

Dr. Othon Michail - Curriculum Vitae



University Address

University of Liverpool
Department of Computer Science
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EDUCATION

University of Patras, Patras, Greece

- ◇ Ph.D., Computer Engineering & Informatics Department (CEID), September 2010
 - Thesis Title: *New Models for Population Protocols*
 - Advisor: Professor Paul G. Spirakis
 - Area of Study: Distributed Computing
- ◇ M.Sc., Computer Engineering & Informatics Department (CEID), April 2009
 - Thesis Title: *Population Protocols*
 - Advisor: Professor Paul G. Spirakis
 - Area of Study: Distributed Computing
 - Grade: 9.75 (Excellent)
- ◇ Diploma, Computer Engineering & Informatics Department (CEID), September 2007

Further Education & Seminars

- ◇ Fellow of the British Higher Education Academy. By being awarded the “Certificate in Professional Studies in Learning and Teaching in Higher Education (CPS)” with “Distinction”, accredited by the British Higher Education Academy, 2019.
- ◇ Research School: Approximation Algorithms for Hard Optimization Problems. *9th Max-Planck Advanced Course on the Foundations of Computer Science (ADFOCS)*, organized by Khaled Elbassioni & Kurt Mehlhorn, Max Planck Institut für Informatik, Saarbrücken, Germany, August 18-22, 2008.

FOREIGN LANGUAGES

English, Spanish, German

- ◇ Lives in the UK, since 2016
- ◇ Certificate of Proficiency in English, English Language Institute, University of Michigan, 2005
- ◇ First Certificate in English, University of Cambridge, 1999
- ◇ Inicial (Beginner level) Certificate in Spanish, Instituto Cervantes, 2007
- ◇ Attended German language courses, 1995-1999

RESEARCH INTERESTS Distributed Computing & Distributed Systems, Algorithm Design & Analysis, Theory of Computation, Computational Complexity, Algorithmic Theory of Dynamic Networks, Population Protocols, Temporal Graphs, Programmable Matter, Mathematics for Computer Science

ARMY SERVICE Mandatory military service in the Hellenic Army from November 2010 to August 2011. His specialty was Soldier of Research & Informatics and was occupied in the Hellenic Army Informatics Support Center which is part of the Hellenic Army General Staff.

PROFESSIONAL EXPERIENCE

Current Positions

- ◇ Senior Lecturer in Computer Science (equivalent to Associate Professor), Department of Computer Science, University of Liverpool, Liverpool, UK. (since June 2021)

Previous Positions

- ◇ Lecturer in Computer Science (equivalent to Assistant Professor), Department of Computer Science, University of Liverpool, Liverpool, UK. (September 2016-May 2021)
- ◇ Senior Researcher at Research Unit 1 (“Foundations of Computer Science, Relevant Technologies and Applications”), Computer Technology Institute & Press “Diophantus”, Patras, Rion, Greece. (2012-2016)
- ◇ Adjunct Faculty, Distributed Systems (2014-2016) and Algorithm Engineering (2015-16), Computer Engineering & Informatics Department (CEID), University of Patras, Patras, Greece.
- ◇ Postdoctoral Researcher at Research Unit 1 (“Foundations of Computer Science, Relevant Technologies and Applications”), Computer Technology Institute & Press “Diophantus”, Patras, Rion, Greece. (2011-2012)

Research

- ◇ Department of Computer Science, University of Liverpool, PI of project *Algorithms and Complexity of Reconfiguration by 3D Catoms*. The project is funded as part of a Royal Society International Exchanges Award. (2019-2021)
- ◇ Department of Computer Science, University of Liverpool, Co-Investigator of project *Distributed Algorithms and Abstraction Methods for Self-reconfigurable Programmable Matter (CHRYSALIDE)*. The project is funded by University of Franche-Comté. (2020-2021)
- ◇ Computer Technology Institute & Press “Diophantus”, Research Unit 1, Rion, Patras
Senior Researcher of project SMARTBUY. The project is funded as part of an H2020 European Union Programme. (2016)
- ◇ Computer Technology Institute & Press “Diophantus”, Research Unit 1, Rion, Patras
Senior Researcher of project Privacy Flag: *Enabling Crowd-sourcing based privacy protection for smartphone applications, websites and Internet of Things deployments*. The project is funded as part of an H2020-IA European Union Programme with project reference 653426. (2016)

- ◇ Computer Technology Institute & Press “Diophantus”, Research Unit 1, Rion, Patras
Co-Investigator and project manager of project FOCUS: *Foundations of Dynamic Distributed Computing Systems*. The project is implemented under the “ARISTEIA” Action of the Operational Programme “Education and Lifelong Learning” under reference number 12555-26.09.2012 and is co-funded by the European Union (European Social Fund) and Greek National Resources. (2012-2015)
- ◇ Computer Technology Institute & Press “Diophantus”, Research Unit 1, Rion, Patras
Key Researcher of project PEP: *Advanced Systems and Services for Wireless Mobile Networks*. The project is funded as part of a Greek GSRT PENED Project under MIS 312179. Supervisors: Ioannis Chatzigiannakis & Paul G. Spirakis. (2011-2012)
- ◇ Computer Technology Institute & Press “Diophantus”, Research Unit 1, Rion, Patras
Key Researcher of project VITRO: *Virtualized dIstributed plaTforms of smart Objects*. The project is funded as part of an FP7 ICT/STREP European Union Programme under contract number ICT-2010-257245. Supervisors: Ioannis Chatzigiannakis & Paul G. Spirakis. (2010)
- ◇ Research Academic Computer Technology Institute, Research Unit 1, Rion, Patras
Key Researcher of project FRONTS: *Foundations of Adaptive Networked Societies of Tiny Artefacts*. The project is funded as part of an ICT/FET European Union Programme under contract number ICT-2008-215270. Supervisors: Ioannis Chatzigiannakis & Paul G. Spirakis. (April 2009 - October 2010)
- ◇ Research Academic Computer Technology Institute, Research Unit 1, Rion, Patras
Researcher of project WISEBED: *Wireless Sensor Network Testbed*. The project is funded as part of an ICT/FIRE European Union Programme under contract number ICT-2008-224460. Supervisors: Ioannis Chatzigiannakis & Paul G. Spirakis. (2010)
- ◇ Research Academic Computer Technology Institute, Research Unit 1, Rion, Patras
Researcher of project AUDIS: *Acoustic Urban Threat Detector for Improved Surveillance Capabilities*. The project is funded as part of an EDA/JIP-FP European Union Programme. Supervisors: Ioannis Chatzigiannakis & Paul G. Spirakis. (2009)

Membership in Scientific Committees

- ◇ Journals
 - Guest Editor of Journal of Computer and System Sciences (JCSS) special issue on Algorithmic Theory of Dynamic Networks and its Applications, with S. Bonomi, G. A. Di Luna, and L. Querzoni, 2019-21.
- ◇ Conferences
 - *1st Symposium on Algorithmic Foundations of Dynamic Networks (SAND)*, **PC co-chair**, with James Aspnes, 2022.
 - *29th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Program Committee Member, 2022.
 - *6th International Symposium on Algorithmic Aspects of Cloud Computing (ALGO-CLOUD)*, **PC co-chair**, with Gianlorenzo D’Angelo, 2021.
 - *32nd International Workshop on Combinatorial Algorithms (IWOCAL)*, Program Committee Member, 2021.
 - *28th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Program Committee Member, 2021.

- *24th International Conference on Principles of Distributed Systems (OPODIS)*, Program Committee Member, Strasbourg, France, December, 2020.
 - *21st International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, Program Committee Member, Track B: Moving and Computing, Pisa, Italy, October 21-25, 2019.
 - *34th International Symposium on Principles of Distributed Computing (PODC)*, Program Committee Member, Donostia-San Sebastián, Spain, July 21-23, 2015.
 - *8th International Conference on Algorithms and Complexity (CIAC)*, Program Committee Member, Universitat Politècnica de Catalunya, Barcelona, Spain, 2013.
- ◇ Workshops
- *IEEE Workshop on Mobile Computing and Networking Technologies 2012 (WM-CNT)*, Saint Petersburg, Russia, October 3-5, Technical Program Committee Member, 2012.
 - *IEEE Workshop on Mobile Computing and Networking Technologies 2011 (WM-CNT)*, Budapest, Hungary, October 5-7, Technical Program Committee Member, 2011.

Membership in Research Project Evaluation Boards

- ◇ Invited as an Outer International Assessment Board member for the *Government of Ireland (GOI) Postdoctoral Fellowship Scheme*, Irish Research Council, 2017, 2020, 2021.
- ◇ Invited as an Outer International Assessment Board member for the *Government of Ireland (GOI) Postgraduate Scholarship Scheme*, Irish Research Council, since 2018.

Other Memberships

- ◇ Member of the council of “Networks Sciences & Technologies” (NeST) initiative, School of EEE/CS, University of Liverpool, since 2019.
- ◇ Formed and is leading the Programmable Matter (Robomate) initiative, School of EEE/CS and School of Engineering, University of Liverpool, since 2017.
- ◇ Member of the Co-Investigating Research Team of the “Leverhulme Research Centre for Functional Materials Design”, since 2017.

Chairmanship

- ◇ Chairman of Session in International Conferences
 - *29th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, Session 2, June 29-July 1, 2021.
 - *34th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, Session 10, Donostia-San Sebastián, Spain, July 21-23, 2015.
 - *13th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS 2011)*, Session 3: Self-Organizing and Autonomic Networks, Grenoble, France, October 10-12, 2011.

External Reviewer

- ◇ Journals

- *Journal of Computer and System Sciences* (1), *ACM Transactions on Algorithms* (1), *Algorithmica* (4), *Theoretical Computer Science* (8), *Distributed Computing* (1), *Journal of Parallel and Distributed Computing* (3), *Journal of Discrete Algorithms* (1), *Information and Computation* (1), *Theory of Computing Systems* (3), *Communications Physics* (1), *IEEE Access* (1), *IEEE Transactions on Computers* (1), *International Journal of Distributed Sensor Networks* (1)
- ◇ Conferences
 - *ICALP* (7), *SODA* (2), *MFCS* (3), *ESA* (2), *STACS* (2), *ISAAC* (1), *PODC* (4), *DISC* (4), *OPODIS* (4), *SIROCCO* (2), *LICS* (1), *CIAC* (1), *IPDPS* (1), *ICDCS* (3), *SOFSEM* (2), *WALCOM* (1), *IWOCA* (2), *Algorithms, Probability, Networks, and Games* (1), *ALGOSENSORS* (1), *IFIP International Conference on Theoretical Computer Science* (1), *FoSSaCS* (1), *WADS* (1), *SEA* (1)
- ◇ Book Chapters
 - *Emergent Computation*, Book celebrating life-time achievements of Prof. Selim Akl, Springer, 2016.

Teaching Experience

- ◇ Senior Lecturer and Lecturer at the Department of Computer Science, University of Liverpool
 - Distributed Systems, Undergraduate Course, since 2016
 - Research Methods in Computer Science, MSc course, since 2017
- ◇ Adjunct Faculty at the Computer Engineering and Informatics Department, University of Patras
 - Distributed Systems, Undergraduate Course, Winter 2014, Winter 2015
 - Algorithm Engineering, Undergraduate and Graduate Course, Spring 2016
 - Introduction to Algorithms, Undergraduate Course, Winter 2011
 - Algorithms & Combinatorial Optimization, Undergraduate Course, Winter 2011
- ◇ Teaching Assistant at the Computer Engineering and Informatics Department, University of Patras
 - Approximation Algorithms (as a Ph.D. student), Graduate Course, Spring 2010
 - Computational Complexity (M.Sc., Ph.D.), Undergraduate Course, Spring 2009, Spring 2010
 - Game Theory (Ph.D.), Undergraduate Course, Winter 2009
 - Algorithms & Combinatorial Optimization (M.Sc., Ph.D.), Undergraduate Course, Winter 2008, Winter 2009
 - Discrete Mathematics (M.Sc.), Undergraduate Course, 2008
 - Intelligent Programming (M.Sc.), Undergraduate Course, Spring 2007
 - Artificial Intelligence (M.Sc.), Undergraduate Course, Winter 2007
 - Teaching Computational Complexity to a small group of fellow-students, Spring 2007
- ◇ Supervision of PhD students
 - Matthew Connor, 2018-
 - George Skretas, 2018-
- ◇ co-Supervision of PhD students
 - Abdullah Almethen, 2017-2021 (graduated)
 - Michail Theofilatos, 2017-

- ◊ Supervision of Undergraduate and MSc students
 - Has supervised and co-supervised more than 83 undergraduate student theses, 25 MSc student theses, and 9 students in industrial placement.
- ◊ Assessor of PhD Theses
 - Internal examiner of Jarek Mirek, viva held in 2019.

Administration

- ◊ At the Department of Computer Science, University of Liverpool
 - Chair of the postgraduate staff-student liaison committee, since 2017
 - Organizer of the departmental research seminars, since 2017

- MONOGRAPHS [M1] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. New Models for Population Protocols. *Synthesis Lectures on Distributed Computing Theory*, Nancy Lynch ed., Morgan & Claypool Publishers, 2011. doi:10.2200/S00328ED1V01Y201101DCT006
- BOOK CHAPTERS [BC1] O. Michail and P. G. Spirakis. Connectivity Preserving Network Transformers. Chapter in *Emergent Computation*, Edited by A. Adamatzky, pages 337-359, Springer, 2016. doi:10.1007/978-3-319-46376-6_15
- [BC2] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Computing in Dynamic Networks. Chapter 6 in *Computational Network Theory: Theoretical Foundations and Applications, First Edition*, Edited by M. Dehmer, F. Emmert-Streib, and S. Pickl, pages 173-218, Wiley-VCH Verlag GmbH & Co. KGaA, 2015.
- [BC3] O. Michail. An Introduction to Temporal Graphs: An Algorithmic Perspective. In *Algorithms, Probability, Networks, and Games - Scientific Papers and Essays Dedicated to Paul G. Spirakis on the Occasion of His 60th Birthday*, pages 308-343, LNCS, Springer, 2015. doi:10.1007/978-3-319-24024-4_18
- [BC4] I. Chatzigiannakis, D. Fotakis, S. Kontogiannis, O. Michail, S. Nikolettseas, G. Pantziou, and C. Zaroliagis. A Glimpse at Paul Spirakis. In *Algorithms, Probability, Networks, and Games - Scientific Papers and Essays Dedicated to Paul G. Spirakis on the Occasion of His 60th Birthday*, pages 3-24, LNCS, Springer, 2015. doi:10.1007/978-3-319-24024-4_1
- [BC5] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Population Protocols and Related Models. Chapter in *Theoretical Aspects of Distributed Computing in Sensor Networks*, S. Nikolettseas and J. Rolim ed., Springer-Verlag, 2010. *Remark: The editors decided to include only P. Spirakis in the author index. The names of I. Chatzigiannakis and O. Michail appear in the abstract.*
- JOURNAL PUBLICATIONS [J1] O. Michail, G. Skretas, and P. G. Spirakis. Distributed Computation and Reconfiguration in Actively Dynamic Networks. *Distributed Computing*, Springer, Accepted: 10th November 2021. To appear.
- [J2] A. Almethen, O. Michail, and I. Potapov. On Efficient Connectivity-Preserving Transformations in a Grid. *Theoretical Computer Science*, 898, 132-148, Elsevier, 2022. To appear. doi:10.1016/j.tcs.2021.11.004

- [J3] O. Michail, P. G. Spirakis, and M. Theofilatos. Beyond Rings: Gathering in 1-Interval Connected Graphs. *Parallel Processing Letters*, World Scientific, Appeared online: 11th November 2021. To appear.
doi:10.1142/S0129626421500201
- [J4] O. Michail, P. G. Spirakis, and M. Theofilatos. Simple and Fast Approximate Counting and Leader Election in Populations. *Information and Computation, SSS 2018 special issue*, Elsevier, Appeared online: 8th January 2021. To appear.
doi:10.1016/j.ic.2021.104698
- [J5] M. Connor, O. Michail, and P. G. Spirakis. On the Distributed Construction of Stable Networks in Polylogarithmic Parallel Time. *Information, special issue on Distributed Systems and Mobile Computing*, 12(6), 254, MDPI, 2021.
doi:10.3390/info12060254
- [J6] A. Almethen, O. Michail, and I. Potapov. Pushing Lines Helps: Efficient Universal Centralised Transformations for Programmable Matter. *Theoretical Computer Science*, 830-831, 43-59, Elsevier, 2020.
doi:10.1016/j.tcs.2020.04.026
- [J7] O. Michail, G. Skretas, and P. G. Spirakis. On the Transformation Capability of Feasible Mechanisms for Programmable Matter. *Journal of Computer and System Sciences*, 102, 18-39, Elsevier, 2019.
doi:10.1016/j.jcss.2018.12.001
- [J8] G. Mertzios, O. Michail, and P. G. Spirakis. Temporal Network Optimization Subject to Connectivity Constraints. *Algorithmica*, 81(4), 1416-1449, Open Access, Springer, 2019.
doi:10.1007/s00453-018-0478-6
- [J9] O. Michail and P. G. Spirakis. Elements of the Theory of Dynamic Networks. *Communications of the ACM*, 61(2), 72-81, ACM, 2018.
doi:10.1145/3156693
- [J10] O. Michail and P. G. Spirakis. How Many Cooks Spoil the Soup?. *Distributed Computing*, 31(6), 455-469, Open Access, Springer, 2018.
doi:10.1007/s00446-017-0317-z
- [J11] O. Michail. Terminating Distributed Construction of Shapes and Patterns in a Fair Solution of Automata. *Distributed Computing*, 31(5), 343-365, Open Access, Springer, 2018.
doi:10.1007/s00446-017-0309-z
- [J12] O. Michail and P. G. Spirakis. Connectivity Preserving Network Transformers. *Theoretical Computer Science, Special Issue on the Theory of Self-Assembly*, Elsevier, 671, 36-55, 2017.
doi:10.1016/j.tcs.2016.02.040
- [J13] O. Michail. An Introduction to Temporal Graphs: An Algorithmic Perspective. *Internet Mathematics*, 12(4), 239-280, Taylor & Francis, 2016.
doi:10.1080/15427951.2016.1177801
- [J14] O. Michail and P. G. Spirakis. Traveling Salesman Problems in Temporal Graphs. *Theoretical Computer Science*, 634, 1-23, Elsevier, 2016.
doi:10.1016/j.tcs.2016.04.006

- [J15] O. Michail and P. G. Spirakis. Simple and Efficient Local Codes for Distributed Stable Network Construction. *Distributed Computing*, Springer, 29(3), 207-237, 2016.
doi:10.1007/s00446-015-0257-4
- [J16] O. Michail and P. G. Spirakis. Terminating Population Protocols via some Minimal Global Knowledge Assumptions. *Journal of Parallel and Distributed Computing*, 81, 1-10, Elsevier, 2015.
doi:10.1016/j.jpdc.2015.02.005
- [J17] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Causality, Influence, and Computation in Possibly Disconnected Synchronous Dynamic Networks. *Journal of Parallel and Distributed Computing*, 74(1), 2016-2026, Elsevier, 2014.
doi:10.1016/j.jpdc.2013.07.007
- [J18] I. Chatzigiannakis, O. Michail, S. Nikolaou, and P. G. Spirakis. The Computational Power of Simple Protocols for Self-Awareness on Graphs. *Theoretical Computer Science, SSS 2011 special issue*, 512, 98-118, Elsevier, 2013.
doi:10.1016/j.tcs.2012.08.026
- [J19] I. Chatzigiannakis, O. Michail, G. Mylonas, P. G. Spirakis. Myriads of data, myriads of devices: self-awareness of the Ad-hoc, *Awareness: Self-Awareness in Autonomic Systems*, 2012.
doi:10.2417/3201211.004384
- [J20] I. Chatzigiannakis, O. Michail, S. Nikolaou, A. Pavlogiannis, and P. G. Spirakis. Passively Mobile Communicating Machines that Use Restricted Space. *Theoretical Computer Science*, 412(46), 6469-6483, Elsevier, 2011.
doi:10.1016/j.tcs.2011.07.001
- [J21] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Mediated Population Protocols. *Theoretical Computer Science*, 412(22), 2434-2450, Elsevier, 2011.
doi:10.1016/j.tcs.2011.02.003
- [J22] C. Àlvarez, I. Chatzigiannakis, A. Duch, J. Gabbaró, O. Michail, M. Serna, and P. G. Spirakis. Computational Models for Networks of Tiny Artifacts: a Survey. *Computer Science Review*, 5(1), 7-25, Elsevier, 2010.
doi:10.1016/j.cosrev.2010.09.001.
- CONFERENCE PUBLICATIONS
- [C1] M. Connor, O. Michail, and I. Potapov. Centralised Connectivity-Preserving Transformations for Programmable Matter: A Minimal Seed Approach. In *17th International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics (ALGOSENSORS)*, pages 45-60, 2021.
doi:10.1007/978-3-030-89240-1_4
- [C2] A. Almethen, O. Michail, and I. Potapov. Distributed Transformations of Hamiltonian Shapes based on Line Moves. In *17th International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics (ALGOSENSORS)*, pages 1-16, 2021.
doi:10.1007/978-3-030-89240-1_1
- [C3] O. Michail, G. Skretas, and P. G. Spirakis. Distributed Computation and Reconfiguration in Actively Dynamic Networks. In *39th ACM Symposium on Principles of Distributed Computing (PODC)*, pages 448-457, 2020.
doi:10.1145/3382734.3405744

- [C4] A. Almethen, O. Michail, and I. Potapov. On Efficient Connectivity-Preserving Transformations in a Grid. In *16th International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics (ALGOSENSORS)*, pages 76-91, 2020.
doi:10.1007/978-3-030-62401-9_6
- [C5] O. Michail, P. G. Spirakis, and M. Theofilatos. Fault Tolerant Network Constructors. In *21st International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 243-255, 2019.
doi:10.1007/978-3-030-34992-9_19
- [C6] A. Almethen, O. Michail, and I. Potapov. Pushing Lines Helps: Efficient Universal Centralised Transformations for Programmable Matter. In *15th International Symposium on Algorithms and Experiments for Sensor Systems, Wireless Networks and Distributed Robotics (ALGOSENSORS)*, pages 41-59, 2019.
doi:10.1007/978-3-030-34405-4_3
- [C7] O. Michail, P. G. Spirakis, and M. Theofilatos. Simple and Fast Approximate Counting and Leader Election in Populations. In *20th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 154-169, 2018.
doi:10.1007/978-3-030-03232-6_11
- [C8] D. Doty, M. Eftekhari, O. Michail, P. G. Spirakis, and M. Theofilatos. Brief Announcement: Exact Size Counting in Uniform Population Protocols in Nearly Logarithmic Time. In *32nd International Symposium on Distributed Computing (DISC)*, pages 46:1-46:3, 2018.
doi:10.4230/LIPIcs.DISC.2018.46
- [C9] O. Michail, P. G. Spirakis, and M. Theofilatos. Brief Announcement: Fast Approximate Counting and Leader Election in Populations. In *25th International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, pages 38-42, 2018.
doi:10.1007/978-3-030-01325-7_7
- [C10] O. Michail, G. Skretas, and P. G. Spirakis. On the Transformation Capability of Feasible Mechanisms for Programmable Matter. In *44th International Colloquium on Automata, Languages and Programming (ICALP)*, pages 136:1-136:15, 2017.
doi:10.4230/LIPIcs.ICALP.2017.136
- [C11] O. Michail and P. G. Spirakis. How Many Cooks Spoil the Soup?. In *23rd International Colloquium on Structural Information and Communication Complexity (SIROCCO)*, pages 3-18, 2016.
doi:10.1007/978-3-319-48314-6_1
- [C12] O. Michail. Terminating Distributed Construction of Shapes and Patterns in a Fair Solution of Automata. In *34th Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, pages 37-46, 2015.
doi:10.1145/2767386.2767402
- [C13] O. Michail and P. G. Spirakis. Traveling Salesman Problems in Temporal Graphs. In *39th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, pages 553-564, 2014.
doi:10.1007/978-3-662-44465-8_47

- [C14] O. Michail and P. G. Spirakis. Simple and Efficient Local Codes for Distributed Stable Network Construction. In *33rd Annual ACM SIGACT-SIGOPS Symposium on Principles of Distributed Computing (PODC)*, pages 76-85, 2014.
doi:10.1145/2611462.2611466
- [C15] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Naming and Counting in Anonymous Unknown Dynamic Networks. In *15th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 281-295, 2013.
doi:10.1007/978-3-319-03089-0_20
- [C16] G. Mertzios, O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Temporal Network Optimization Subject to Connectivity Constraints. In *40th International Colloquium on Automata, Languages and Programming (ICALP)*, pages 657-668, 2013.
doi:10.1007/978-3-642-39212-2_57
- [C17] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Causality, Influence, and Computation in Possibly Disconnected Synchronous Dynamic Networks. In *16th International Conference On Principles Of Distributed Systems (OPODIS)*, pages 269-283, 2012.
doi:10.1007/978-3-642-35476-2_19
- [C18] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Brief Announcement: Naming and Counting in Anonymous Unknown Dynamic Networks. In *26th International Symposium on Distributed Computing (DISC)*, pages 437-438, 2012.
doi:10.1007/978-3-642-33651-5_46
- [C19] O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Terminating Population Protocols via some Minimal Global Knowledge Assumptions. In *14th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 77-89, 2012.
doi:10.1007/978-3-642-33536-5_8
- [C20] I. Chatzigiannakis, O. Michail, S. Nikolaou, and P. G. Spirakis. The Computational Power of Simple Protocols for Self-Awareness on Graphs. In *13th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 135-147, 2011.
doi:10.1007/978-3-642-24550-3_12
- [C21] I. Chatzigiannakis, O. Michail, Stavros Nikolaou, Andreas Pavlogiannis, and P. G. Spirakis. Passively Mobile Communicating Machines that Use Restricted Space. In *7th ACM SIGACT/SIGMOBILE International Workshop on Foundations of Mobile Computing (FOMC)*, pages 6-15, 2011.
doi:10.1145/1998476.1998480
- [C22] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Algorithmic Verification of Population Protocols. In *12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 221-235, 2010.
doi:10.1007/978-3-642-16023-3_19
- [C23] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Stably Decidable Graph Languages by Mediated Population Protocols. In *12th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, pages 252-266, 2010.
doi:10.1007/978-3-642-16023-3_21

- [C24] A. Filippas, S. Nikolaou, A. Pavlogiannis, O. Michail, I. Chatzigiannakis, and P. G. Spirakis. Computational Models for Wireless Sensor Networks: A Survey. *1st International Conference for Undergraduate and Postgraduate Students in Computer Engineering, Informatics, related Technologies and Applications (EU-REKA!)*, 2010.
- [C25] I. Chatzigiannakis, O. Michail, S. Nikolaou, A. Pavlogiannis, and P. G. Spirakis. All Symmetric Predicates in $NSPACE(n^2)$ are Stably Computable by the Mediated Population Protocol Model. *35th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, pages 270-281, 2010. doi:10.1007/978-3-642-15155-2_25
- [C26] I. Chatzigiannakis, S. Dolev, S. P. Fekete, O. Michail, and P. G. Spirakis. Not All Fair Probabilistic Schedulers are Equivalent. *13th International Conference On Principles Of Distributed Systems (OPODIS)*, pages 33-47, 2009. doi:10.1007/978-3-642-10877-8_5
- [C27] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Brief Announcement: Decidable Graph Languages by Mediated Population Protocols. In *23rd International Symposium on Distributed Computing (DISC)*, pages 239-240, 2009. doi:10.1007/978-3-642-04355-0_24
- [C28] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Mediated Population Protocols. In *36th International Colloquium on Automata, Languages and Programming (ICALP)*, pages 363-374, 2009. doi:10.1007/978-3-642-02930-1_30
- [C29] Jim Prentzas, Ioannis Hatzilygeroudis, and Othon Michail. Improving the Integration of Neuro-Symbolic Rules with Case-Based Reasoning. In *5th Hellenic conference on Artificial Intelligence: Theories, Models and Applications (SETN)*, pages 377-382, 2008. doi:10.1007/978-3-540-87881-0_36

INVITED
CONFERENCE
PUBLICATIONS

- [ICP1] O. Michail and P. G. Spirakis. Network Constructors: A Model for Programmable Matter. In *43rd International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM)*, pages 15-34, Lero-Limerick, Ireland, January 2017. doi:10.1007/978-3-319-51963-0_3
- [ICP2] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Recent Advances in Population Protocols. In *34th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, pages 56-76, Novy Smokovec, High Tatras, Slovak Republic, 2009. doi:10.1007/978-3-642-03816-7_6 (Also FRONTS Technical Report FRONTS-TR-2009-21, <http://fronts.cti.gr/aigaion/?TR=85>)

INVITED TALKS
(ALSO OF
COAUTHORS)

- [IT1] O. Michail, G. Skretas, and P. G. Spirakis. Actively Dynamic Networks. *23rd International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS)*, November, 2021.
- [IT2] O. Michail, G. Skretas, and P. G. Spirakis. Distributed Computation and Reconfiguration in Actively Dynamic Networks. University of Vienna, Communication Technologies group, September, 2021.
- [IT3] O. Michail, G. Skretas, and P. G. Spirakis. Distributed Computation and Reconfiguration in Actively Dynamic Networks. Durham University, ACiD group, March, 2021.

- [IT4] O. Michail, G. Skretas, and P. G. Spirakis. From Programmable Matter to Actively Dynamic Networks. Dagstuhl Seminar *Algorithmic Foundations of Programmable Matter*, online event, March, 2021.
- [IT5] O. Michail, G. Skretas, and P. G. Spirakis. On Distributed Computation and Reconfiguration in Actively Dynamic Networks. *3rd Workshop on Algorithmic Aspects of Temporal Graphs*, July 30, 2020.
- [IT6] O. Michail, G. Skretas, and P. G. Spirakis. Transformations of Programmable Matter with Spherical Modules. Computer Science Department, Montbéliard, France, June, 2019.
- [IT7] O. Michail and P. G. Spirakis. Models (and Mechanisms) for Programmable Matter. *Distributed Algorithms @ Loughborough (DA@L), Networks: Reliability, Routing and Memory*, Loughborough University, UK, January 28, 2019.
- [IT8] O. Michail, P. G. Spirakis, and M. Theofilatos. Network Constructors and the Crystal Structure Prediction Problem. *Workshop on Self-organization in Swarm of Robots*, Tokyo, Japan, November 4, 2018.
- [IT9] O. Michail and P. G. Spirakis. Models and Mechanisms for Programmable Matter. *CEID Seminar and Social Hour*, University of Patras, Greece, March 30, 2018.
- [IT10] O. Michail. Towards Making Matter Programmable. *The Association for Science Education Annual Conference 2018*, University of Liverpool, January 3-6, 2018.
- [IT11] O. Michail and P. G. Spirakis. Network Constructors: A Model for Programmable Matter. *43rd International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM)*, Lero-Limerick, Ireland, January 16-20, 2017.
- [IT12] O. Michail. An Overview of Recent Progress in Temporal Graphs: An Algorithmic Perspective. *1st Workshop on Dynamic Graphs in Distributed Computing (DGDC)*, Paris, France, September 30, 2016.
- [IT13] O. Michail and P. G. Spirakis. Programmable Matter for Dynamic Environments. Dagstuhl Seminar *Algorithmic Foundations of Programmable Matter*, Schloss Dagstuhl, Germany, June, 2016.
- [IT14] O. Michail. Foundations of Dynamic Networks. *Dipartimento di Ingegneria Informatica Automatica e Gestionale "Antonio Ruberti"*, University of Rome "La Sapienza", Rome, Italy, November 25, 2015.
- [IT15] O. Michail and P. G. Spirakis. Distributed Stable Network Construction, *Durham Algorithms and Complexity Seminar*, Durham, UK, March 10, 2015.
- [IT16] G. Mertzios, O. Michail, and P. G. Spirakis. Temporal Networks: Optimization and Connectivity, *9th Athens Colloquium on Algorithms and Complexity (ACAC)*, UoA, Athens, Greece, August 21-22, 2014.
- [IT17] P. G. Spirakis, O. Michail, G. Mertzios, and I. Chatzigiannakis. Temporal Networks, *Theoretical Aspects of Dynamic Distributed Systems (TADDS 2014)*, Paris, France, July 15, 2014.
- [IT18] G. Mertzios, O. Michail, and P. G. Spirakis. Temporal Networks: Optimization and Connectivity, *Middlesex Algorithms Day (MAD! 2014)*, Middlesex University London, London, UK, March 14, 2014.

- [IT19] G. Mertzios, O. Michail, and P. G. Spirakis. Temporal Networks: Optimization and Connectivity, *DIMAP Seminar*, University of Warwick, Warwick, UK, February 18, 2014.
- [IT20] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Distributed Computation in Possibly Disconnected Dynamic Networks. *Dipartimento di Ingegneria Civile e Ingegneria Informatica*, University of Rome “Tor Vergata”, Rome, Italy, May 15, 2013.
- [IT21] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Distributed Computation in Anonymous, Unknown and Possibly Disconnected Dynamic Networks. *Foundations of Network Science Workshop (FONES)*, ICALP 2013 workshops, Riga, Latvia, July 7, 2013.
- [IT22] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Spread of Influence and Computation in Dynamic Networks. *7th Athens Colloquium on Algorithms and Complexity (ACAC)*, UoA, Athens, Greece, August 27-28, 2012.
- [IT23] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Population Protocols. *15th Panhellenic Conference on Informatics (PCI 2011)*, Premises of Kastoria Campus of TEI of Western Macedonia, Kastoria, Greece, September 30 - October 2, 2011.
- [IT24] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Advances in Population Protocols. *Workshop on Wireless Networking and Mobile Computing (WNET 2011)*, MITACS International Focus Period: Advances in Network Analysis and its Applications, Carleton University, Ottawa, Ontario, Canada, April 26-29, 2011.
- [IT25] I. Chatzigiannakis, O. Michail, S. Nikolaou, A. Pavlogianis, and P. G. Spirakis. *5th Athens Colloquium on Algorithms and Complexity (ACAC)*, NTUA, Athens, Greece, August 26-27, 2010.
- [IT26] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Recent Advances in Population Protocols. *34th International Symposium on Mathematical Foundations of Computer Science (MFCS)*, Novy Smokovec, High Tatras, Slovak Republic, 2009.
- [IT27] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Population Protocols and Generalizations. *3rd International Conference on Algebraic Informatics (CAI)*, Thessaloniki, Greece, May 19-22, 2009.

OTHER
INVITATIONS

- [OI1] Invited participant of the Dagstuhl Seminar *Temporal Graphs: Structure, Algorithms, Applications* (number 21171), organized by A. Casteigts, K. Meeks, G. B. Mertzios, and R. Niedermeier. Schloss Dagstuhl, Germany, April 25-30, 2021.
- [OI2] Invited participant of the Dagstuhl Seminar *Algorithmic Foundations of Programmable Matter* (number 21091), organized by A. Becker, S. Fekete, I. Kostitsyna, M. Patitz, and D. Woods. cancelled due to covid and replacement event held online, March, 2021.
- [OI3] Invited participant of the Dagstuhl Seminar *Algorithmic Foundations of Programmable Matter* (number 18331), organized by S. Berman, S. Fekete, M. Patitz, and C. Scheideler. Schloss Dagstuhl, Germany, August 12-17, 2018.
- [OI4] Invited participant of the Dagstuhl Seminar *Algorithmic Foundations of Programmable Matter* (number 16271), organized by S. Fekete, K. Römer, C. Scheideler, and A. W. Richa. Schloss Dagstuhl, Germany, July 3-8, 2016.

POSTERS

- [P1] I. Chatzigiannakis, O. Michail, and P. G. Spirakis. Exploring the Computational Limits of Adaptive Networked Populations of Tiny Artefacts. *Future and Emerging Technologies (FET)*, Prague, 21-23 April, 2009.