


Konstantinos Ampountolas, Associate Professor

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Education

- 2009 **Ph.D., Engineering**, Technical University of Crete, Greece.
- 2002 **M.Sc., Operations Research**, Technical University of Crete, Greece.
- 1999 **Diploma, Production Engineering & Management**, Technical University of Crete, Greece.

Academic Positions

- 2019- **Associate Professor**, Department of Mechanical Engineering, University of Thessaly, Volos, Greece.
- 2018-2019 **Senior Lecturer**, School of Engineering, University of Glasgow, Glasgow, United Kingdom.
- 2013-2018 **Lecturer**, School of Engineering, University of Glasgow, Glasgow, United Kingdom.
- 2012-2013 **Research Fellow**, School of Architecture, Civil and Environmental Engineering, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland.
- 2011 **Research Scholar**, Institute of Transportation Studies & PATH, University of California, Berkeley, CA, USA.
- 2010-2011 **Postdoctoral Researcher**, Informatics & Telematics Institute, Centre for Research & Technology Hellas, Greece.

Visiting Positions (short term up to two months)

- 2016; 2019 **Visiting Professor**, Department of Automation & Systems, Federal University of Santa Catarina, SC, Brazil.
- 2016 **Visiting Professor**, Department of Signals & Systems, Chalmers University of Technology, Gothenburg, Sweden.
- 2014 **Visiting Professor**, Faculty Civil & Environmental Eng., Technion–Israel Institute of Technology, Haifa, Israel.

Research Interests

Automatic control and optimisation theory with emphasis on applications to traffic and transport systems, large-scale networks, and further areas. Specific areas of research interest include:

- Traffic flow modelling, simulation, and control
- Connected and automated vehicles; smart infrastructure
- Data analytics via deep learning methods
- Constrained control via set invariance methods
- Operations research and mathematical programming

Recent Research Projects

- 2019-2024 **Urban Big Data Centre**, UK Research and Innovation (UKRI), UK, Grant #ES/S007105/1.
- 2018-2021 **Implications of transport sharing and automation**, National Productivity Investment Fund (NPIF), UKRI, UK.
- 2014-2020 **Urban Big Data**, UK Research and Innovation (UKRI), UK, Grant #ES/L011921/1.
- 2018-2019 **Rethinking the use of road infrastructure in the era of CAV**, CONFAP, Brazil, and Newton Fund, UK.
- 2018 **Urban big data for trusted smart statistics**, Eurostat, European Commission.
- 2017-2018 **A platform for the remote control of AVs in connected environments**, RG Scheme, Royal Society, UK.
- 2016-2017 **Cooperative and flexible public transportation systems**, CONFAP, Brazil, and Newton Fund, UK.
- 2015-2017 **Dynamic distributed particle swarm optimisation**, Newton International Exchanges, Royal Society, UK.
- 2014-2018 **Transport network analytics**, Lord Kelvin/Adam Smith Scheme, University of Glasgow, UK.

Academic Service

Member of Editorial Advisory Boards

- Journal of Big Data Analytics in Transportation – Springer (Associate Editor, - since 2018)
- Data in Brief – Elsevier (Editor for Transport 2018-2019)
- Transportation Research Part C: Emerging Technologies – Elsevier (since 2015)
- Transportation Research Procedia – Elsevier (since 2014)

Evaluator of Research Proposals for the Research Councils

- Engineering and Physical Sciences Research Council (EPSRC), United Kingdom
- Economic and Social Research Council (ESRC), United Kingdom
- Leverhulme Trust, United Kingdom
- Academy of Medical Sciences (GCRF Grants), United Kingdom
- The Netherlands Organization for Scientific Research (NWO), The Netherlands
- Swiss National Science Foundation (SNSF), Switzerland
- ETH Zurich Research Grants (ETH Grants), Switzerland
- Israel Science Foundation (ISF), Israel
- European Commission (EC)
- Luxembourg National Research Fund (FNR), Luxembourg
- METRANS – University of Southern California & US Department of Transportation (USDOT)
- The São Paulo Research Foundation (FAPESP), Brazil
- Greek General Secretariat of Research and Development (GSRT), Greece

Reviewer for the Publishers

- Addison-Wesley - Pearson PLC (2015)
- Elsevier London Ltd. (2015, 2017, 2019)
- Springer-Verlag London Ltd. (2014, 2016)
- CRC Press & Routledge, Taylor & Francis (2017)

Reviewer for the Journals

Asian Journal of Control, Automatica, Engineering Applications of Artificial Intelligence, Data in Brief, IEEE/CAA Journal of Automatica Sinica, IEEE Intelligent Transportation Systems Magazine, IEEE Transactions on Automatic Control, IEEE Transactions on Automation Science and Engineering, IEEE Transactions on Control of Network Systems, IEEE Transactions on Control Systems Technology, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Vehicular Technology, IEEE Transactions on Very Large Scale Integration Systems, IET Intelligent Transport Systems, International Journal of Modelling and Simulation, International Journal of Robust and Nonlinear Control, Journal of Advanced Transportation, Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, Journal of Transportation Engineering, Journal of Transportation Planning and Technology, Mathematical and Computer Modelling of Dynamical Systems, Operational Research: An International Journal, Simulation Modelling Practice and Theory, Systems & Control Letters, Transportation Research Part B, Transportation Research Part C, Transportation Research Part D, Transportation Research Record, Transportation Science, Transportmetrica A, Transportmetrica B

Reviewer for the Conferences

American Control Conferences (ACC), Annual Conferences of the Society of Instrument and Control Engineers of Japan, Annual Meetings of the Transportation Research Board (TRB), Australian Control Conferences, Australian & New Zealand Control Conferences, European Association for Research in Transportation Symposia, European Control Conferences (ECC), European Working Group on Transportation Conferences, IEEE Annual Conferences on Intelligent Transportation Systems (ITSC), IEEE Conferences on Control Technology & Applications, IEEE Conferences on Decision and Control (CDC), IEEE Intelligent Vehicles Symposia, IEEE International Conferences on Automation Science and Engineering, IEEE International Conferences on Control & Automation (ICCA), IEEE International Conferences on Robotics & Automation (ICRA), IEEE International Conferences on Vehicular Electronics and Safety, IEEE International Symposia on Robot & Human Interactive Communication, IEEE Multi-conferences on Systems & Control, IEEE/RSJ International Conferences on Intelligent Robots & Systems, IEEE Symposia Intelligent Vehicles, IFAC Symposia on Mathematical Modelling, IFAC Symposia on Control in Transportation Systems (CTS), IFAC World Congresses (WC), International Conferences on Instrumentation, Control, Information Technology and System Integration, International Conferences on Models and Technologies for Intelligent Transportation Systems, International Conferences on System Theory, Control and Computing, International Conferences on Unmanned Aircraft Systems, International Conferences on Vehicle Technology and Intelligent Transport Systems, International UKACC Conferences on Control, ITS World Congresses on Intelligent Transport Systems, Mediterranean Conferences on Control & Automation (MED), Vienna International Conferences on Mathematical Modelling

Member of the International Program Committee for the Conferences

- 6th IFAC Symposium on Control in Transportation Systems (CTS2021) (Associate Editor), Lille, France, June 2021.
- 2020 IEEE Integrated and Sustainable Transportation Systems (Ass. Editor), Delft, The Netherlands, Jun 29-Jul 3, 2020.
- 2019 IEEE Intelligent Vehicles (IV) Symposium (Associate Editor), Changshu, Paris, France, June 9-12, 2019.
- 5th Intern Conference on Vehicle Techn and Intelligent Transport Systems (VEHITS), Heraklion, Greece, May 3–5, 2019.
- 21st IEEE International Conference on Intelligent Transportation Systems (Associate Editor), Maui, Hawaii, Nov 4-7, 2018.
- 2018 IEEE International Conference on Vehicular Electronics and Safety (ICVES), Madrid, Spain, Sept 12-14, 2018
- 2018 IEEE Intelligent Vehicles (IV) Symposium (Associate Editor), Changshu, Suzhou, China, June 26–July 1, 2018
- 9th International Symposium on Smart Networks, Energy and Management, Exeter, UK, June 28-30, 2018
- 2nd Symposium on Management of Future Motorway and Urban Traffic Systems, Ispra, Italy, June 11–12, 2018.
- 5th IFAC Symposium on Control in Transportation Systems (CTS2018) (Associate Editor), Savona, Italy, June 6–8, 2018.
- 4th Intern Conference on Vehicle Techn & Intelligent Transport Systems (VEHITS), Madeira, Portugal, March 16–18, 2018.
- 9th Vienna International Conference on Mathematical Modelling, Vienna, Austria, February 21–23, 2018.
- 20th IEEE International Conference on Intelligent Transportation Systems (TPC), Yokohama, Japan, Oct 16–19, 2017.
- 2017 IEEE Intelligent Vehicles (IV) Symposium (Associate Editor), Redondo Beach, CA, USA, June 11–14, 2017
- 3rd Intern Conference on Vehicle Techn and Intelligent Transport Systems (VEHITS), Porto, Portugal, April 22–24, 2017.
- 2016 IEEE Intelligent Vehicles (IV) Symposium (Associate Editor), Gothenburg, Sweden, June 19–22, 2016
- 1st Symposium on Management of Future Motorway and Urban Traffic Systems, Chania, Greece, June 2–3, 2016.
- 2nd Intern Conference on Vehicle Techn and Intelligent Transport Systems (VEHITS), Rome, Italy, April 23–24, 2016.
- 3rd Int. Symp. of Future Active Safety Technology Towards zero Traffic accidents, Gothenburg, Sweden, Sept 9–11, 2015
- 8th Symposium on Mathematical Modelling (MATHMOD), Vienna, Austria, February 17–20, 2015.
- 2014 IEEE International Conference on Systems, Man, and Cybernetics (SMC), San Diego, CA, USA, October 5–8, 2014.

Teaching & Learning

- Fellow of the Higher Education Academy (FHEA), UK (Recognition reference: PR106630)
- 2 years Postgraduate programme in Academic Practice (Learning & Teaching; Developing Effective Supervision Practices; Student Engagement; Learning with Technology)
- Courses taught in 4 different countries (UK, Switzerland, USA, Greece) including: Transport Network Optimisation, Traffic Flow Optimisation of Transportation Networks; Intelligent Transportation Systems, Transport Systems Engineering; Transportation Studies; Integrated Systems Design; Robust Control; Dynamic Programming; Nonlinear Programming; Production Systems and Project Scheduling.

Research Group & Student Supervision

Post-doctoral Research Assistants

- Dr Long Chen, NPIF Fellow, 2018-2021
- Dr Pablo Garcia, CONACYT, 2017-2018

PhD Students

- Chao Zhang, University of Glasgow, PhD expected in 2021

PhD Theses Completed

- Dr Sheila Scialanga, University of Glasgow, UK (now with MathWorks, Cambridge, UK)
Title: *Reduced-complexity interpolating control of constrained interconnected systems and applications*, 2019.
- Dr Ruzanna Mat Jusoh, University of Glasgow, UK (now with the National Defence University of Malaysia, KL, Malaysia)
Title: *Monitoring and control of transport networks using parsimonious models*, 2019.
- Dr Ashwini Venkatasubramaniam, University of Glasgow, UK (now with Alan Turing Institute, London, UK)
Title: *Nonparametric clustering for spatio-temporal data*, 2018.

Invited Talks

University of California, Berkeley (CA), University of California, Los Angeles (CA), Cisco (CA), University of Delaware (PA), École Polytechnique Fédérale de Lausanne, EPFL (CH), ETH Zurich (CH), Technical University of Munich (DE), Technical University of Delft (NL), University College London (UK), University of Leeds (UK), University of York (UK), University of Glasgow (UK), Bath University (UK), Technion – Israel Institute of Technology (IL), Lund University (SE), Chalmers University of Technology (SE), KTH Royal Institute of Technology (SE), Aalto University (FI), Eurostat (LU), University of Luxembourg (LU), University of Belgrade (SRB), Mahidol University (TH), Federal University of Santa Catarina, Florianopolis (BR), Federal University of Santa Catarina, Joinville (BR), Sun-Yat Sen University (CN); South China University of Technology (CN), Zhejiang University (CN), Tongji University (CN), Beijing University of Posts and Telecommunications (CN), The University of Tokyo (JP), Kyoto University (JP), Kobe University (JP).

Publications

Papers in Journals

- J14** Ampountolas, K., Kring, M., 2019. Mitigating bunching with bus-following models and bus-to-bus cooperation. *IEEE Transactions on Intelligent Transportation Systems*, accepted.
- J13** Ampountolas, K., Alves dos Santos, J., Carlson, R.C., 2019. Motorway tidal flow lane control. *IEEE Transactions on Intelligent Transportation Systems*, doi:10.1109/TITS.2019.2945910.
- J12** Ampountolas, K., Zheng, N., Geroliminis, N., 2017. Macroscopic modelling and robust control of bi-modal multi-region urban networks. *Transportation Research Part B*, accepted, DOI:10.1016/j.trb.2017.05.007.
- J11** Christofa, E., Ampountolas, K., Skabardonis, A., 2016. Arterial traffic signal optimization: A person-based approach. *Transportation Research Part C* 66, 27–47.
- J10** Geroliminis, N., Zheng, N., Ampountolas, K., 2014. A three-dimensional macroscopic fundamental diagram for mixed bi-modal urban networks. *Transportation Research Part C* 42, 168–181.
- J9** Aboudolas, K., Geroliminis, N., 2013. Perimeter and boundary flow control in multi-region heterogeneous networks. *Transportation Research Part B* 55, 265–281.
- J8** Kouvelas, A., Aboudolas, K., Kosmatopoulos, E.B., Papageorgiou, M., 2011. Adaptive performance optimization for large-scale traffic control systems. *IEEE Transactions on Intelligent Transportation Systems* 12 (4), 1434–1445.
- J7** Kouvelas, A., Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B., 2011. A hybrid strategy for real-time traffic signal control of urban road networks. *IEEE Transactions on Intelligent Transportation Systems* 12 (3), 884–894.
- J6** Kraus Junior, W., de Souza, F., Carlson, R., Dantas, L., Papageorgiou, M., Camponogara, E., Kosmatopoulos, E.B., Aboudolas, K., 2010. Cost effective real-time traffic signal control using the TUC strategy. *IEEE Intelligent Transportation Systems Magazine* 2 (4), 6–17.
- J5** Aboudolas, K., Papageorgiou, M., Kouvelas, A., Kosmatopoulos, E.B., 2010. A rolling-horizon quadratic-programming approach to the signal control problem in large-scale congested urban road networks. *Transportation Research Part C* 18 (5), 680–694.
- J4** Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B., 2009. Store-and-forward based methods for the traffic signal control problem in large-scale congested urban road networks. *Transportation Research Part C* 17 (2), 163–174.
- J3** Diakaki, C., Dinopoulou, V., Aboudolas, K., Papageorgiou, M., Ben-Shabat, E., Seider, E., Leibov, A., 2003. Extensions and new applications of the traffic-responsive urban control strategy: Coordinated signal control for urban networks. *Transportation Research Record: Journal of the Transportation Research Board* 1856, 202–211.
- J2** Diakaki, C., Papageorgiou, M., Aboudolas, K., 2002. A multivariable regulator approach to traffic-responsive network-wide signal control. *Control Engineering Practice* 10, 183–195.
- J1** Diakaki, C., Papageorgiou, M., Aboudolas, K., 2000. Traffic-responsive urban network control using multivariable regulators. *Archives of Transport* 12 (4), 17–32.

Book Chapters

- B3** Chow, A. H.F. and Ampountolas, K.: United Kingdom. In: Tang, K., Boltze, M., Nakamura, H. and Tian, Z. (Eds.) *Global Practices on Road Traffic Signal Control: Fixed-Time Control at Isolated Intersections*. Series: WCTRS book series. Elsevier, 2019, pp. 69–82.
- B2** Diakaki, C., Dinopoulou, V., Aboudolas, K., Papageorgiou, M., Ben-Shabat, E., Seider, E., Leibov, A.: Extensions and new applications of the traffic signal control strategy TUC. In: Aron, M., Boillot, F., Lebacque, J.P. (Eds.) *Modélisation du Trafic-Actes du Groupe de Travail 2002*, Actes INRETS No. 97, Paris, France, 2004, pp. 67–88.
- B1** Diakaki, C., Papageorgiou, M., Aboudolas, K.: Traffic-responsive urban network control using multivariable regulators. In: Aron, M., Boillot, F., Lebacque, J.P. (Eds.) *Modélisation du Trafic-Actes du Groupe de Travail 1999*, Actes INRETS No. 83, Paris, France, 2002, pp. 137–153.

Papers at International Conferences

- C61** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Nonparametric clustering for spatio-temporal data. In: 12th International Conference on Computational and Methodological Statistics (CMStatistics 2019), London, UK, Dec 14-16, 2019.
- C60** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Nonparametric clustering for spatio-temporal datasets. In: RSS International Conference (RSS 2019), Belfast, Northern Ireland, Sept 2-5, 2019.
- C59** Tan, J., Oлару, S., Ampountolas, K., Martinez Molina, J.J., Xu, F.: A novel RPI set computation method for discrete-time LPV systems with bounded uncertainties, 15th IEEE International Conference on Control & Automation (ICCA), Edinburgh, Scotland, July 16-19, 2019.
- C58** Garcia, P., Ampountolas, K.: Robust stability of time-varying polytopic systems by the Attractive Ellipsoid Method. In: 2019 American Control Conference, Philadelphia, PA, USA, July 10-12, 2019, pp. 1139–1144.

- C57** Jusoh, R.M., Ampountolas, K.: Optimal selection of traffic sensors: An information-theoretic framework. In: 2019 American Control Conference, Philadelphia, PA, USA, July 10-12, 2019, pp. 3297–3302.
- C56** Scialanga, S., Ampountolas, K.: Interpolating Control Toolbox (ICT). In: European Control Conference, Naples, Italy, June 25–28, 2019, pp. 2510–2515.
- C55** Ampountolas, K., Carlson, R.C.: Optimal control of tidal traffic flow. In: European Control Conference, Naples, Italy, June 25–28, 2019, pp. 3680–3685.
- C54** Scialanga, S., Ampountolas, K.: Robust constrained Interpolating Control of interconnected systems. In: 57th IEEE Conference on Decision and Control, Fontainebleau, Miami Beach, FL, USA, Dec. 17-19, 2018, pp. 7016–7021.
- C53** Garcia, P., Ampountolas, K.: Robust disturbance rejection by the Attractive Ellipsoid Method—Part II: Discrete-time systems. In: 17th IFAC Workshop on Control Applications of Optimization, Yekaterinburg, Russia, Oct 15-19, 2018, pp. 93–98.
- C52** Garcia, P., Ampountolas, K.: Robust disturbance rejection by the Attractive Ellipsoid Method—Part I: Continuous-time systems. In: 17th IFAC Workshop on Control Applications of Optimization, Yekaterinburg, Russia, Oct 15-19, 2018, pp. 34–39.
- C51** Ampountolas, K.: The free-floating bike share rebalancing problem. In: 45th International Symposium on Operational Research (SYM-OP-IS), Zlatibor, Serbia, September 16–19, 2018.
- C50** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Nonparametric spatial clustering using spatio-temporal data. In: 33rd International Workshop on Statistical Modelling (IWSM), University of Bristol, UK, July 16-20, 2018.
- C49** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Nonparametric spatial clustering using spatio-temporal data. In: 2018 ISBA (International Society for Bayesian Analysis) World Meeting, University of Edinburgh, UK, June 24-29, 2018.
- C48** Ampountolas, K., Carlson, R.C.: A kinematic wave theory of tidal traffic flow. In: 2nd Symposium on Management of Future motorway and urban Traffic Systems. Ispra, Italy, June 11-12, 2018.
- C47** Ampountolas, K., Furtado, H.S., Carlson, R.C.: Motorway tidal flow lane control. In: 15th IFAC Symposium on Control in Transportation Systems. Savona, Italy, June 6-8, 2018.
- C46** Scialanga, S., Ampountolas, K.: Interpolating constrained control of interconnected systems. In: 15th IFAC Symposium on Control in Transportation Systems. Savona, Italy, June 6-8, 2018.
- C45** Jusoh, R.M., Ampountolas, K.: Traffic monitoring on sparse-measurement network-wide fundamental diagrams. In: 50th Annual UTSG Conference, University College London, London, UK, Jan 2-4, 2018.
- C44** Ampountolas, K., Davari, S.: An overview of the healthcare facility location problem, In: OR 2017 – International Conference on Operations Research, Berlin, Germany, Sept 6–8, 2017.
- C43** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Spatio-temporal clustering of urban traffic networks. In: 2017 Joint Statistical Meetings (JSM), Baltimore, Maryland, July 29 – August 3, 2017.
- C42** Davari, S., Ampountolas, K.: Using big data for the mobile facility routing problem in healthcare delivery. In: INFORMS 2017 Healthcare Meeting, Rotterdam, The Netherlands, July 26–28, 2017.
- C41** Venkatasubramaniam, A., Evers, L., Ampountolas, K., Spatio-temporal clustering of traffic networks. In: 32nd International Workshop on Statistical Modelling (IWSM), Groningen, The Netherlands, July 3–7, 2017.
- C40** Jusoh, R.M., Ampountolas, K.: Multi-gated perimeter flow control of transport networks. In: 25th Mediterranean Conference on Control and Automation, Valletta, Malta, July 3–6, 2017, 2017.
- C39** Scialanga, S., Ampountolas, K., Decentralised control of interconnected systems: An interpolation-based approach. In: 27th Biennial Numerical Analysis Conference. Glasgow, United Kingdom, June 27-30, 2017.
- C38** Scialanga, S., Ampountolas, K., Decentralised control of interconnected systems: An interpolation-based approach. In: INdAM Workshop on Transport Modeling and Management. Rome, Italy, March 6-10, 2017.
- C37** Jusoh, R.M., Ampountolas, K., Distributed perimeter flow control of transport networks. In: 49th Annual UTSG Conference, Trinity College Dublin, Dublin, Ireland, Jan 4-6, 2017.
- C36** Venkatasubramaniam, A., Evers, L., Ampountolas, K.: Distance dependent Chinese restaurant process for spatio-temporal clustering of urban traffic networks. In: 22nd Intern. Conf. on Computational Statistics, Oviedo, Spain, Aug 23–26, 2016.
- C35** Venkatasubramaniam, A., Evers, L., Ampountolas, K.: Spatio-temporal clustering of heterogeneous cities. In: 5th Symposium of the European Association for Research in Transportation (hEART), Delft, The Netherlands, Sept 13-16, 2016.
- C34** Ampountolas, K.: Decentralised urban traffic signal control in a connected/autonomous vehicle environment. In: 1st Symposium on Management of Future motorway and urban Traffic Systems, Chania, Greece, June 2–3, 2016.
- C33** Ampountolas, K., Kring, M.: Mitigating bunching with bus-following models and bus-to-bus cooperation. In: 18th IEEE International Conference on Intelligent Transportation Systems, Las Palmas de Gran Canaria, Spain, Sept 15–18, 2015.
- C32** Kulcsár, B., Ampountolas, K., Dabiri, A.: Single-region robust perimeter traffic flow control. In: 14th Annual European Control Conference, Linz, Austria, July 15–17, 2015.
- C31** Ampountolas, K., Kouvelas, A.: Real-time estimation of critical vehicle accumulation for maximum network throughput. In: 2015 American Control Conference, Chicago, Illinois, July 1–3, 2015.
- C30** Ampountolas, K., Kring, M.: Avoiding bunching with bus-following models and bus-to-bus cooperation. In: 94th Annual Meeting of the Transportation Research Board, Washington, D.C., USA, Jan 11–15, 2015.

- C29** Ampountolas, K., Kouvelas, A.: Real-time estimation of critical values of the MFD for maximum network throughput. In: 94th Annual Meeting of the Transportation Research Board, Washington, D.C., USA, Jan 11–15, 2015.
- C28** Ampountolas, K., Zheng, N., Geroliminis, N.: Robust control of bi-modal multi-region urban networks: An LMI optimisation approach. In: 17th IEEE International Conference on Intelligent Transportation Systems, Qingdao, China, Oct 8–11, 2014.
- C27** Geroliminis, N., Ampountolas, K., Zheng, N.: Modeling and control of large scale multimodal urban networks. In: 20th Conference of the International Federation of Operational Research Societies (IFORS), Barcelona, Spain, July 13-18, 2014.
- C26** Ampountolas, K., Kouvelas, A.: Real-time estimation of critical accumulation in perimeter flow control for maximum network throughput. In: 17th Meeting of the EURO Working Group on Transportation, Seville, Spain, July 2-4, 2014.
- C25** Ampountolas, K., Zheng, N., Geroliminis, N.: Perimeter flow control in bi-modal urban road networks: A robust feedback control approach. In: 2014 European Control Conference, Strasburg, France, June 24–27, 2014.
- C24** Ampountolas, K.: Real-time estimation of critical accumulation for maximum network throughput. In: 2014 International Symposium of Transport Simulation & International Workshop on Traffic Data Collection and its Standardisation, Ajaccio, Corsica, France, June 1-4, 2014.
- C23** Geroliminis, N., Zheng, N., Ampountolas, K.: A city-scale macroscopic fundamental diagram for mixed bi-modal urban traffic. In: 93rd Annual Meeting of the Transportation Research Board, Washington, D.C., USA, January 12–16, 2014.
- C22** Ampountolas, K., Zheng, N., Geroliminis, N.: Perimeter flow control for bi-modal urban road networks. In: 93rd Annual Meeting of the Transportation Research Board, Washington, D.C., USA, January 12–16, 2014.
- C21** Aboudolas, K., Geroliminis, N.: Perimeter and boundary flow control for heterogeneous transportation networks. In: 52nd IEEE Conference on Decision and Control, Florence, Italy, December 10–13, 2013, pp. 288–293.
- C20** Zheng, N., Aboudolas, K., Geroliminis, N.: Investigation of the existence of city-scale three-dimensional Macroscopic Fundamental Diagrams for bi-modal traffic. In: 16th IEEE International Conference on Intelligent Transportation Systems, The Hague, The Netherlands, October 6–9, 2013, pp. 1029–1034.
- C19** Liu, C., Sharma, A., Aboudolas, K., Adaptive-signal control software-in-the-loop (ACSIL) simulation platform using application programming interface in VISSIM. In: 14th Annual North American PTV Traffic Suite UG Meeting, Oct 1–2, 2013.
- C18** Aboudolas, K., Geroliminis, N.: Feedback perimeter control for multi-region large-scale congested networks. In: 2013 European Control Conference, Zurich, Switzerland, July 17–19, 2013, pp. 3506–3511.
- C17** Aboudolas, K., Geroliminis, N.: Feedback perimeter control for multi-region and heterogeneous congested cities. In: 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., USA, January 13–17, 2013.
- C16** Christofa, E., Aboudolas, K., Skabardonis, A.: Arterial traffic signal optimization: A person-based approach. In: 92nd Annual Meeting of the Transportation Research Board, Washington, D.C., USA, January 13–17, 2013.
- C15** Baldi, S., Kosmatopoulos, E.B., Aboudolas, K., Rovas, D.V., Papachristodoulou, A., Ioannou, P.A.: Nonlinear control of large scale complex systems using convex optimization tools and self-adaptation. In: 50th IEEE Conference on Decision and Control and European Control Conference, Orlando, FL, USA, December 12–15, 2011, pp. 5407–5412.
- C14** Kosmatopoulos, E.B., Rovas, D.V., Doitsidis, L., Aboudolas, K., Roumeliotis, S.I.: A generic framework for scalable and convergent multi-robot active simultaneous localization, mapping and target tracking. In: 19th IEEE Mediterranean Conference on Control and Automation, Corfu, Greece, June 20–23, 2011, pp. 151–156.
- C13** Kosmatopoulos, E.B., Baldi, S., Aboudolas, K., Rovas, D.V., Papachristodoulou, A., Ioannou, P.A.: Nonlinear control of large scale complex systems using convex control design tools. In: 19th IEEE Mediterranean Conference on Control and Automation, Corfu, Greece, June 20–23, 2011, pp. 1022–1027.
- C12** Kouvelas, A., Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B.: A hybrid strategy for real-time traffic signal control of urban road networks. In: 89nd Annual Meeting of the Transportation Research Board, Washington, D.C., Jan 10–14, 2010.
- C11** Kosmatopoulos, E., Doitsidis, L., Aboudolas, K.: Scalable and convergent multi-robot passive and active sensing. In: 2009 IEEE/RSJ International Conference on Intelligent RObots and Systems, St. Louis, MO, Oct 11–15, 2009, pp. 5828–5833.
- C10** Kouvelas, A., Kosmatopoulos, E.B., Papageorgiou, M., Aboudolas, K.: Adaptive performance optimization for large-scale traffic control systems. In: 12th IFAC Symposium on Transportation Systems, Redondo, USA, September 2–4, 2009, 76–83. (Also poster at the 2nd NEARCTIS Workshop, University College London (UCL), London, UK, November 13, 2009.)
- C9** Kosmatopoulos, E.B., Doitsidis, L., Aboudolas, K.: A unified methodology for multi-robot passive and active sensing. In: 17th IEEE Mediterranean Conference on Control and Automation, Thessaloniki, Greece, June 24–26, 2009, pp. 264–269.
- C8** Aboudolas, K., Papageorgiou, M., Kouvelas, A., Kosmatopoulos, E.B.: A rolling-horizon quadratic-programming approach to the signal control problem in large-scale congested urban road networks. In: 10th International Conference on Application of Advanced Technologies in Transportation, Athens, Greece, May 27–31, 2008, pp. 524–538. (Also invited plenary session paper at the XXXV SYM-OP-IS Operational Research Symposium, Soko Banja, Serbia, September 14–17, 2008.)
- C7** Kosmatopoulos, E.B., Papageorgiou, M., Papamichail, I., Aboudolas, K., Papadaki D., Betsis, I.: Adaptive fine-tuning for large-scale complex nonlinear systems. In: 3rd International Conference on Information and Communication Technologies: From Theory to Applications, Damascus, Syria, April 7–11, 2008.
- C6** Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B.: Control and optimization methods for traffic signal control in large-scale urban road networks. In: 2007 American Control Conference, New York City, USA, Jul 11–13, 2007, pp. 3132–3138.

- C5** Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B.: A quadratic programming approach for the signal control problem in large-scale urban road networks. In: Sixth Triennial Symposium on Transportation Analysis, Phuket Island, Thailand, June 10–15, 2007.
- C4** Smaragdis, E., Dinopoulou, V., Aboudolas, K., Diakaki, C., and Papageorgiou, M.: Application of the extended traffic signal control strategy TUC to the Southampton urban road network. In: 10th IFAC Symposium on Control in Transportation Systems, Tokyo, Japan, August 4–6, 2003, pp. 23–28.
- C3** Diakaki, C., Dinopoulou, V., Aboudolas, K., Papageorgiou, M., Ben-Shabat, E., Seider, E., Leibov, A.: Extensions and new applications of the traffic signal control strategy TUC. In: 82nd Annual Meeting of the Transportation Research Board, Washington, D.C., January 12–16, 2003, Paper No. 03–3040.
- C2** Diakaki, C., Papageorgiou, M., Aboudolas, K.: A multivariable regulator approach to traffic-responsive network-wide signal control. In: 9th IFAC Symposium on Control in Transport Systems, Braunschweig, Germany, Jun 13–15, 2000, pp. 589–594.
- C1** Diakaki, C., Papageorgiou, M., Aboudolas, K.: Traffic-responsive urban network control using multivariable regulators. In: Int. Conference on Modeling and Management in Transportation, Poznan, Poland, October 12–16, 1999, Vol. 2, pp. 11–16.

Papers and posters at national conferences or workshops

- N10** Scialanga, S., Ampountolas, K., Decentralised control of interconnected systems: An interpolation-based approach. In: IPAM, University of California, Los Angeles (UCLA), LA, USA, June 13, 2018.
- N9** Venkatasubramaniam, A., Evers, L., Ampountolas, K.: Clustering methods for partitioning of urban traffic networks. In: Machine Learning Summer School, Max Planck Institute for Intelligent Systems, Tübingen, Germany, July 13–24, 2015.
- N8** Evers, L., Venkatasubramaniam, A., Ampountolas, K.: Functional distributional clustering with an application to the spatial partitioning of traffic networks. In: Workshop on Solving big data challenges from modern science through statistical modelling, International Center for Mathematical Sciences, Edinburgh, UK, May 5–8, 2015.
- N7** Kulcsár, B., Ampountolas, K.: Robust traffic flow control for urban network capacity maximisation. In: 2014 Swedish Transport Conference, Linköping, Sweden, October 21–22, 2014.
- N6** Ampountolas, K., Zheng, N., Geroliminis, N.: Perimeter flow control of mixed bi-modal urban road networks. In: 14th Swiss Transport Research Conference, Ascona, Switzerland, May 14–16, 2014.
- N5** Zheng, N., Aboudolas, K., Geroliminis, N.: A city-scale three-dimensional Macroscopic Fundamental Diagram: Simulation findings. In: 13th Swiss Transport Research Conference, Ascona, Switzerland, April 24–26, 2013.
- N4** Aboudolas, K., Geroliminis, N.: Perimeter flow control in heterogeneous networks. In: 13th Swiss Transport Research Conference, Ascona, Switzerland, April 24–26, 2013.
- N3** Kouvelas, A., Aboudolas, K., Papageorgiou, M., Kosmatopoulos, E.B.: A hybrid strategy for real-time traffic signal control and its implementation at the urban road network of Chania, Greece. In: 5th International Congress on Transportation Research, Volos, Greece, September 30 and October 1, 2010.
- N2** Spiliopoulou, A., Papageorgiou, M., Kouvelas, A., Aboudolas, K.: Application of the urban traffic control strategy TUC at the Kifisias-Attiki Odos Roundabout. In: 5th Intern. Congress on Transportation Research, Volos, Greece, Sept 30/Oct 1, 2010.
- N1** Papageorgiou, M., Kosmatopoulos, E.B., Papamichail, I., Wang, Y., Kouvelas, A., Aboudolas, K.: Advanced traffic control strategies and their potential application in Greece. In: 3rd International Congress on Transportation Research, Thessaloniki, Greece, May 19–20, 2006, pp. 585–594.