Positioning in Connected Vehicle Applications
Positioning and Navigation for Intelligent Transport Systems (POSNAV 2022), Berlin, Germany, November 3-4, 2022.
- P52. Papamichail I.* , Markantonakis V., Typaldos P. and Papageorgiou M.
Traffic management using Connected Automated Vehicles
Invited keynote presentation, Symposium organized by the IEEE Intelligent Transportation Systems Society (ITSS) for the Travelling Fellowship Program in 2022 for Young Professionals (YPs), Chania, Greece, November 25, 2022.

- P53. Niels T. *, Bogenberger K., Papageorgiou M. and Papamichail I.
Optimization-based intersection control for connected automated vehicles and pedestrians
 102nd Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 8-12, 2023.
- P54. Papamichail I.
CAV applications requiring accurate positioning data: Considerations for RobPos4VApp project
 Invited presentation, Final Event, RobPos4VApp, Athens, Greece, December 18, 2023.
- P55. Typaldos P. *, Pavlaki I., Yanumula V.K., Papamichail I. and Papageorgiou M.
Optimal trajectory planning for emergency vehicles in lane-free automated vehicle traffic
 103rd Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 7-11, 2024.
- P56. Naderi M.*, Papamichail I. and Papageorgiou M.
Lane-free signal-free intersection crossing via model predictive control
 Invited presentation, Webinar by ECTRI Thematic Group on Traffic Management & Modelling, May 16, 2024.
- P57. Papamichail I.
Motorway traffic control – From theory to practice
 Invited presentation, 2024 IEEE ITSS Cyprus Chapter Workshop: Advances in Intelligent Traffic Management, Nicosia, Cyprus, December 9, 2024.
- P58. Papamichail I.
Optimal control approaches for lane-free traffic with connected and automated vehicles
 Invited presentation, GRETTIA, Université Gustave Eiffel, Paris, France, April 4, 2025.
- P59. Dabestani N.*, Papamichail I. and Papageorgiou M.
Optimal path planning of CAVs in lane-free traffic
 Invited presentation, Webinar by ECTRI Thematic Group on Traffic Management & Modelling, May 23, 2025.
- P60. Papamichail I.
Freeway traffic control via Variable Speed Limits
 International Symposium “Navigating the Future of Traffic Management”, Athens, Greece, June 29 - July 3, 2005.
- P61. Papamichail I.
Freeway traffic management using connected automated vehicles
 Invited presentation, 2nd International Conference on Traffic Control for Smart Highway, Ningbo, China, September 26-27, 2025.
- P62. Papamichail I.
Distributed model predictive control of automated vehicle entities in lane-free traffic
 Distinguished invited lecture, Institute of Intelligent Transportation Systems, Zhejiang University, Hangzhou, China, November 19, 2025.
- P63. Papamichail I.
Distributed model predictive control of automated vehicle entities in lane-free traffic
 Invited presentation, The 4th International Conference on Cross-sea Bridges, Ningbo, China, November 21-22, 2025.

Research and Development Reports

- R1. Papageorgiou M., Papamichail I. and partners of the Information Society Project
 EURAMP (IST-2004-507645)
Network-wide ramp metering
 Deliverable 3.3, Report for the IST Office, Brussels, Belgium, August 2006.

- R2. Papageorgiou M., Papamichail I. and partners of the Information Society Project EURAMP (IST-2004-507645)
Network-wide ramp metering prototype
Deliverable 3.4, Report for the IST Office, Brussels, Belgium, October 2006.
- R3. Papageorgiou M., Kosmatopoulos E., Protopappas M. and Papamichail I.
Effects of variable speed limits (VSL) on motorway traffic – Results obtained from M42 data
Internal Report 2006-25, Dynamic Systems and Simulation Laboratory, Technical University of Crete, Chania, Greece, October 2006.
- R4. Papageorgiou M. and Papamichail I.
Handbook of ramp metering
Deliverable 7.5, Report of the Information Society Project EURAMP (IST-2004-507645), IST Office, Brussels, Belgium, April 2007.
- R5. Papageorgiou M., Papamichail I. and partners of the Information Society Project EURAMP (IST-2004-507645)
Technology implementation plan (Updated dissemination and use plan)
Deliverable 7.4, Report for the IST Office, Brussels, Belgium, July 2007.
- R6. Papamichail I., Papageorgiou M. and Kosmatopoulos E.
Modelling, configuration and simulation testing for the VicRoads ramp metering pilot project – Final report
Prepared for VicRoads, Melbourne, Australia, September 2007.
- R7. Tampere C.M.J., Lentzakis A.F., Papageorgiou M. and Papamichail I.
Off-line application of the motorway traffic surveillance tool RENAISSANCE to a motorway network around Antwerp
Report for Ministerie van het Vlaams Gewest, Department Mobiliteit en Openbare Werken, Vlaams Verkeerscentrum, Belgium, February 2009.
- R8. Papamichail I. and Papageorgiou M.
Balancing of queues or waiting times on dual-branch on-ramps
Report for VicRoads, Melbourne, Australia, June 2009.
- R9. Wang Y., Papageorgiou M., Gaffney J., Papamichail I., Rose G. and Young W.
Local ramp metering in the presence of random-location bottlenecks downstream of a metered ramp
Report for VicRoads, Melbourne, Australia, July 2009.
- R10. Papageorgiou M., Papamichail I. and partners of the DG INFSO Project NEARCTIS (ICT-2008-224272)
Review of available case studies and related scientific knowledge
Deliverable 7, Report for the ICT Office, Brussels, Belgium, September 2009.
- R11. Papageorgiou M. and Papamichail I.
High-level proof-of-concept for the application of the HERO coordinated ramp metering scheme to a field test at A10
Report for Rijkswaterstaat, The Netherlands, September 2009.
- R12. Papamichail I., Papageorgiou M. and partners of the DG INFSO Project NEARCTIS (ICT-2008-224272)
Identification of successes, gaps and potential for improvements in traffic management applications
Deliverable 8, Report for the ICT Office, Brussels, Belgium, July 2010.
- R13. Kouvelas A., Papamichail I., Papageorgiou M. and partners of the DG INFSO Project AGILE (ICT-2009-257806)
ConvCD distributed optimization software tool for providing arbitrary-close-to-optimal and scalable LSCS design
Deliverable 2.2, Report for the ICT Office, Brussels, Belgium, September 2011.

- R14. Kouvelas A., Papamichail I., Papageorgiou M. and partners of the DG INFSO Project AGILE (ICT-2009-257806)
Description of the AGILE integrated system
Deliverable 3.2, Report for the ICT Office, Brussels, Belgium, September 2011.
- R15. Papamichail I., Papageorgiou M. and partners of the DG INFSO Project NEARCTIS (ICT-2008-224272)
Specifications and evaluation approaches for possible case studies
Deliverable 15, Report for the ICT Office, Brussels, Belgium, May 2012.
- R16. Diakaki C., Dinopoulou V., Papamichail I. and Papageorgiou M.
Public transport priority in real time: A state of the art and practice review
Deliverable 1, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, February 2013.
- R17. Papamichail I., Iordanidou G.-R., Spiliopoulou A. and Papageorgiou M.
Modelling, configuration and simulation testing for the Main Roads managed freeways pilot project – Final Report
Prepared for Main Roads Western Australia, Perth, Australia, March 2013.
- R18. Chrysoulakis J., Papageorgiou M., Papamichail I., Tyrinopoulos Y., Kontorinaki M. and Ponta E.
Overview and selection of nonlinear programming methods (in Greek)
Deliverable 2.1. Technical Report for the Project SMOOTH, ARCHIMEDES III, Athens, June 2013.
- R19. Dinopoulou V., Diakaki C., Papamichail I. and Papageorgiou, M.
PTP methodology/software development
Deliverable 2.1, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, September 2013.
- R20. Malandraki G., Papamichail I., Papageorgiou M. and Dinopoulou V.
Public transport priority in real time: Simulation and evaluation of a PTP methodology
Deliverable 3, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, November 2013.
- R21. Karlaftis M.G., Papageorgiou M., Vlahogianni E.I. and Papamichail, I.
Analysis and recommendations for traffic data collection and forecasting in Bulgaria
World Bank Report, February 2014.
- R22. Papageorgiou M., Karlaftis M.G., Vlahogianni E.I. and Papamichail, I.
Traffic management in Bulgaria: Analysis and recommendations
World Bank Report, February 2014.
- R23. Diakaki C., Papageorgiou M., Papamichail I., Nikolos I., Iordanidou G.-R. and Porfyri K.
Overview and analysis of vehicle automation and communication systems from a motorway traffic management perspective
Deliverable 1, Technical Report for the ERC Advanced Grant TRAMAN21, Chania, Greece, May 2014.
- R24. Spiliopoulou A., Papamichail I., Papageorgiou M. and Chrysoulakis, J.
CALISTO user's manual
Deliverable 4.1, Technical Report for the Project SMOOTH, ARCHIMEDES III, Athens, July 2014.
- R25. Dinopoulou V., Papamichail I., Papageorgiou M. and Malandraki, G.
Multiple PTP requests methodology/software
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