

# 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

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

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

## TEACHING AND ACADEMIC ACTIVITIES

<b>Technical University of Crete, Chania, Greece</b> School of Production Engineering and Management	<b>09/2004-present</b>
<ul style="list-style-type: none"> <li>• Lectures on: <ul style="list-style-type: none"> <li>– Advanced Nonlinear Programming (Postgraduate course, since 10/2006)</li> <li>– Data Structures and Algorithms</li> <li>– Introduction to Computer Programming (until 09/2009)</li> <li>– Introduction to Industrial Processes (until 09/2006)</li> <li>– Nonlinear Programming (since 10/2022)</li> <li>– Probability and Statistics for Engineers (until 09/2005)</li> <li>– Project and Production Management and Scheduling (since 09/2009)</li> </ul> </li> <li>• Supervisor of 5 PhD students and member of 8 PhD committees</li> <li>• Supervisor of 9 MSc theses and 15 Diploma theses</li> <li>• Advisor of 9 Post-docs</li> <li>• Evaluator of candidate faculty members</li> <li>• Examiner of several PhD, MSc and Diploma theses</li> <li>• Member of the General Assembly of the Department of Production Engineering and Management (since 09/2005)</li> <li>• Member of the Summer Employment Committee of the Department of Production Engineering and Management (09/2006-08/2008)</li> <li>• Member of the Undergraduate Studies Committee of the Department of Production Engineering and Management (09/2007-08/2008)</li> <li>• Departmental coordinator for the ERASMUS program of the Department of Production Engineering and Management (09/2008-08/2010)</li> </ul>	

- 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).

**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**

**FRONTIER** **05/2021-present**

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-present**

Lane-free artificial-fluid environment for vehicular traffic, Funded by the European Commission, European Research Council Executive Agency, Advanced Investigator 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 21<sup>st</sup> century, Funded by the European Commission, European Research Council Executive Agency, Advanced Investigator 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 INFSO), 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 INFSO), 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 INFSO), 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 INFSO), 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 Editors 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**

- 22<sup>nd</sup> IFAC World Congress 2023 (Technical Associate Editor), Yokohama, Japan, July 9-14, 2023.
- 4<sup>th</sup> Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2016), Dresden, Germany, November 30 - December 2, 2022.
- 25<sup>th</sup> IEEE Intelligent Transportation Systems Conference (IEEE ITSC 2022), Macau, China, October 8-12, 2022.
- 24<sup>th</sup> IEEE Intelligent Transportation Systems Conference (IEEE ITSC 2021), Indianapolis, IN, USA, September 19-22, 2021.
- 7<sup>th</sup> International IEEE Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2021), Heraklion, Greece, June 16-18, 2021.
- 16<sup>th</sup> IFAC Symposium on Control in Transportation Systems, Lille, France, June 8-10, 2021.
- IEEE Forum on Intelligent and Sustainable Transportation Systems (ISTS) 2020, Delft, The Netherlands, November 3-5, 2020.
- 23<sup>rd</sup> IEEE International Conference on Intelligent Transportation Systems (ITSC 2020), Rhodes, Greece, September 20-23, 2020.
- 23<sup>rd</sup> European Working Group on Transportation 2020 (EWGT 2020), Paphos, Cyprus September 16-18, 2020.
- 21<sup>st</sup> IFAC World Congress 2020 (Technical Associate Editor), Berlin, Germany, July 12-17, 2020.
- 3<sup>rd</sup> Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2020), Luxembourg, July 4-5, 2020.
- 22<sup>nd</sup> IEEE Intelligent Transportation Systems Conference (ITSC 2019), Auckland, New Zealand, October 27-30, 2019.
- 1<sup>st</sup> IFAC Workshop on Control of Transportation Systems (WCTS 2019), Haifa, Israel, June 30 - July 1, 2019.
- 6<sup>th</sup> International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2019), Kraków, Poland, June 5-7, 2019.
- 21<sup>th</sup> IEEE Intelligent Transportation Systems Conference (ITSC 2018), Maui, Hawaii, November 4-7, 2018.
- 22<sup>nd</sup> International Conference on System Theory, Control and Computing, Sinaia, Romania, October 10-12, 2018.
- 2<sup>nd</sup> Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2018), Ispra, Italy, June 11-12, 2018.
- 15<sup>th</sup> IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 6-8, 2018.
- 4<sup>th</sup> 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.
- 20<sup>th</sup> IEEE Intelligent Transportation Systems Conference (ITSC 2017), Yokohama, Japan, October 16-19, 2017.
- 3<sup>rd</sup> International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS), Porto, Portugal, April 23-24, 2017.
- 19<sup>th</sup> IEEE Intelligent Transportation Systems Conference (ITSC 2016), Rio de Janeiro, Brazil, November 1-4, 2016.

- 19<sup>th</sup> EURO Working Group on Transportation Meeting (EWGT2016), Istanbul, Turkey, September 5-7, 2016.
- 1<sup>st</sup> Symposium on Management of Future motorway and urban Traffic Systems (MFTS 2016), Chania, Greece, June 2-3, 2016.
- 14<sup>th</sup> IFAC Symposium on Control in Transportation Systems, Istanbul, Turkey, May 18-20, 2016.
- 2<sup>nd</sup> 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
- 19<sup>th</sup> International Conference on System Theory, Control and Computing, Cheile Gradistei, Romania, October 14-16, 2015.
- 18<sup>th</sup> Intern. IEEE Conference on Intelligent Transportation Systems (ITSC 2015), Las Palmas De Gran Canaria, Spain, September 15-18, 2015.
- 17<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC2014), Qingdao, Shandong, China, October 8-11, 2014.
- 16<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC2013), The Hague, The Netherlands, October 6-9, 2013.
- 15<sup>th</sup> IASTED Conference on Control and Applications (CA2013), Honolulu, Hawaii, USA, August 26-28, 2013.
- 13<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS2012), Sofia, Bulgaria, September 12-14, 2012.
- 14<sup>th</sup> IASTED Conference on Control and Applications (CA2012), Crete, Greece, July 18-20, 2012.
- Organised/Special Sessions Co-Chair for the 13<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC2010), Madeira Island, Portugal, September 19-22, 2010.
- 12<sup>th</sup> IASTED Conference on Control and Applications (CA2010), Banff, Alberta, Canada, July 15-17, 2010.
- 11<sup>th</sup> IASTED Conference on Control and Applications (CA2009), Cambridge, UK, July 13-15, 2009.
- 2008 IEEE International Conference on Systems, Man and Cybernetics (SMC2008), Singapore, October 12-15, 2008.
- 10<sup>th</sup> IASTED Conference on Control and Applications (CA2008), Quebec City, Quebec, Canada, May 26-28, 2008.
- 2<sup>nd</sup> 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 (SMC2007), Montreal, Canada, October 7-10, 2007.
- 9<sup>th</sup> IASTED Conference on Control and Applications (CA2007), Montreal, Quebec, Canada, May 30 - June 1, 2007.
- 5<sup>th</sup> IFAC-DECOM-TT Workshop, Izmir, Turkey, May 17-18, 2007.
- 2006 IEEE International Conference on Systems, Man and Cybernetics (SMC2006), 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 Symposia 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**

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

#### **Invited external examiner of doctoral theses**

- National Technical University of Athens, Greece (2021, 2022)
- Université Gustave Eiffel, France (2022)
- University of Cyprus, Cyprus (2019)
- University of Malta, Malta (2019)

#### **Evaluation of research proposals**

- METRANS Transportation Center, USC & CSULB (2018, 2019)

- UCLA Institute of Transportation Studies (2017)

## AWARDS - SCHOLARSHIPS

- "Matthew Karlaftis" Award** **2021**  
 Awarded at the 10<sup>th</sup> ICTR (International Congress on Transportation Research) to the PhD student Panagiotis Typaldos for the article: Typaldos P., Volakakis V., Papageorgiou M. and Papamichail I., A discrete differential dynamic programming approach for GLOSA systems with stochastic switching times.
- 1<sup>st</sup> 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**  
 Awarder 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 3<sup>rd</sup> year exams in the Department of Chemical Engineering, NTUA
- Scholarship from the State Scholarships Foundation** **1993-94**  
Second on the 1<sup>st</sup> year exams in the Department of Chemical Engineering, NTUA
- Nikolaou I. Kritikou Scholarship** **1993-94**  
First on the 1<sup>st</sup> 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, 25<sup>th</sup> 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), 23<sup>rd</sup> IEEE International Conference on Intelligent Transportation Systems (ITSC 2020), Virtual conference, September 20-23, 2020.
- Advances in motorway traffic control (Special session), 18<sup>th</sup> 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), 20<sup>th</sup> 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), 14<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC 2011), Washington, DC, USA, October 5-7, 2011.
- Ramp metering (Special session), 13<sup>th</sup> 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), 13<sup>th</sup> 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.  
*Person-based traffic responsive signal control optimization*  
IEEE Transactions on Intelligent Transportation Systems, Vol. 14, pp. 1278-1289, 2013.
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 XXIV ANPET - Congresso de Pesquisa e Ensino em Transportes. Anais do XXIV Congresso da ANPET (Associação Nacional de Pesquisa e Ensino em Transportes), Salvador, Brazil, November 29 - December 3, 2010.
- C38. Carlson R.C., Ragias A., Papamichail I. and Papageorgiou M.  
*Mainstream traffic flow control of merging motorways using variable speed limits*  
 19<sup>th</sup> Mediterranean Conference on Control and Automation (MED2011), Corfu, Greece, June 20-23, 2011.
- C39. Carlson R.C., Papamichail I. and Papageorgiou M.  
*Local feedback-based mainstream traffic flow control on motorways using variable speed limits*  
 Proceedings Special International Conference on Complex Systems: Synergy of Control, Computing & Communications (COSY 2011), pp. 187-194, Ohrid, F.Y.R.O.M., September 16-20, 2011.

- C40. Carlson R.C., Papamichail I. and Papageorgiou M.  
*Comparison of local feedback controllers for the mainstream traffic flow on freeways using variable speed limits*  
 Proceedings 14<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems, pp. 2160-2167, Washington, DC, USA, October 5-7, 2011.
- C41. Kouvelas A., Papageorgiou M., Kosmatopoulos E.B. and Papamichail I.  
*A learning technique for deploying self-tuning traffic control systems*  
 Proceedings 14<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems, pp. 1646-1651, Washington, DC, USA, October 5-7, 2011.
- C42. Carlson R.C., Papamichail I. and Papageorgiou M.  
*Comparação de controladores para o fluxo principal em rodovias com o uso de limites de velocidade variáveis (Comparison of controllers for the motorway mainstream by use of variable speed limits)*  
 XXV ANPET - Congresso de Pesquisa e Ensino em Transportes. Anais do XXV Congresso da ANPET, pp. 1054-1065, Belo Horizonte, Brazil, November 7-11, 2011.
- C43. Christofa E., Papamichail I. and Skabardonis A.  
*Person-based traffic signal optimization for real-time applications*  
 CD 91<sup>st</sup> Transportation Research Board Annual Meeting, Paper 12-2228, Washington, DC, USA, January 22-26, 2012.
- C44. Carlson R.C., Manolis D., Papamichail I. and Papageorgiou M.  
*Integrated ramp metering and mainstream traffic flow control on freeways using variable speed limits*  
 Procedia - Social and Behavioral Sciences Vol. 48, pp. 1578-1588, Transport Research Arena 2012, Athens, Greece, April 23-26, 2012.
- C45. Keyvan-Ekbatani M., Kouvelas A., Papamichail I. and Papageorgiou M.  
*Congestion control in urban networks via feedback gating*  
 Procedia - Social and Behavioral Sciences Vol. 48, pp. 1599-1610, Transport Research Arena 2012, Athens, Greece, April 23-26, 2012.
- C46. Carlson R.C., Manolis D., Papamichail I. and Papageorgiou M.  
*Integrated ramp metering and mainstream traffic flow control on freeways using variable speed limits*  
 Proceedings 13<sup>th</sup> IFAC Symposium on Transportation Systems, pp. 150-155, Sofia, Bulgaria, September 12-14, 2012.
- C47. Carlson R.C., Papamichail I. and Papageorgiou M.  
*Controle do fluxo principal de rodovias usando limites de velocidade variáveis (Mainstream traffic flow control on freeways using variable speed limits)*  
 XXVI ANPET - Congresso Nacional de Pesquisa e Ensino em Transportes. Anais do XXXI Congresso da ANPET, pp. 24-35, Joinville, Brazil, October 28 - November 1, 2012.
- C48. Keyvan-Ekbatani M., Papageorgiou M. and Papamichail I.  
*Feedback gating based on sparse-measurement urban network fundamental diagrams*  
 CD 92<sup>nd</sup> Transportation Research Board Annual Meeting, Paper 13-0958, Washington, DC, USA, January 13-17, 2013.
- C49. Keyvan-Ekbatani M., Papageorgiou M. and Papamichail I.  
*Perimeter traffic control via remote feedback gating*  
 Procedia - Social and Behavioral Sciences Vol. 111, pp. 645-653, EWGT2013 – 16<sup>th</sup> Meeting of the EURO Working Group on Transportation, Porto, Portugal, September 4-6, 2013.

- C50. Spiliopoulou A., Kontorinaki M., Papamichail I. and Papageorgiou M.  
*Real-time route diversion control at congested off-ramp areas - Part II: Route guidance versus off-ramp closure*  
 Procedia - Social and Behavioral Sciences Vol. 111, pp. 1002-1111, EWGT2013 – 16<sup>th</sup> Meeting of the EURO Working Group on Transportation, Porto, Portugal, September 4-6, 2013.
- C51. Dinopoulou V., Diakaki C., Papamichail I. and Papageorgiou M.  
*Public transport priority strategies: Progress and prospects*  
 Proceedings 2<sup>nd</sup> International Symposium and 24<sup>th</sup> National Conference on Operational Research, pp. 290-295, Athens, Greece, September 26-28, 2013.
- C52. Kontorinaki M., Papamichail I., Papageorgiou M., Tyrinopoulos Y. and Chrysoulakis J.  
*Overview of nonlinear programming methods suitable for calibration of traffic flow models*  
 Proceedings 2<sup>nd</sup> International Symposium and 24<sup>th</sup> National Conference on Operational Research, pp. 303-309, Athens, Greece, September 26-28, 2013.
- C53. Spiliopoulou A., Kontorinaki M., Papamichail I. and Papageorgiou M.  
*Real-time route diversion control at congested motorway off-ramp areas - Part I: User-optimum route guidance*  
 Proceedings 16<sup>th</sup> International IEEE Annual Conference on Intelligent Transportation Systems (ITSC 2013), pp. 2119-2125, The Hague, The Netherlands, October 6-9, 2013.
- C54. Kontorinaki M., Papamichail I., Papageorgiou M., Tyrinopoulos Y. and Chrysoulakis J.  
*Macroscopic traffic flow models and optimisation methods for their validation (Μακροσκοπικά μοντέλα κυκλοφοριακής ροής και μέθοδοι βελτιστοποίησης για την επικύρωσή τους)*  
 Proceedings 6<sup>th</sup> International Congress on Transport Research, Thessaloniki, Greece, October 17-18, 2013.
- C55. Carlson R.C., Papamichail I. and Papageorgiou M.  
*Controle integrado de acesso e do fluxo principal em rodovias (Integrated ramp metering and traffic flow control on freeways)*  
 XXVII ANPET - Congresso Nacional de Pesquisa e Ensino em Transportes, Belém. Panorama Nacional da Pesquisa em Transportes 2013, Rio de Janeiro, Brazil, November 4-8, 2013.
- C56. 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*  
 CD 93<sup>rd</sup> Transportation Research Board Annual Meeting, Paper 14-0992, Washington, DC, USA, January 12-16, 2014.
- C57. Roncoli C., Papageorgiou M. and Papamichail I.  
*Motorway flow optimisation in presence of vehicle automation and communication systems*  
 OPT-i – An International Conference on Engineering and Applied Sciences Optimization, M. Papadrakakis, M.G. Karlaftis and N.D. Lagaros (Editors), paper 3178, Kos Island, Greece, June 4-6, 2014.
- C58. Spiliopoulou A., Papamichail I., Papageorgiou M and Chrysoulakis J.  
*A calibration tool for macroscopic traffic flow models*  
 Proceedings 3<sup>rd</sup> International Symposium & 25<sup>th</sup> National Conference on Operational Research, pp. 215-225, Volos, Greece, June 26–28, 2014.
- C59. Roncoli C., Papageorgiou M. and Papamichail I.  
*Optimal control for multi-lane motorways in presence of vehicle automation and communication systems*  
 Proceedings 19<sup>th</sup> IFAC World Congress (IFAC'14), pp. 4178-4183, Cape Town, South Africa, August 24-29, 2014.

- C60. Iordanidou G.-R., Papamichail I., Roncoli C. and Papageorgiou M.  
*A feedback-based approach for mainstream traffic flow control of multiple bottlenecks on motorways*  
 Proceedings 19<sup>th</sup> IFAC World Congress (IFAC'14), pp. 11344-11349, Cape Town, South Africa, August 24-29, 2014.
- C61. Roncoli C., Papamichail I. and Papageorgiou M.  
*Model predictive control for multi-lane motorways in presence of VACS*  
 Proceedings of the 17<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC 2014), pp. 501-507, Qingdao, China, October 8-11, 2014.
- C62. Wang Y., Kan Y, Papageorgiou M. and Papamichail, I.  
*Local ramp metering with distant downstream bottlenecks: a comparative study*  
 Proceedings of the 17<sup>th</sup> International IEEE Conference on Intelligent Transportation Systems (ITSC 2014), pp. 768-773, Qingdao, China, October 8-11, 2014.
- C63. Spiliopoulou A., Papamichail I., Papageorgiou M., Tyrinopoulos Y., Chrysoulakis J.  
*Calibration of two macroscopic traffic flow models using a genetic algorithm*  
 11<sup>th</sup> International Congress on Advances in Civil Engineering (ACE 2014), Istanbul, Turkey, October 21-25, 2014.
- C64. Roncoli C., Papageorgiou M. and Papamichail I.  
*An optimisation-oriented first-order multi-lane model for motorway traffic*  
 94<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 11-15, 2015, paper No. 15-2905.
- C65. Spiliopoulou A., Papamichail I., Papageorgiou M., Tyrinopoulos I. and Chrysoulakis J.  
*Macroscopic traffic flow calibration using different optimization algorithms*  
 Transportation Research Procedia, Vol. 6, pp. 144-157, 2015, 4<sup>th</sup> International Symposium of Transport Simulation, Ajaccio, Corsica, France, June 1-4, 2014.
- C66. Malandraki G., Papamichail I., Papageorgiou M. and Dinopoulou V.  
*Simulation and evaluation of a public transport priority methodology*  
 Transportation Research Procedia, Vol. 6, pp. 402-410, 2015, 4<sup>th</sup> International Symposium of Transport Simulation, Ajaccio, Corsica, France, June 1-4, 2014.
- C67. Jamshidnejad A., Papageorgiou M., Papamichail I. and De Schutter B.  
*A multi-objective model-predictive control approach dealing with congestion and emissions in urban traffic networks*  
 Proceedings of the 1<sup>st</sup> ARTS ECR Conference, La Valletta, Malta, May 27-28, 2015.
- C68. Kepaptsoglou K., Tyrinopoulos Y., Kosmopoulos D. and Papamichail I.  
*Stimulating environmental considerations in transit route network design through a web-based decision support system*  
 4<sup>th</sup> International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2015), Budapest, Hungary, June 3-5, 2015.
- C69. Malandraki G., Papamichail I., Dinopoulou V. and Papageorgiou M.  
*Simulation and evaluation of a public transport priority methodology upon multiple priority requests*  
 Proceedings of the 4<sup>th</sup> International Symposium & 26<sup>th</sup> National Conference on Operational Research, pp. 186-190, Chania, Greece, June 4-6, 2015.
- C70. Manolis D., Diakaki C., Papamichail I. and Papageorgiou M.  
*Comparative evaluation of two alternative approaches for the decentralized real-time signal control of urban networks*  
 Proceedings of the 4<sup>th</sup> International Symposium & 26<sup>th</sup> National Conference on Operational Research, pp. 196-200, Chania, Greece, June 4-6, 2015.

- C71. Baldi S., Michailidis I., Ntampasi V., Kosmatopoulos E.B., Papamichail I. and Papageorgiou, M.  
*Simulation-based synthesis for approximately optimal urban traffic light management*  
 Proceedings of the American Control Conference (ACC2015), pp. 868-873, Chicago, IL, USA, July 1-3, 2015.
- C72. Roncoli C., Papamichail I. and Papageorgiou M.  
*Model predictive control for motorway traffic with mixed manual and VACS-equipped vehicles*  
 Transportation Research Procedia, Vol. 10, pp. 452-461, 2015, 18<sup>th</sup> Euro Working Group on Transportation, EWGT 2015, Delft, The Netherlands, July 14-16, 2015.
- C73. Pasquale C., Papamichail I., Roncoli C., Sacone S., Siri S. and Papageorgiou M.  
*A nonlinear optimal control approach for two-class freeway traffic regulation to reduce congestion and emissions*  
 Proceedings of the 2015 European Control Conference (ECC), pp. 2651-2656, Linz, Austria, July 15-17, 2015.
- C74. Tyrinopoulos Y., Pternea M., Kepaptsoglou K., Kosmopoulos D., Papageorgiou M. and Papamichail I.  
*Assisting transit operators in designing sustainable bus route networks*  
 Proceedings 7<sup>th</sup> International Congress on Transportation Research in Greece (Πρακτικά 7<sup>ο</sup> Διεθνές Συνέδριο για την Έρευνα στις Μεταφορές στην Ελλάδα), Athens, Greece, November 5-6, 2015.
- C75. Jamshidnejad A., Papamichail I., Papageorgiou M. and De Schutter B.  
*A model-predictive urban traffic control approach with a modified flow model and endpoint penalties*  
 Proceedings 14<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2016), pp. 147-152, Istanbul, Turkey, May 18-20, 2016.
- C76. Iordanidou G.-R., Papamichail I., Roncoli C. and Papageorgiou M.  
*Integrated motorway traffic flow control with delay balancing*  
 Proceedings 14<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2016), pp. 315-322, Istanbul, Turkey, May 18-20, 2016.
- C77. Jamshidnejad A., Papamichail I., Hellendoorn H., Papageorgiou M. and De Schutter, B.  
*Gradient-based model-predictive control for green urban mobility in traffic networks.*  
 Proceedings of 2016 IEEE 19<sup>th</sup> International Conference on Intelligent Transportation Systems, pp. 1077-1082, Rio de Janeiro, Brazil, November 1-4, 2016.
- C78. Fountoulakis M., Bekiaris-Liberis N., Roncoli C., Papamichail I. and Papageorgiou M.  
*Highway traffic state estimation with mixed connected and conventional vehicles: Microscopic simulation-based testing.*  
 Proceedings of 2016 IEEE 19<sup>th</sup> IEEE International Conference on Intelligent Transportation Systems, pp. 1761-1766, Rio de Janeiro, Brazil, November 1-4, 2016.
- C79. Manolis M., Pappa T., Diakaki C., Papamichail I. and Papageorgiou M.  
*Simulation study of centralized vs decentralized approaches to the signal control of large-scale urban networks.*  
 96<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 8-12, 2017, paper No. 17-2323.
- C80. Manolis D., Michailidis I., Diakaki C., Papamichail I., Kosmatopoulos E. and Papageorgiou M.  
*Simulation study of an adaptive decentralized approach for the optimization of traffic control systems*  
 6<sup>th</sup> International Symposium and 28<sup>th</sup> National Conference on Operation Research, pp. 85-90, Thessaloniki, Greece, June 8-10, 2017.

- C81. Papamichail I., Iordanidou G.-R., Roncoli C. and Papageorgiou M.  
*Integrated motorway traffic flow control*  
8<sup>th</sup> International Congress on Transportation Research in Greece, Thessaloniki, Greece, September 27-29, 2017.
- C82. Manolis D., Diakaki C., Papamichail I. and Papageorgiou M.  
*Simulation investigations of the coordinated traffic-responsive signal control strategy TUC with actuation at the local junction level*  
8<sup>th</sup> International Congress on Transportation Research, Thessaloniki, Greece, September 27-29, 2017.
- C83. Papadopoulou S., Roncoli C., Bekiaris-Liberis N., Papamichail I. and Papageorgiou M.  
*Validation of a per-lane traffic state estimation scheme for highways with connected vehicles*  
2017 IEEE 20th International Conference on Intelligent Transportation Systems (ITSC), pp. 1053-1059, Yokohama, Japan, October 16-19, 2017.
- C84. Perraki G., Roncoli C., Papamichail I. and Papageorgiou M.  
*Evaluation of an MPC strategy for motorway traffic comprising connected and automated vehicles*  
2017 IEEE 20th International Conference on Intelligent Transportation Systems (ITSC), pp. 2315-2321, Yokohama, Japan, October 16-19, 2017.
- C85. Typaldos P., Papamichail I. and Papageorgiou M.  
*Minimization of fuel consumption for vehicle trajectories*  
97<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 7-11, 2018, paper No. 18-3953.
- C86. Wang L., Guo J., Ye F., Perraki G., Liu Y., Papamichail I., Wang Y. and Papageorgiou, M.  
*Traffic flow characteristics with Cooperative Adaptive Cruise Control: An intensive study using enhanced AIMSUN*  
97<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 7-11, 2018, paper No. 18-2191.
- C87. Papamichail I., Papageorgiou M. and Stamatakis I.  
*Feedback traffic control at highway work zones using variable speed limits*  
15<sup>th</sup> IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 6-8, 2018, pp. 329-336.
- C88. Frejo J.R.D., Papamichail I., Papageorgiou M. and De Schutter B.  
*A new macroscopic model for variable speed limits*  
15<sup>th</sup> IFAC Symposium on Control in Transportation Systems, Savona, Italy, June 6-8, 2018, pp. 343-348.
- C89. Markantonakis V., Skoufoulas D.I., Papamichail I. and Papageorgiou M.  
*Integrated traffic control for freeways using variable speed limits and lane change control actions*  
98<sup>th</sup> Annual Meeting of the Transportation Research Board, Washington, DC, USA, January 13-17, 2019, paper No. 19-3865.
- C90. Ye F., Wang L., Wang Y., Guo J., Papamichail I. and Papageorgiou M.  
*A reinforcement learning approach to smart lane changes of self-driving cars*  
Progress in Artificial Intelligence, P. Moura Oliveira, P. Novais, L.P. Reis, Editors, Springer, 2019, pp. 559-571, 19<sup>th</sup> EPIA Conference on Artificial Intelligence (EPIA2019), Vila Real, Portugal, September 3-6, 2019.
- C91. Typaldos P., Mountakis K.S., Papageorgiou M. and Papamichail I.  
*Optimization-based path planning for automated vehicles*  
9<sup>th</sup> International Congress on Transportation Research, Athens, Greece, October 24-25, 2019, paper No. 18.



- C92. Wang L., Ye F., Wang Y., Guo J., Papamichail I., Papageorgiou M., Hu S. and Zhang L.  
*A Q-learning foresighted approach to ego-efficient lane changes of connected and automated vehicles on freeways*  
2019 IEEE International Conference on Intelligent Transportation Systems, Auckland, New Zealand, October 27-30, 2019, pp. 1385-1392.
- C93. Piacentini G., Ferrara A., Papamichail I. and Papageorgiou M.  
*Highway traffic control with moving bottlenecks of connected and automated vehicles for travel time reduction*  
58<sup>th</sup> Conference on Decision and Control (CDC 2019), Nice, France, December 11-13, 2019.
- C94. Almérás C., Buisson C., Olstam J., Papamichail I., Ponweiser W. and Wagner P.  
*Zero crashes, zero congestion, and zero emissions – Future research in traffic management*  
Transport Research Arena 2020, Helsinki, Finland, April 27-30, 2020.  
(Conference canceled)
- C95. Cao J., Hu Y., Diamantis M., Zhang S., Wang Y., Guo J., Papamichail I., Papageorgiou M., Zhang L. and Hu J.  
*A max pressure approach to urban network signal control with queue estimation using connected vehicle data*  
2020 IEEE Intelligent Transportation Systems Conference (ITSC), Rhodes, Greece, September 20-23, 2020, pp. 612-619.  
(Virtual conference)
- C96. Zhang S., Diamantis M., Wang Y., Guo J., Papamichail I., Papageorgiou M., Zhang L. and Hu J.  
*Joint queue estimation and max pressure control for signalized urban networks with connected vehicles*  
2020 Forum on Integrated and Sustainable Transportation Systems (FISTS), Delft, The Netherlands, November 3-5, 2020, pp. 211-217.  
(Virtual conference)
- C97. 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*  
Transportation Research Procedia, Vol. 52, pp. 356-363, 2021, 23<sup>rd</sup> EURO Working Group on Transportation Meeting, EWGT 2020, Paphos, Cyprus, Online, September 16-18, 2020.
- C98. Troullinos D., Chalkiadakis G., Papamichail I. and Papageorgiou M.  
*Collaborative multiagent decision making for lane-free autonomous driving*  
Proc. 20<sup>th</sup> International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2021), U. Endriss, A. Nowé, F. Dignum, A. Lomuscio (eds.), Online, May 3-7, 2021, pp. 1335-1343.
- C99. Sharma S., Papamichail I., Nadi A., van Lint H., Tavasszy L. and Snelder, M.  
*A multi-class lane-changing advisory system for freeway merging sections*  
16<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2021), Lille, France, Online, June 8-10, 2021, IFAC-PapersOnLine 54 (2), pp. 93-98.
- C100. Malekzadeh M., Papamichail I. and Papageorgiou M.  
*Internal boundary control of lane-free automated vehicle traffic using a model-free adaptive controller*  
16<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2021), Lille, France, Online, June 8-10, 2021, IFAC-PapersOnLine 54 (2), pp. 99-106.

- C101. Typaldos P., Volakakis V., Papageorgiou M. and Papamichail I.  
*Vehicle-based trajectory specification in presence of traffic lights with stochastic switching times*  
 16<sup>th</sup> IFAC Symposium on Control in Transportation Systems (CTS 2021), Lille, France, Online, June 8-10, 2021, IFAC-PapersOnLine 54 (2), pp. 298-305.
- C102. Malekzadeh M., Papamichail I., Papageorgiou M. and Bogenberger K.  
*Optimal control of internal road boundary for lane-free automated vehicle traffic*  
 7<sup>th</sup> International IEEE Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS 2021), Heraklion, Greece, June 16-18, 2021.
- C103. Malekzadeh M., Papamichail I. and Papageorgiou M.  
*Internal boundary control of lane-free automated vehicle traffic using a linear quadratic integral regulator*  
 2021 European Control Conference (ECC), Rotterdam, The Netherlands, June 29 - July 2, 2021, pp. 35-41.
- C104. Typaldos P., Volakakis M., Papageorgiou M. and Papamichail I.  
*A discrete differential dynamic programming approach for GLOSA systems with stochastic switching times*  
 10<sup>th</sup> International Congress on Transportation Research (ICTR 2021), Rhodes, Greece, Online, September 1-3, 2021, paper No 19.
- C105. Ma Y., Wang L., Wang Y., Guo J., Zhang L., Hu S., Papamichail I. and Papageorgiou M.  
*Developing smart lane-changing strategies for CAVs on freeways based on MOBIL and reinforcement learning*  
 24<sup>th</sup> IEEE International Conference on Intelligent Transportation (ITSC 2021), Indianapolis, IN, USA, September 19-22, 2021, pp 2027-2033.
- C106. Troullinos D., Chalkiadakis G., Manolis D., Papamichail I. and Papageorgiou M.  
*Lane-free microscopic simulation for connected and automated vehicles*  
 24<sup>th</sup> IEEE International Conference on Intelligent Transportation (ITSC 2021), Indianapolis, IN, USA, September 19-22, 2021, pp. 3292-3299.
- C107. Yanumula V.K., Typaldos P., Troullinos D., Malekzadeh, M., Papamichail I. and Papageorgiou M.  
*Optimal path planning for connected and automated vehicles in lane-free traffic*  
 24<sup>th</sup> IEEE International Conference on Intelligent Transportation (ITSC 2021), Indianapolis, IN, USA, September 19-22, 2021, pp. 3545-3552.
- C108. Troullinos D., Chalkiadakis G., Manolis D., Papamichail I. and Papageorgiou M.  
*Extending SUMO for lane-free microscopic simulation of connected and automated vehicles*  
 SUMO Conference Proc., Vol. 3, SUMO User Conference 2022 (SUMO 2022), Online, May 9-11, 2022, pp. 95-103.
- C109. Georgakis P., Bothos E., Magoutas B., Tsirimpa A., Richetta A., Papamichail I., Breuil F.A.  
*Next generation traffic management for proactive multimodal network optimization*  
 14<sup>th</sup> ITS European Congress, Toulouse, France, May 30 - June 1, 2022, paper No. 344.
- C110. Yanumula V.K., Typaldos P., Troullinos D., Malekzadeh M., Papamichail I. and Papageorgiou M.  
*Lane-free traffic with connected and automated vehicles – An optimal control approach*  
 11<sup>th</sup> Triennial Symposium on Transportation Analysis (TRISTAN XI), Mauritius Island, June 19-25, 2022.
- C111. Theodosis D., Tzortzoglou F.N., Karafyllis I., Papamichail I. and Papageorgiou M.  
*Sampled-data controllers for autonomous vehicles on lane-free roads*  
 Mediterranean Conference on Control and Automation (MED 2022), Athens, Greece, June 28 - July 1, 2022, pp. 103-108.

- C112. Malekzadeh M., Papamichail I. and Papageorgiou M.  
*Overlapping internal boundary control of lane-free automated vehicle traffic with state and input inclusion*  
 Mediterranean Conference on Control and Automation (MED 2022), Athens, Greece, June 28 - July 1, 2022, pp. 1066-1073.
- C113. Jin X., Yu X., Hu Y., Wang Y., Papageorgiou M., Papamichail I., Malekzadeh M.  
*Integrated control of internal boundary and ramp inflows for lane-free traffic of automated vehicles on freeways*  
 25<sup>th</sup> IEEE International Conference on Intelligent Transportation Systems (ITSC 2022), Macau, China, October 8-12, 2022, pp. 1234-1239.
- C114. Naderi M., Papageorgiou M., Karafyllis I., Papamichail I.  
*Automated vehicle driving on large lane-free roundabouts*  
 25<sup>th</sup> IEEE International Conference on Intelligent Transportation Systems (ITSC 2022), Macau, China, October 8-12, 2022, pp. 1528-1535.
- C115. Malekzadeh M., Manolis D., Papamichail I., Papageorgiou M.  
*Empirical investigation of properties of lane-free automated vehicle traffic*  
 25<sup>th</sup> IEEE International Conference on Intelligent Transportation Systems (ITSC 2022), Macau, China, October 8-12, 2022, pp. 2393-2400.

#### **Scientific Presentations (presented by \*)**

- P1. Papamichail I.\*, Boukouvalas C., Magoulas K. and Tassios D.  
*Supercritical fluid extraction applications (Εφαρμογές της υπερκρίσιμης εκχύλισης)*  
 2<sup>nd</sup> 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 CO<sub>2</sub> extraction of celery and parsley seed oil*  
 17<sup>th</sup> 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*  
 4<sup>th</sup> 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*  
21<sup>st</sup> 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*  
11<sup>th</sup> 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*  
2<sup>nd</sup> 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*  
3<sup>rd</sup> 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*  
4<sup>th</sup> 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?", 2<sup>nd</sup> International Conference on Models and Technologies for ITS,  
Leuven, Belgium, June 24, 2011.
- P18. Papamichail I.  
*Traffic control using microscopic simulation tools*  
Invited lecture, 4<sup>th</sup> 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*  
1<sup>st</sup> 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*  
20<sup>th</sup> 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*  
94<sup>th</sup> 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*  
1<sup>st</sup> 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*  
5<sup>th</sup> 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*  
2<sup>nd</sup> 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*  
2<sup>nd</sup> 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*  
2<sup>nd</sup> 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*  
2<sup>nd</sup> 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*  
7<sup>th</sup> 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*  
6<sup>th</sup> 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*  
99<sup>th</sup> 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*  
99<sup>th</sup> 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*  
99<sup>th</sup> 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*  
3<sup>rd</sup> 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*  
3<sup>rd</sup> 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*  
3<sup>rd</sup> 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*  
3<sup>rd</sup> 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, 3<sup>rd</sup> 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", 1<sup>st</sup> 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", 29<sup>th</sup> 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.*  
 7<sup>th</sup> 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*  
 101<sup>st</sup> 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*  
 101<sup>st</sup> 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, 10<sup>th</sup> Symposium of the European Association for Research in Transportation (hEART), Leuven, Belgium, May 31, 2022.
- P51. 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.

- P52. Typaldos P.\*, Koutsas P., Papamichail I. and Papageorgiou M.  
*GLOSA system with uncertain green and red signal phases*  
 4<sup>th</sup> Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, November 30 - December 2, 2022.
- P53. Faros, I., Yanumula, V.K. Typaldos P., Papamichail I.\* and Papageorgiou M.  
*A lateral positioning strategy for connected and automated vehicles in lane-free traffic*  
 4<sup>th</sup> Symposium on Management of Future Motorway and Urban Traffic Systems (MFTS 2020), Luxemburg, November 30 - December 2, 2022.

### 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 INFISO 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 INFISO 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 INFISO 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 INFISO 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*  
Deliverable 4.1, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, August 2014.
- R26. Michailidis, I., Korkas, C. Ravanis, C., Kosmatopoulos, E., Schild, T., Sangi, R., Aliubavicius, U., Obermaier, J., Fourati, W., Krause, M., Diakaki, C., Manolis, D., Papamichail, I., Papageorgiou, M. *Local4Global System - Final Version (Methodology Revised using Simulations)*  
Deliverable D4.2.2, Report for Project LOCAL4GLOBAL (FP7-ICT-611538) for the Information and Communication Technologies Office, Brussels, Belgium, October 2014.
- R27. Spiliopoulou A., Papamichail I., Papageorgiou M., Tyrinopoulos Y. and Chrysoulakis J. *Accuracy and reliability investigations*  
Deliverable 5.1, Technical Report for the Project SMOOTH, ARCHIMEDES III, Athens, November 2014.
- R28. Papamichail I., Iordanidou G.-R. and Papageorgiou M. *Development of a variable speed limit algorithm for the maximisation of freeway capacity – Intermediate report on algorithm developments and preliminary testing*  
Prepared for VicRoads, Melbourne, Australia, November 2014.
- R29. Malandraki G., Papamichail I., Papageorgiou M. and Dinopoulou, V. *Simulation and Evaluation of a PTP methodology upon multiple priority requests*  
Deliverable 5, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, December 2014.
- R30. Spiliopoulou A., Papamichail I., Papageorgiou M., Tyrinopoulos Y. and Chrysoulakis J. *Comparative evaluation*  
Deliverable 6.1. Technical Report for the Project SMOOTH, ARCHIMEDES III, Athens, December 2014.
- R31. Diakaki C., Dinopoulou V., Papamichail I. and Papageorgiou M. *Report on the Dissemination, Evaluation and Exploitation of the Public Transport Priority in Real Time Project Results (in Greek)*.  
Deliverable 6, Technical Report prepared for the Project "Real time public transport priority", ARCHIMEDES III, Athens, May 2015.
- R32. Papamichail I. and Papageorgiou M. *Modelling, Configuration and Simulation Testing for the I-15 Managed Freeways Study - Technical Memorandum for Project No S-R299(199)*  
Prepared for Parson Brinckerhoff, Murray, UT, USA, July 2015.
- R33. Papamichail I. and Papageorgiou M. *Development of a variable speed limit algorithm for the maximisation of freeway capacity - Phase 1 – Final report on achieved field test results and recommendations*  
Prepared for VicRoads, Melbourne, Australia, October 2016.

- R34. Diakaki C., Manolis D., Papamichail I., Papageorgiou M., Pappa T., Fourati W., Obermaier J., Aliubavicius U., Vega Pérez J., Michailidis I., Ravanis C., Kosmatopoulos E. and García A.  
*Applying local signal control in Munich: Control logic and software implementation*  
Technical Report prepared under the Information and Communication Technologies Project LOCAL4GLOBAL (FP7-ICT-611538), Brussels, Belgium, December 2016.
- R35. Alonso I., Gilabert E., Diakaki C., Papamichail I., Papageorgiou M., Manolis D., Kosmatopoulos E., Ravanis C., Michailidis I., Ettinger R., Schild T., Sangi R., Beuchat P., Krause M., Fourati W. and Liu A.  
*Local4Global business models and update on exploitation plans (Final Version)*  
Deliverable 7.5.2, Report of Project LOCAL4GLOBAL (FP7-ICT-611538) for the Information and Communication Technologies Office, Brussels, Belgium, December 2016.
- R36. Schild T., Sangi R., Fütterer J., Streblov R., Müller D., Fourati W., Liu A., Vega J., Krause M., Winzer O., Bengler K., Diakaki C., Manolis D., Papamichail I., Papageorgiou M., Michailidis I. and Kosmatopoulos E.  
*Results on site evaluations*  
Deliverable 6.2, Report of Project LOCAL4GLOBAL (FP7-ICT-611538) for the Information and Communication Technologies Office, Brussels, Belgium, January 2017.
- R37. Liu A., Fourati W., Krause M., Winzer O., Bengler K., García Á., Diakaki C., Manolis D., Papamichail I. and Papageorgiou M.  
*Local4Global implementation for traffic use case*  
Deliverable 5.5, Report of Project LOCAL4GLOBAL (FP7-ICT-611538) for the Information and Communication Technologies Office, Brussels, Belgium, January 2017.
- R38. Papamichail I. and Papageorgiou M.  
*Exit ramp queue estimation tool - Algorithmic developments and simulation investigations*  
Report for VicRoads, Melbourne, Australia, December 2017.
- R39. Papageorgiou M., Papamichail I. and partners of the EC Research Project  
*Requirements catalogue from the status-quo analysis*  
Deliverable 2.1, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium, February 2018.
- R40. Papamichail I. and partners of the EC Research Project  
*Architecture and interface specification of the co-simulation environment*  
Deliverable 2.2, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium, March 2018.
- R41. Heinrich Th., Maier F.W., Papageorgiou M., Papamichail I., Schober Ch. and Stamatakis I.  
*Entwicklung einer Fahrstreifenreduktionsbeeinflussungsanlage für Baustellen auf BAB*  
Berichte der Bundesanstalt für Straßenwesen, Verkehrstechnik Heft V 302, Bergisch Gladbach, Germany, April 2018.
- R42. Papageorgiou M., Papamichail I. and partners of the EC Research Project  
*Data management plan*  
Deliverable 1.3, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium, May 2018.
- R43. Markantonakis V., Mountakis K.S., Papageorgiou M. and Papamichail I.  
*Traffic state estimation and traffic control algorithms for mixed vehicle traffic*  
Deliverable 2.5, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium, December 2018.

- R44. Papageorgiou M., Papamichail I. and partners of the EC Research Project  
*INFRAMIX plan for systems interaction, integration and testing*  
Deliverable 4.1, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium,  
December 2018.
- R45. Papamichail I. and partners of the EC Research Project  
*Plan for evaluation and users' engagement*  
Deliverable 5.1, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium,  
December 2018.
- R46. Papamichail I. and Papageorgiou M.  
*Development of a motorway traffic control strategy integrating ramp metering and  
variable speed limits - First draft on algorithmic developments and simulation  
investigations*  
Report for VicRoads, Melbourne, Australia, April 2019.
- R47. Markantonakis V., Papageorgiou M., Papamichail I. and partners of the EC Research  
Project  
*Implementation of traffic management strategies*  
Deliverable 3.4, Report of Project INFRAMIX (H2020-723016), Brussels, Belgium,  
November 2019.
- R48. Markantonakis V., Papageorgiou M., Papamichail I. and partners of the EC Research  
Project  
*Evaluation results, impact analysis and new safety performance criteria*  
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