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Current

Today
May 2022
Professor of Electrical and Computer Engineering — *Västerås, Sweden*
Mälardalen University, *Faculty of Innovation, Design and Engineering (IDT)*
Research groups: Complex Real-Time Embedded Systems, Robotics

Today
Jan 2021
Program Manager of the *ARRAY* & *ARRAY++* Graduate School funded by KKS — *Västerås, Sweden*
Mälardalen University
 # People: 20 Industrial PhD students

Today
Aug 2020
Scientific Advisor — *Västerås, Sweden*
ABB AB, Industrial Automation – Process Control Platform (PCP)

Today
Mar 2019
Leader of the *Complex Real-Time Embedded Systems (CORE)* group — *Västerås, Sweden*
Mälardalen University (Jointly with Prof. Thomas Nolte)
 # People: 16 (7 Seniors, 9 PhD students)

Previous Positions

May 2022
Mar 2018
Associate Professor (Docent, Universitetslektor) — *Västerås, Sweden*
Mälardalen University, *Faculty of Innovation, Design and Engineering (IDT)*
Research groups: Complex Real-Time Embedded Systems, Robotics

Feb 2022
Apr 2021
Lab Technician — *Stockholm, Sweden*
A05 Diagnostics AB
Support for diagnostics activities related to the COVID-19 pandemic (during weekends and red days)

Dec 2020
Dec 2019
Program Manager of the *Future Factories in the Cloud* SSF project — *Västerås, Sweden*
Mälardalen University
 # People: 25 at MDH, Chalmers University of Technology (SE), Uppsala University (SE), and University of York (UK)

Mar 2018
Feb 2018
Senior Lecturer (Universitetslektor, tenured) — *Västerås, Sweden*
Mälardalen University, *Faculty of Innovation, Design and Engineering (IDT)*
Research groups: Complex Real-Time Embedded Systems, Robotics

Jan 2018
Sep 2016
Forskarassistent (Assistant Professor equivalent) — *Västerås, Sweden*
Mälardalen University, *Faculty of Innovation, Design and Engineering (IDT)*
Research group: Complex Real-Time Embedded Systems
Research topic: Feedback computing for the management of IT-infrastructure resources (part of the SSF project: Future factories in the cloud).

Aug 2016 – Feb 2016 | **Postdoctoral Research Assistant** | *Milano, Italy*
Politecnico di Milano, *Dipartimento di Elettronica, Informazione e Bioingegneria*
Supervisor: Prof. Maria Prandini
Research topic: Modeling and control of interconnected systems affected by uncertainty, with application to next generation electric grids.

Jan 2016 – Jan 2014 | **Postdoctoral Researcher** | *Lund, Sweden*
Lund University, *Department of Automatic Control*
Supervisor: Prof. Karl-Erik Årzén
Research topic: Control design and implementation in cloud and embedded systems.

Jan 2016 – Jan 2014 | **Member** | *Lund, Sweden*
Lund Center for Control of Complex Engineering Systems (LCCC)

Education

Mar 2018 | Qualification as **Associate Professor (Docent) in Computer Science** | *Västerås, Sweden*
Mälardalen University

Dec 2013 – Jan 2011 | **Ph.D. in Information Technology – Systems and Control** | *Milano, Italy*
Politecnico di Milano
Thesis title: Automatic Model Simplification for Continuous and Discontinuous Systems
Advisor: Prof. Alberto Leva

Sep 2012 – Jun 2012 | **Visiting Ph.D. Student** | *Lund, Sweden*
Lund University, *Department of Automatic Control*
Supervisor: Prof. Johan Åkesson

Oct 2011 | **Professional Engineer License in Information Engineering** | *Milano, Italy*
Politecnico di Milano, (Abilitazione alla Professione di Ingegnere)

Oct 2010 – Oct 2008 | **Master of Science in Computer Engineering** | *Milano, Italy*
Politecnico di Milano
Evaluation: Summa cum Laude, 110L/110; GPA: 28.98/30 **Degree Date:** 22/10/2010
Thesis title: Advanced control techniques for resource management in computing systems.

Jul 2008 – Sep 2005 | **Bachelor of Science in Computer Engineering** | *Milano, Italy*
Politecnico di Milano
Evaluation: 108/110; GPA: 27.59/30 **Degree Date:** 23/07/2008
Thesis title: Model parameterisation for the automatic tuning of industrial regulators: the proposal of a unitary approach.

Teaching Experience

Lecturer, Course Responsible and Examiner

2021–2022 | ***Introduction to graduate education*** | Mälardalen University, *Sweden*
4.5 ECTS (PhD course)
Fall 2021-Spring 2022: 44 students, 36h

2017–2021 | ***Control Theory*** **(ELA410, previously ELA407)** | Mälardalen University, *Sweden*
7.5 ECTS (Graduate course)
Fall 2021: 25 students, 44h – **Overall Evaluation 5.7/6**
Fall 2020: 38 students, 44h – **Overall Evaluation 5.4/6**

Fall 2019: 18 students, 44h – **Overall Evaluation 5.8/6**
Spring 2019: 41 students, 44h – **Overall Evaluation 9.6/10**
Spring 2018: 43 students, 44h – **Overall Evaluation 8.7/10**
Spring 2017: 19 students, 12h. Course responsible and examiner *Dr. Giacomo Spampinato*

2017–2021 | ***Industrial Robotics* (DVA400, previously DVA414)** Mälardalen University, *Sweden*
7.5 ECTS (Graduate course)
Spring 2022: 18 students, 39h – (Only course responsible & examiner)
Spring 2021: 16 students, 39h – (Only course responsible & examiner) **Overall Evaluation 4.9/6**
Fall 2019: 20 students, 39h – **Overall Evaluation 5.7/6**
Fall 2018: 22 students, 39h – **Overall Evaluation 8.5/10**
Fall 2017: 13 students, 39h – **Overall Evaluation 9.3/10**

2018–2019 | ***Mobile Robotics* (ELA408, previously ELA406)** Mälardalen University, *Sweden*
7.5 ECTS (Graduate course)
Spring 2021: 15 students, 44h – (Only course responsible & examiner) **Overall Evaluation 5.4/6**
Spring 2020: 17 students, 44h – (Only course responsible & examiner)
Spring 2019: 21 students, 44h – **Overall Evaluation 8.5/10**
Spring 2018: 12 students, 44h

2014 | ***Real-Time Systems* (FRTN01 – Realtidssystem)** Lund University, *Sweden*
10 ECTS (Graduate course)
Fall 2014: 98 students, 34h – **Overall Evaluation +38 in a [-100,100] scale**. Course responsible and examiner *Prof. Karl-Erik Årzén*

Guest Lecturer

Fall 2019–2020 | *Fog computing* in ***Industrial Systems in Cloud Computing*** Mälardalen University, *Sweden*
2h, Graduate course. Dr. Severine Sentille

Spring 2019 | *Introduction to fog computing* in ***IoT and Fog Computing*** Mälardalen University, *Sweden*
2h, *PhD course* (25 students)

Spring 2018 | *Introduction to cloud computing* in ***FORA PhD Training School*** TU Vienna, *Austria*
1h, *PhD course* (15 students)

Fall 2017–2019 | *Cloud computing and virtualization* in ***Embedded Systems II*** Mälardalen University, *Sweden*
3h, Graduate course. Prof. Mikael Sjödin

Fall 2017–2018 | *Fog computing* in ***Industrial Systems in Cloud Computing*** Mälardalen University, *Sweden*
1h, Graduate course. Dr. Hongyu Pei-Breivold

Fall 2017 | *Path planning in autonomous vehicles* in ***Autonomous vehicles*** Mälardalen University, *Sweden*
2h, Undergraduate course. Dr. Masoud Daneshtalab

Spring 2017 | *Cloud computing* in ***IoT and Big Data Analytics*** Mälardalen University, *Sweden*
1h, PhD course. Dr. Mohammad Ashjaei

Teaching Assistant

2016 | ***Fundamentals of Automatic Control*** Politecnico di Milano, *Italy*
10 ECTS (Undergraduate course). Course responsible: *Prof. Marcello Farina*
Spring 2016: 167 students, 35h – **Overall Evaluation: High**

2011–2013 | ***Fundamentals of Automatic Control (for Bioengineering)*** Politecnico di Milano, *Italy*

7 ECTS (Undergraduate course). Course responsible: *Prof. Maria Prandini*
Fall 2013: 168 students, 20h – **Overall Evaluation: High**
Fall 2012: 136 students, 26h – **Overall Evaluation: High**
Fall 2011: 130 students, 20h – **Overall Evaluation: High**

2011–2013 | ***Fundamentals of Automatic Control (for Aerospace Engineers)*** Politecnico di Milano, *Italy*
8 ECTS (Undergraduate course). Course responsible: *Prof. Luca Bascetta*
Spring 2013: 187 students, 26h – **Overall Evaluation: High**
Spring 2012: 169 students, 28h – **Overall Evaluation: High**
Spring 2011: 160 students, 12h – **Overall Evaluation: High**

Supervision activities

PhD students (active)

Main Supervisor

1. Niklas Persson (Jan 2020–ongoing) – **Main Supervisor**. *Topic*: Control of Autonomous Bicycles

Co-Supervisor

1. Daniel Bujosa Mateu (Dec 2019–ongoing) – **Co-Supervisor**. *Topic*: Time Sensitive Networks
2. Anna Friebe (Jan 2019–ongoing) (Lic Spring 2022 (expected)) – **Co-Supervisor**.
    - "Timing and Schedulability Analysis of Real-Time Systems using Hidden Markov Models", Lic., Jun 21, 2022 (expected).
3. Bjarne Johansson (Industrial PhD student, from ABB Industrial Automation) (Jan 2019–ongoing) – **Co-Supervisor**. *Topic*: Machine learning for control systems
4. Sheela Hariharan (Industrial PhD student, from Volvo Construction Equipment) (Dec 2021–ongoing) – **Co-Supervisor**. *Topic*: Cyber-security in heavy vehicles.
5. Anders Lager (Industrial PhD student, from ABB Robotics) (Jan 2019–ongoing) – **Co-Supervisor**. *Topic*: Industrial robots re-planning in uncertain dynamic environments
6. Mahdi Momeni Kelageri (Jan 2019–ongoing) – **Co-Supervisor**. *Topic*: Robots for Automated Construction
7. Shaik Salman (Industrial PhD student, from ABB Robotics) (Nov 2018–ongoing) (Lic Mar 2022) – **Co-Supervisor**.
    - "Integrating Elastic Real-Time Applications on Fog Computing Platforms", Lic., Mar 30, 2022.
8. Vaclav Struhar (May 2018–ongoing) (Lic Sep 2021) – **Co-Supervisor**.
    - "Improving Soft Real-Time Performance of Fog Computing", Lic., Sep 28, 2021.

PhD students (completed)

Main supervisor

1. Branko Miloradović (Oct 2015–Jan 2022) – **Main Supervisor**.
    - "Multi-agent mission planning", Ph.D., Jan 31, 2022.
    - *First position after Ph.D.*: PostDoc at Mälardalen University (Sweden)
2. Mirgita Frasheri (Jun 2015–Jun 2020) – **Main Supervisor**
    - "Modeling and Control of the Collaborative Behavior of Adaptive Autonomous Agents", Ph.D., Jun 12, 2020.
    - *First position after Ph.D.*: PostDoc at Aarhus University (Denmark)

Co-Supervisor

1. Hamid Reza Faragardi (2013–Mar 2018) – **Co-Supervisor** (from 2017):
    - "Optimizing Timing-Critical Cloud Resources in a Smart Factory". Ph.D., Mar 2018.
    - "Resource Optimization in Multi-Processor Real-Time Systems". Licentiate, Sep 2017.
    - *First position after Ph.D.*: PostDoc at University of Innsbruck (Austria)
2. Federico Terraneo (2012–2015) – **Co-Supervisor**
    - "Thermal and energy management techniques for multi-core and many-core systems". Ph.D., Feb 2015.
    - *First position after Ph.D.*: PostDoc at Politecnico di Milano (Italy)

PostDocs

1. Branko Miloradović (Apr 2022–ongoing). PhD from Mälardalen University (2022).
2. Gabriele Gualandi (Sep 2020–ongoing). PhD from Università La Sapienza, Rome, Italy (2020).
3. Filip Marković (Aug 2020–ongoing). PhD from Mälardalen University, Sweden (2020).
4. Auday Al-Dulaimy (May 2020–ongoing). PhD from Beirut Arab University, Lebanon (2017).
5. Inmaculada Ayala (Sep 2019–Mar 2020) – Visiting PostDoc from University of Malaga, Spain. PhD from University of Malaga, Spain (2013).

Master and Bachelor Theses

1. Chris Anderson "An Investigation of Self-Learning and Self-Protection for Adaptive Digital Twins", *The University of Waikato*, New Zealand. Master's of Science (Research). Advisor: Prof. Panos Patros (July, 2021). (**External examiner**)
2. Jonas Rehnholm, "Battery Pack Part Detection and Disassembly Verification Using Computer Vision" (in collaboration with NorthVolt AB), MSc in Engineering – Robotics (30 credits), June 2021 (**Examiner**)
3. Hampus Baaz, "Navigation and Planned Movement of Unmanned Bicycle", MSc in Engineering – Robotics (30 credits), June 2020. (**Examiner**)
4. Malin Ghatta, Fredrik Hammar, "Counteracting 3D Double Pendulum Motion on the SIRO Platform in a Confined Space" (in collaboration with Knightec), MSc in Engineering – Robotics (30 credits), June 2020. (**Examiner**)
5. Sebastian Andersson, Gustav Carlstedt, "Reliability analysis of software test in simulation" (in collaboration with ABB Robotics), MSc in Engineering – Robotics (30 credits), June 2019. (**Main supervisor**)
6. Tom Andersson, Niklas Persson, "Stabilising controller for a riderless bicycle", MSc in Engineering – Robotics (30 credits), June 2019. (**Examiner**) – **Awarded with ABB Robotics Scholarship 2019.**
7. Ayoub Ayoub, Carl Martin Berg, "Design of an Active Boom Suspension System in a Hybrid Wheel Loader" (in collaboration with Volvo Construction Equipment), MSc in Engineering – Robotics (30 credits), June 2018. (**Main supervisor**)
8. Peter Charbachi, Filippo Ferrario, "Investigation of Methods for Automatic Hydraulics Calibration in Construction Equipment" (in collaboration with Volvo Construction Equipment), MSc in Computer Science – Embedded Systems (30 credits), June 2018. (**Main supervisor**)
9. Per Ekström, Elisabeth Eriksson, "A Framework for Testing Redundant Components In Software and Hardware" (in collaboration with ABB Robotics), MSc in Engineering – Robotics (30 credits), June 2018. (**Assistant supervisor**)
10. Fredrik Köhler, "Network Virtualization in Multi-Hop Heterogeneous Architecture", BSc in Computer Science (15 credits), February 2018. (**Examiner**)

11. Johan Gärtner, Philip Johansson, "An Adaptive Control System Based on PID, I2PD and RLS: a Simulated Design for UAVs", MSc in Engineering – Robotics (30 credits), June 2017. (**Main supervisor**)
12. Marcus Johansson, Lukas Olsson, "Comparative evaluation of virtualisation technologies in cloud", BSc in Engineering – Computer Network Engineering (15 credits), June 2017. (**Main supervisor**)
13. Jonathan Larsson, "Client-side evaluation of Quality of Service in Cloud Applications", Bachelor in Computer Science (15 credits), June 2017. (**Main supervisor**)

Invited talks and seminars

May 2022	**Invited seminar** "Designing Self-Adaptive Software Systems with Control Theory: An Overview" at the University of Bologna, invited by Dr. Danilo Pianini.
May 2021	**Invited seminar** at the Dagstuhl Seminar n. 21201 on "Serverless Computing", Dagstuhl, Germany, invited by Prof. Cristina Abad, Prof. Ian T. Foster, Dr. Nikolas Herbst, Prof. Alexandru Iosup.
Oct 2020	**Invited seminar** "Automation of Computing Systems" at ABB Industrial Automation, Västerås, Sweden.
Jan 2020	**Invited seminar** at the NII Shonan Meeting entitled "3rd Controlled Adaptation of Self-adaptive Systems (CASaS2020)", Shonan Village Center (SVC), Japan, invited by Dr. Kenji Tei, Dr. Javier Camara, Dr. Nir Piterman
Feb 2019	**Invited seminar** at the GIPSA-Lab in Grenoble, France, invited by Prof. Paolo Frasca
Nov 2018	**Invited seminar** "Control of Autonomous Vehicles" at the High Performance Real-Time Lab, at the University of Modena and Reggio Emilia (UniMoRE), invited by Prof. Marko Bertogna
Sep 2018	**Invited speaker** at the round table on "Automatica oltre l'ingegneria" (Automatic control beyond engineering) at Automatica.it 2018, Florence, Italy, invited by Prof. Laura Giarré, Prof. Pietro Tesi (available here)
Aug 2018	**Invited seminar** at the GI-Dagstuhl Seminar n. 18343 on "Software Engineering for Intelligent and Autonomous Systems (SEfIAS)", Dagstuhl, Germany, invited by Dr. Ada Diaconescu, Dr. Simos Gerasimou, Dr. Thomas Vogel (Report available here)
Apr 2018	**Invited seminar** "Control of Computing systems: Challenges and (great) opportunities" at the Department of Mechanical Engineering & Materials Science, Swanson School of Engineering, University of Pittsburgh, Pittsburgh, PA, USA, invited by Prof. Daniel Cole and Prof. Daniel Mosse
Apr 2018	**Invited seminar** "Cloud Control" at the Department of Computer Science, University of Pittsburgh, Pittsburgh, PA, USA, invited by Prof. Daniel Mosse
Apr 2018	**Invited seminar** "Control of Things" at the Carnegie Mellon University (CMU), Pittsburgh, PA, USA, invited by Prof. David Garlan and Dr. Javier Camara
Jul 2017	**Invited seminar** "Bridging continuous and discrete control" at the NII Shonan Meeting entitled "2nd Controlled Adaptation of Self-adaptive Systems (CASaS2017)", Shonan Village Center (SVC), Japan, invited by Prof. David Garlan, Dr. Nicolás D'Ippolito, Dr. Kenji Tei
Jun 2017	**Invited seminar** at the 11^{th} Cloud Control Workshop, Västerås, Sweden, invited by Prof. Erik Elmroth

Mar 2017 | **Invited seminar** at the 10^{th} Cloud Control Workshop, Umeå, Sweden, invited by Prof. Erik Elmroth

Nov 2016 | **Invited seminar** "A control perspective on vertical scaling", Chalmers University, Gothenubrg, Sweden, invited by Prof. Marina Papatriantafilou and Prof. Philippas Tsigas

Apr 2016 | **Invited seminar** at the NII Shonan Meeting entitled "Controlled Adaptation of Self-adaptive Systems (CASaS)", Shonan Village Center (SVC), Japan, invited by Prof. Paola Inverardi, Dr. Nicolás D'Ippolito, Dr. Kenji Tei

Feb 2016 | **Invited seminar** "Control of Self-Adaptive Software in Presence of Uncertainty", University of Basel, Basel, Switzerland, invited by Prof. Dr. Jörg Schibler

Jan 2016 | **Invited seminar** "Control and Performance Evaluation of Computing Systems in Presence of Uncertainty", at GIPSA-Lab Grenoble and INRIA Grenoble Rhône-Alpes, France, invited by Prof. Eric Rutten and Prof. Bogdan Robu

Dec 2015 | **Invited seminar** "Control-based Design of Computing Systems in Presence of Uncertainty", at MDH, Västerås, Sweden, invited by Prof. Hans A. Hansson

Sep 2014 | **Invited seminar** at the GI-Dagstuhl Seminar n. 14382 on "Control Theory meets Software Engineering", Dagstuhl, Germany, invited by Prof. Antonio Filieri and Prof. Martina Maggio

Aug 2014 | **Invited talk** "Adopting the Scenario Theory for Performance Evaluation in Cloud Applications", at the 5th Cloud Control Workshop, Mölle, Sweden

Feb 2014 | **Invited talk** "Modelling Aspects of Computing Systems: from clouds to earth and back again", at the 3rd Cloud Control Workshop, Hemavan, Sweden

Nov 2013 | **Invited seminar** "Model reduction of switched affine systems: a method based on balanced truncation and randomized optimization", at ETH, Zürich, Switzerland, invited by Prof. John Lygeros and Dr. Kostas Margellos

Grants & Honours

Jul 2022 | *External Participant* of the project "IRIS: Stepwise confIguRatIon of virtualized Services for sustainable and adaptive mobile networks", funded by the Spanish Ministry of Science and Innovation (project leader: Lidia Fuentes Fernández and Mercedes Amor Pinilla, University of Malaga).

Mar 2022 | *co-PI* of the **VINNOVA** project (2022–2024), "ROBOREC: Semi-automated Dismantling System for Battery Metal Recovery and Recycling" (project leader: Northvolt Revolt AB). Total budget 5MSEK.

Oct 2021 | **Outstanding service award** at ACSOS 2021.

Jul 2021 | **Outstanding paper award** at ECRTS 2021 ([C17]).

Dec 2020 | *Applicant and PI* of the **Swedish Foundation for Strategic Research SSF** (Stiftelsen för Strategisk Forskning) project (2021–2023), "FuturAS: Future Generation Automation Systems". Total budget 1.3MSEK.

Oct 2020	*Applicant and PI* of the **Swedish Research Council VR** (Vetenskapsrådet) project (2021–2024), "PSI: Pervasive Self-Optimizing Computing Infrastructures". Total budget 4MSEK.
Mar 2020	*co-PI and WP leader* of the **VINNOVA** project (2020–2024), "GREENER: Intelligent energy management in connected construction sites", under the program Vehicle Strategic Research and Innovation (Fordonsstrategisk Forskning och Innovation, FFI). Total budget 17.5MSEK.
Jun 2019	*co-Applicant, PI, and sub-project leader* of the **Knowledge Foundation (KK-stiftelsen) Synergy** project (2019–2023), "FIESTA: Federated Choreography of an Integrated Embedded Systems Software Architecture". Total budget 28.1MSEK. Leader of the "Distributed Control (DisCo)" sub-project.
Jun 2019	*co-Applicant, PI, and sub-project leader* of the **Knowledge Foundation (KK-stiftelsen) Synergy** project (2019–2023), "SACSys: Safe and Secure Adaptive Collaborative Systems". Total budget 21.7MSEK. Leader of the "Real-Time Cloud (RTCloud)" sub-project.
May 2019	Awarded the "**Ericsson Research Foundation Grant** 2019". Total budget 25kSEK, funded by the Ericsson's Research Foundation.
Apr 2019	Elevated to the grade of **IEEE Senior member**.
Sep 2018	*Co-Applicant and Member* (2018–2019), of **XPRES** – Excellence in Production Research.
May 2018	Awarded the "**Ericsson Research Foundation Grant** 2018". Total budget 35kSEK, funded by the Ericsson's Research Foundation.
Mar 2018	*Co-PI* of the **Knowledge Foundation (KK-stiftelsen)** project (2018–2020), "Automation Region Research Academy (ARRAY)". Total budget 69.3MSEK. Supervisor of 4 PhD students involved in the industrial PhD school.
May 2017	*Co-PI* of the **H2020** project (2017–2021), "Fog Computing for Robotics and Industrial Automation (FORA)" funded by the European Union's Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No 764785[1]. Total budget 4MEuros. Supervisor of 2 PhD students involved in the PhD school.
May 2017	Awarded the "**Ericsson Research Foundation Grant** 2017". Total budget 20kSEK, funded by the Ericsson's Research Foundation.
May 2017	**Best artefact award** at the 12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS) for the paper "Self-Adaptive Video Encoder: Comparison of Multiple Adaptation Strategies Made Simple" ([C61, A3]).
Dec 2016	*Co-Applicant and PI* of the SLA-IoT project (Ensuring Quality of Service through Modeling of Service-level Agreements in Industrial IoT). Total budget 265kSEK, funded by the **Software Center Initiative** by Chalmers University and the University of Gothenburg Sweden[2].
Dec 2013	Awarded with the **European Doctorate** certificate with honour.
Dec 2013 Jan 2011	**Ph.D. Scholarship** funded by the Italian Government – $55000 Politecnico di Milano, IT

Other Research Programs

[1] http://www.fora-etn.eu/
[2] http://softwarecenter.gu.se/

2017–2020	**Team member**, PARIS - Practical Probabilistic Timing Analysis of Real-Time Systems, funded by the Swedish Research Council (VR).
2018–2021	**Team member**, AFarCloud - Aggregate Farming in the Cloud, funded by ECSEL Vinnova.
2016–TODAY	**Team member**, Future factories in the Cloud (FiC), Swedish Foundation for Strategic Research (SSF), 2016-2020.
2016–2016	**Team member**, Unifying Control and Verification of Cyber-Physical Systems (UnCoVerCPS), European Commission, H2020, 2015-2018.
2014–2016	**Team member**, Cloud Control, Swedish research council (VR), Framework Grant, 2013-2016.

Commissions of Trust

Expert Referee for National or International Research Councils

- French National Research Agency (Agence Nationale de la Recherche ANR).
- Austrian Science Fund (FWF) – the main Austrian funding organization for fundamental research.
- Dutch Research Council (NWO) Domain Science (ENW), for the NWO Talent Programme Veni.
- EU Horizon2020 for the Space Research Unit.

Services to the Research Community

Editorial Service

- **Associate Editor** of ACM Transactions on Autonomous and Adaptive Systems (TAAS) (2021-present)
- **Guest editor** of the special issue on "Next Generation Real-Time Architectures in Autonomous Robots and Automation Systems", in Frontiers in Robotics and AI (2021).

Reviewer of PhD theses

1. **Member of the Grading Committee)** of Joel Scheuner PhD thesis, "Performance Evaluation of Serverless Applications and Infrastructures" *Chalmers University of Technology*, Göteborg, Sweden. Advisor: Dr. Philipp Leitner (Sep 8th, 2022).
2. **Opponent (Discussion Leader)** of Licentiate thesis of Fatemeh Akbarian, "Attack Resilient Cloud-based Industrial Control Systems", *Lund University*, Lund, Sweden. Advisor: Prof. Maria Kihl (Apr 12th, 2022).
3. **Member of the Grading Committee** of Johan Sundell Licentiate thesis, "Safety Critical Software – Test Coverage vs Remaining faults", *Mälardalen University*, Sweden. Advisor: Prof. Kristina Lundqvist (Apr 7th, 2022).
4. **Member of the Grading Committee** of Ivan Lujic PhD thesis defense, "Foundations for Sustainable and Trustworthy Edge Data Analytics", *TU Wien*, Austria. Advisor: Prof. Ivona Brandic (Feb 17th, 2022).
5. **Member of the Grading Committee** of Moksadur Rahman PhD thesis defense, "On a Learning System for Industrial Automation: Model-Based Control and Diagnostics for Decision Support", *Mälardalen University*, Sweden. Advisor: Prof. Konstantinos Kyprianidis (Jan 21st, 2022).
6. **Member of the Grading Committee** of Mohammadreza Barzegaran PhD thesis defense, "Configuration Optimization of Fog Computing Platforms for Control Applications", *Technical University of Denmark (DTU)*, Denamrk. Advisor: Prof. Paul Pop (June 14th, 2021).
7. **Member of the Grading Committee** of Mirko D'Angelo PhD thesis defense, "Engineering Decentralized Learning in Self-Adaptive Systems", *Linnaeus University*, Sweden. Advisor: Prof. Mauro Caporuscio (May 28th, 2021).

8. **Reviewer** of Johan Sundell Licentiate Proposal, "Safety Critical Software - Test Coverage vs Remaining Faults", *Mälardalen University*, Sweden. Advisor: Prof. Kristina Lundqvist (Apr 27th, 2021).
9. **Reviewer** of Van-Lan Dao Licentiate Proposal, "Performance Enhancements and Analysis of Pairwise NOMA", *Mälardalen University*, Sweden. Advisor: Prof. Elisabeth Uhlemann (Sep 29th, 2020).
10. **Opponent (Discussion Leader)** of Joel Scheuner Licentiate thesis, "Towards Measuring and Understanding Performance in Infrastructure- and Function-as-a-Service Clouds" *Chalmers University of Technology*, Göteborg, Sweden. Advisor: Dr. Philipp Leitner (Aug 28th, 2020).
11. **Member of the Grading Committee** of Filip Markovic PhD thesis defense, "Preemption-Delay Aware Schedulability Analysis of Real-Time Systems", *Mälardalen University*, Sweden. Advisor: Prof. Jan Carlson (Jun 15th, 2020).
12. **Member of the Grading Committee** of Andrea Casalino PhD thesis defence, "Allowing a real collaboration between humans and robots", *Politecnico di Milano*, Italy. Advisor: Prof. Paolo Rocco (Feb 19th, 2020).
13. **Member of the Grading Committee** of Marco Baur PhD thesis defence, "Autonomous driving at the limits of handling", Politecnico di Milano, Italy. Advisor: Prof. Luca Bascetta (Feb 19th, 2020).
14. **Opponent** of Gabriele Gualandi PhD thesis, "ASiMOV: A Microservices-Based Verifiable Controller with Estimable Detection Delay against Cyber-Attacks to Cyber-Physical Systems", *Università La Sapienza*, Rome, Italy. Advisor: Prof. Luigi Vincenzo Mancini (Feb, 2020).
15. **Reviewer** of Rong Gu Licentiate Proposal, "Automatic Model Generation and Scalable Verification for Autonomous Vehicles", *Mälardalen University*, Sweden. Advisor: Prof. Cristina Seceleanu (Dec 17th, 2019).
16. **Opponent** of Marco Baur PhD thesis, "Autonomous driving at the limits of handling", *Politecnico di Milano*, Italy. Advisor: Prof. Luca Bascetta (Nov, 2019).
17. **Member of the Grading Committee** of Melika Hozhabri Licentiate thesis defence, "Human Detection and Tracking with UWB radar", *Mälardalen University*, Sweden. Advisor: Prof. Maria Lindén (Oct 4th, 2019).
18. **Reviewer** of Jonatan Tidare Licentiate Proposal, "Discriminating Motor Imagery of Opening and Closing One Hand From Electroencephalogram Data", *Mälardalen University*, Sweden. Advisor: Prof. Ning Xiong (Sep 6th, 2019).
19. **Reviewer** of Lan Anh Trinh Licentiate Proposal, "Dependable Path Planning for Autonomous Control", *Mälardalen University*, Sweden. Advisor: Prof. Mikael Ekström (Mar 14th, 2019).
20. **Member of the Grading Committee** of Konstantinos Angelopoulos PhD thesis defence, "Optimal Adaptations over Multi-Dimensional Adaptation Spaces: A Control-Theoretic Approach", *University of Trento*, Italy. Advisor: Prof. John Mylopoulos (Apr 8th, 2016).

Participation as Technical Program Committee Member (Alphabetical order)

1. **ACSOS** 2020–2022: IEEE International Conference on Autonomic Computing and Self-Organizing Systems
2. **AHPC** 2016–2018: International Workshop on Autonomic High Performance Computing
3. **ALGOCLOUD** 2019–2020: International Symposium on Algorithmic Aspects of Cloud Computing
4. **AI-Science** 2019: International Workshop on Autonomous Infrastructure for Science
5. **CCW** 2017: Cloud Control Workshop
6. **CPS-IoTBench** 2019: Workshop on Benchmarking Cyber-Physical Systems and Internet of Things (part of CPS-IoT week)
7. **CTSE** 2015: International Workshop on Control Theory for Software Engineering (part of ESEC/FSE)
8. **DATE** 2020–2021: Design, Automation and Test in Europe Conference Initiative day on Autonomous Systems Design
9. **ECRTS** 2020–2022: Euromicro Conference on Real-Time Systems

10. **EMSAC** 2019: International Workshop on Evaluations and Measurements in Self-Aware Computing Systems
11. **ETFA** 2017–2022: IEEE International Conference on Emerging Technologies And Factory Automation
12. **FC** 2016–2017: 12th Workshop on Feedback Computing
13. **Fog-IoT** 2019–2020: Fog and the IoT Workshop (part of the CPS-IoT week 2019)
14. **HotCloudPerf** 2019–2021: Workshop on Hot Topics in Cloud Computing Performance
15. **ICAC** 2017–2019: International Conference on Autonomic Computing
16. **ICCAC** 2017: IEEE International Conference on Cloud and Autonomic Computing
17. **ICCPS** 2020: ACM/IEEE International Conference on Cyber-Physical Systems
18. **ICDCS** 2021–2022: IEEE International Conference on Distributed Computing Systems
19. **ICINCO** 2021: International Conference on Informatics in Control, Automation and Robotics
20. **ICIT** 2019–2020: IEEE International Conference on Industrial Technology (IEEE-ICIT)
21. **IECON** 2018–2019: Annual Conference of the IEEE Industrial Electronics Society (IECON)
22. **ISC** 2019: ISC High Performance conference (*PhD Forum Program Committee Member*)
23. **ISORC** 2022: International Symposium on Real-Time Distributed Computing
24. **ISPA** 2015–2016: IEEE International Symposium on Parallel and Distributed Processing with Applications
25. **NG-RES** 2020-2021: Workshop on Next Generation Real-Time Embedded Systems
26. **RAGE** 2022: International workshop on Real-time And intelliGent Edge computing
27. **RTAS** 2019, 2023: IEEE Real-Time and Embedded Technology and Applications Symposium (Applied Methodologies and Foundations track)
28. **RTCSA** 2020–2021: IEEE International Conference on Embedded and Real-Time Computing Systems and Applications
29. **RTNS** 2018: International Conference on Real-Time Networks and Systems
30. **RTSS** 2021: IEEE Real-Time Systems Symposium
31. **SC** 2022: International Conference for High Performance Computing, Networking, Storage, and Analysis (Supercomputing)
32. **SCAV** 2017–2018: Safe Control of Connected and Autonomous Vehicles (part of the CPS week)
33. **SEAMS** 2018–2023: International Symposium on Software Engineering for Adaptive and Self-Managing Systems
34. **SRDS** 2017, 2019: Symposium on Reliable Distributed Systems
35. **WATERS** 2020: Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems

Participation in Organizing Committees (Decreasing chronological order)

1. **ECRTS** 2023 (***Program Chair***): 35th Euromicro Conference on Real-Time Systems
2. **CCTA** 2022 (***Organizer of the Invited Session*** "Control for Computing"): Conference on Control Technology and Applications
3. **MED** 2022 (***Program Chair***): 30th Mediterranean Conference on Control and Automation
4. **RTAS** 2022 (***Brief Presentations Chair***): 28th IEEE Real-Time and Embedded Technology and Applications Symposium
5. **SEAMS** 2022 (***Artifact Co-Chair***): 17th International Symposium on Software Engineering for Adaptive and Self-Managing Systems

6. **ICPE** 2022 (**Proceedings Chair**): 13th ACM/SPEC International Conference on Performance Engineering
7. **ESWEEK** 2021 (***Tutorial Organizer***: "Tutorial on Fog Computing for Industrial IoT"): Embedded System Week 2021
8. **ACSOS** 2021 (***Artifact Evaluation Co-Chair***): 2nd IEEE International Conference on Autonomic Computing and Self-Organizing Systems
9. **WFCS** 2021 (***WiP Chair***): 17th IEEE International Conference on Factory Communication Systems
10. **ETFA** 2021 (***Workshop Organizer*** "WS 2 - Workshop on Advances in Industrial Automation"): 26th Annual Conference of the IEEE Industrial Electronics Society
11. **ETFA** 2021 (***Organizer of Special Session*** "SS 05 - Fog Computing and IoT"): 26th Annual Conference of the IEEE Industrial Electronics Society
12. **ECRTS** 2020 (***Artifact Evaluation Co-Chair***): 32nd Euromicro Conference on Real-Time Systems
13. **ETFA** 2020 (***Organizer of Special Session*** "SS 08 - Fog and Industrial IoT Applications"): 25th Annual Conference of the IEEE Industrial Electronics Society
14. **RTAS** 2020 (***Artifact Evaluation Co-Chair***): 26th IEEE Real-Time and Embedded Technology and Applications Symposium
15. **MELECON** 2020 (***Theme Chair*** for ***Embedded and Cyber-physical systems***): 20th IEEE Mediterranean Electrotechnical Conference
16. **SASO** 2019 (***Industry Chair***): 13th International Conference on Self-Adaptive and Self-Organizing Systems
17. **RTAS** 2019 (***Publicity Chair***): 25th IEEE Real-Time and Embedded Technology and Applications Symposium
18. **ECRTS** 2019 (***Artifact Evaluation Co-Chair***): 31st Euromicro Conference on Real-Time Systems
19. **RTNS** 2018 (***Artifact Evaluation Chair***): 26th International Conference on Real-Time Networks and Systems
20. **SASO** 2018 (***Publicity Chair***): 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems
21. **ICAC** 2018 (***Publicity Chair***): 15th IEEE International Conference on Autonomic Computing
22. **TC-CPS** 2018 (***Publicity Chair***): Workshop on Time Critical Cyber Physical Systems
23. **AHPC** 2017 (***Organizer, General and Program Chair***): International Workshop on Autonomic High Performance Computing
24. **CDC** 2016 (***Organizer and Chair*** *of the invited session "Control of Computing Systems"*): 55th IEEE Conference on Decision and Control
25. **ECRTS** 2015 (***Local Chair***): Euromicro Conference on Real-Time Systems
26. **CCW** 2014 (***Social Chair***): 6th Cloud Control Workshop

Artifact/Repeatability Evaluation Committee Member (Decreasing chronological order)

1. **ECRTS** 2016: Euromicro Conference on Real-Time Systems
2. **HSCC** 2016: International Conference on Hybrid Systems Computation and Control (part of the CPS week)
3. **RTNS** 2018: International Conference on Real-Time Networks and Systems
4. **RTSS** 2016-2018: IEEE Real-Time Systems Symposium

Session chair or co-chair at International Conferences (Decreasing chronological order)

- **RTCSA** 2020: Session "CPS and Emerging Applications"
- **HPCS** 2018: Session "Work-in-progress"
- **CDC** 2017: Session "Emerging Control Applications"

- **CDC** 2016: Session "Control of Computing Systems"
- **CDC** 2015: Session "Control Applications II"
- **CTSE** 2015: Main track session
- **Feedback Computing** 2015: Main track session
- **IFAC World Congress** 2014: Session "Modelling of Human Performance"
- **CDC** 2013: Session "Emerging Control Applications"

Reviewer of International Journals (Alphabetical order)

- ACM Transactions on Autonomous and Adaptive Systems (TAAS) • ACM Transactions on Cyber-Physical Systems (TCPS) • ACM Transactions on Embedded Computing Systems (TECS) • ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS) • ACM Transactions on Software Engineering and Methodology (TOSEM) • Advances in Computational Mathematics (ACOM) • Autonomous Robots (AuRo) • AIMS Electronic Engineering (ElectronEng) • Applied Mathematics and Computation (AMC) • Automatica • Control Engineering Practice (CEP) • IEEE Transactions on Automatic Control (TAC) • IEEE Transactions on Automation Science and Engineering (TASE) • IEEE Transactions on Cloud Computing (TCC) • IEEE Transactions on Computers (TC-CS) • IEEE Transactions on Dependable and Secure Systems (TDSC) • IEEE Transactions on Industrial Informatics (TII) • IEEE Transactions on Network and Service Management (TNSM) • IEEE Transactions on Parallel and Distributed Systems (TPDS) • IEEE Transactions on Robotics and Automation Letters (R-AL) • IEEE Transactions on Services Computing (TSC) • Real-Time Systems Journal (RTSJ)

Reviewer of International Conferences (Alphabetical order)

- ACM/EDAC/IEEE Design Automation Conference (DAC) • ACM/IEEE International Conference on Cyber-Physical Systems (ICCPS) • American Control Conference (ACC) • Annual Conference of the IEEE Industrial Electronics Society (IES) • Design, Automation and Test in Europe (DATE) • European Control Conference (ECC) • IEEE Annual Conference on Decision and Control (CDC) • IEEE International Conference on Cloud and Autonomic Computing (ICCAC) • IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA) • IEEE International Conference on Industrial Technology (ICIT) • IEEE International Conference on Robotics and Automation (ICRA) • IEEE International Symposium on Industrial Embedded Systems (SIES) • IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS) • IFAC Symposium on Advances in Control Education (ACE) • IFAC Symposium on Control in Transportation Systems (CTS) • IFAC International Conference of Mathematical Modelling (MATHMOD) • IFAC Conference on Advances in PID Control (PID) • IFAC World Congress (IFAC WC) • Mediterranean Conference on Control and Automation (MED)

Languages

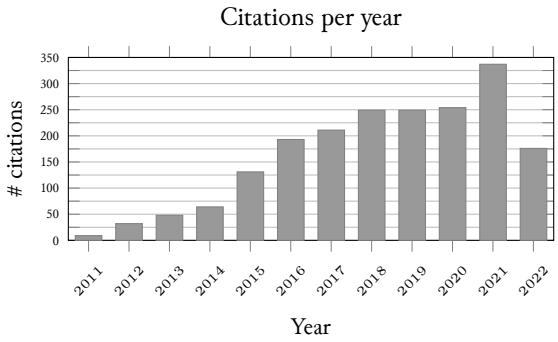
Italian:	Mothertongue
Greek:	Mothertongue, bilingual
English:	Fluent – TOEFL iBT 81/120 – C1 (CEFR) (October 2007)
French:	Basic Knowledge
Swedish:	Basic Knowledge – Level 1 Certificate 82.5/100 (June 2014)

Publications

Citations overview

Source: Google scholar (20/07/2022)

- Number of citations: 2027
- h-index: 25
- i10-index: 48
- i100-index: 4
- g-index: 40



Books and book chapters

[B1] S. Kounev, C. Abad, I. T. Foster, N. Herbst, A. Iosup, S. Al-Kiswany, A. Ali-Eldin Hassan, B. Balis, A. Bauer, A. B. Bondi, K. Chard, R. L. Chard, R. Chatley, A. A. Chien, A. J. J. Davis, J. Donkervliet, S. Eismann, E. Elmroth, N. Ferrier, H.-A. Jacobsen, P. Jamshidi, G. Kousiouris, P. Leitner, P. Garcia Lopez, M. Maggio, M. Malawski, B. Metzler, V. Muthusamy, A. V. Papadopoulos, P. Patros, G. Pierre, O. F. Rana, R. P. Ricci, J. Scheuner, M. Sedaghat, M. Shahrad, P. Shenoy, J. Spillner, D. Taibi, D. Thain, A. Trivedi, A. Uta, V. van Beek, E. van Eyk, A. van Hoorn, S. Vasani, F. Wamser, G. Wirtz, and V. Yussupov. "Toward a Definition for Serverless Computing". In: *Serverless Computing (Dagstuhl Seminar 21201)*. Ed. by C. Abad, I. T. Foster, N. Herbst, and A. Iosup. Vol. 11. Dagstuhl, Germany: Schloss Dagstuhl – Leibniz-Zentrum für Informatik, 2021, pp. 34–93. DOI: 10.4230/DagRep.11.4.34.

[B2] V. Gulisano, M. Papatriantafilou, and A. V. Papadopoulos. "Elastic Resource Management in Stream Processing". In: *Encyclopedia of Big Data Technologies (2nd edition)*. Ed. by S. Sakr and A. Y. Zomaya. Cham: Springer International Publishing, 2020.

[B3] A. V. Papadopoulos and M. Prandini. *Fondamenti di Automatica: Esercizi (2 Edizione)*. (In Italian). Pearson Italia, 2020.

[B4] V. Gulisano, M. Papatriantafilou, and A. V. Papadopoulos. "Elasticity". In: *Encyclopedia of Big Data Technologies*. Ed. by S. Sakr and A. Y. Zomaya. Cham: Springer International Publishing, 2019, pp. 1–7. DOI: 10.1007/978-3-319-63962-8_191-1.

[B5] M. Maggio, T. Abdelzaher, L. Esterle, H. Giese, J. O. Kephart, O. J. Mengshoel, A. V. Papadopoulos, A. Robertsson, and K. Wolter. "Self-adaptation for Individual Self-aware Computing Systems". In: *Self-Aware Computing Systems*. Ed. by S. Kounev, J. O. Kephart, A. Milenkoski, and X. Zhu. Cham: Springer International Publishing, 2017, pp. 375–399. DOI: 10.1007/978-3-319-47474-8_12.

[B6] A. V. Papadopoulos and M. Prandini. *Fondamenti di Automatica: Esercizi*. (In Italian). Pearson Italia, 2016.

[B7] A. Leva, M. Maggio, A. V. Papadopoulos, and F. Terraneo. *Control-based operating system design*. Control Engineering Series. IET, 2013. DOI: 10.1049/PBCE089E.

International Journals

[J1] V. Gulisano, H. Najdataei, Y. Nikolakopoulos, A. V. Papadopoulos, M. Papatriantafilou, and P. Tsigas. "STRETCH: Virtual Shared-Nothing Parallelism for Scalable and Elastic Stream Processing". In: *IEEE Transactions on Parallel and Distributed Systems* (2022), pp. 1–18. DOI: 10.1109/TPDS.2022.3181979.

[J2] A. Lager, G. Spampinato, A. V. Papadopoulos, and T. Nolte. "Task Roadmaps: Speeding up Task Replanning". In: *Frontiers in Robotics and AI* 9 (2022). DOI: 10.3389/frobt.2022.816355.

[J3] M. Momeni, J. Relefors, A. Khatry, L. Pettersson, A. V. Papadopoulos, and T. Nolte. "Automated fabrication of reinforcement cages using a robotized production cell". In: *Automation in Construction* 133 (2022), p. 103990. DOI: 10.1016/j.autcon.2021.103990.

[J4] A. V. Papadopoulos, K. Agrawal, E. Bini, and S. Baruah. "Feedback-Based Resource Management for Multi-Threaded Applications". In: *Real-Time Systems* (2022). DOI: 10.1007/s11241-022-09386-7.

[J5] S. M. Salman, A. V. Papadopoulos, S. Mubeen, and T. Nolte. "Multi-processor scheduling of elastic applications in compositional real-time systems". In: *Journal of Systems Architecture* (2022), p. 102358. DOI: 10.1016/j.sysarc.2021.102358.

[J6] I. Ayala, A. V. Papadopoulos, M. Amor, and L. Fuentes. "ProDSPL: Proactive Self-Adaptation based on Dynamic Software ProductLines". In: *Journal of Systems and Software* 175.110909 (2021). DOI: 10.1016/j.jss.2021.110909.

[J7] B. Miloradović, B. Çürüklü, M. Ekström, and A. V. Papadopoulos. “GMP: A Genetic Mission Planner for Heterogeneous Multi-Robot System Applications”. In: *IEEE Transactions on Cybernetics* (2021). DOI: 10.1109/TCYB.2021.3070913.

[J8] A. V. Papadopoulos, L. Versluis, A. Bauer, N. Herbst, J. von Kistowski, A. Ali-Eldin, C. L. Abad, J. N. Amaral, P. Tůma, and A. Iosup. “Methodological Principles for Reproducible Performance Evaluation in Cloud Computing”. In: *IEEE Transactions on Software Engineering* 47.8 (2021). Selected as Journal-First publication presented at ICSE 2020, pp. 1528–1543. DOI: 10.1109/TSE.2019.2927908.

[J9] P. Patros, J. Spillner, A. V. Papadopoulos, B. Varghese, O. Rana, and S. Dustdar. “Towards Sustainable Serverless Computing”. In: *IEEE Internet Computing* 25.6 (2021), pp. 42–50. DOI: 10.1109/MIC.2021.3093105.

[J10] S. M. Salman, A. V. Papadopoulos, S. Mubeen, and T. Nolte. “A Systematic Methodology to Migrate Complex Real-Time Software Systems to Multi-Core Platforms”. In: *Journal of Systems Architecture* 117.102087 (2021). DOI: 10.1016/j.sysarc.2021.102087.

[J11] W. Wang, D. Mosse, and A. V. Papadopoulos. “Packet Priority Assignment for Wireless Control Systems of Multiple Physical Systems”. In: *Journal of Systems Architecture* 107 (2020), p. 101708. DOI: 10.1016/j.sysarc.2020.101708.

[J12] D. Ioli, A. Falsone, A. V. Papadopoulos, and M. Prandini. “A compositional modeling framework for the optimal energy management of a district network”. In: *Journal of Process Control* 74 (2019), pp. 160–176. DOI: 10.1016/j.jprocont.2017.10.005.

[J13] A. Leva, A. V. Papadopoulos, S. Seva, and C. Cimino. “Explicit model-based real PID tuning for efficient load disturbance rejection”. In: *Industrial & Engineering Chemistry Research* 58.51 (2019), pp. 23211–23224. DOI: 10.1021/acs.iecr.9b04198.

[J14] K. Angelopoulos, A. V. Papadopoulos, V. E. S. Souza, and J. Mylopoulos. “Engineering Self-Adaptive Software Systems: From Requirements to Model Predictive Control”. In: *ACM Transactions on Autonomous and Adaptive Systems* 13.1 (2018), 1:1–1:27. DOI: 10.1145/3105748.

[J15] A. Ilyushkin, A. Ali-Eldin, N. Herbst, A. Bauer, A. V. Papadopoulos, D. Epema, and A. Iosup. “An Experimental Performance Evaluation of Autoscalers for Complex Workflows”. In: *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS)* 3.2 (2018), 8:1–8:32. DOI: 10.1145/3164537.

[J16] S. Mubeen, S. Abbaspour Asadollah, A. V. Papadopoulos, M. Ashjaei, H. Pei-Breivold, and M. Behnam. “Management of Service Level Agreements for Cloud Services in IoT: A Systematic Mapping Study”. In: *IEEE Access* 6.1 (2018), pp. 30184–30207. DOI: 10.1109/ACCESS.2017.2744677.

[J17] A. V. Papadopoulos, F. Terraneo, A. Leva, and M. Prandini. “Switched control for quantized feedback systems: invariance and limit cycles analysis”. In: *IEEE Transactions on Automatic Control* 63.11 (2018), pp. 3775–3786. DOI: 10.1109/TAC.2018.2797246.

[J18] F. Terraneo, A. V. Papadopoulos, A. Leva, and M. Prandini. “FLOPSYNC-QACS: Quantization-aware Clock Synchronization for Wireless Sensor Networks”. In: *SIGBED Rev.* 14.4 (2018), pp. 33–38. DOI: 10.1145/3177803.3177809.

[J19] A. Filieri, M. Maggio, K. Angelopoulos, N. D’Ippolito, I. Gerostathopoulos, A. B. Hempel, H. Hoffmann, P. Jamshidi, E. Kalyvianaki, C. Klein, F. Krikava, S. Misailovic, A. V. Papadopoulos, S. Ray, A. M. Sharifloo, S. Shevtsov, M. Ujma, and T. Vogel. “Control Strategies for Self-Adaptive Software Systems”. In: *ACM Transactions on Autonomous and Adaptive Systems* 11.4 (Feb. 2017), 24:1–24:31. DOI: 10.1145/3024188.

[J20] F. Terraneo, A. V. Papadopoulos, A. Leva, and M. Prandini. “FLOPSYNC-QACS: Quantization-Aware Clock Synchronization for Wireless Sensor Networks”. In: *Journal of Systems Architecture* 80 (2017), pp. 77–84. DOI: 10.1016/j.sysarc.2017.09.006.

[J21] A. Leva, F. Terraneo, L. Rinaldi, A. V. Papadopoulos, and M. Maggio. “High-Precision Low-Power Wireless Nodes’ Synchronization via Decentralized Control”. In: *IEEE Transactions on Control Systems Technology* 24.4 (2016), pp. 1279–1293. DOI: 10.1109/TCST.2015.2483559.

[J22] A. V. Papadopoulos, A. Ali-Eldin, K.-E. Årzén, J. Tordsson, and E. Elmroth. “PEAS: A Performance Evaluation Framework for Auto-Scaling Strategies in Cloud Applications”. In: *ACM Transactions on Modeling and Performance Evaluation of Computing Systems (TOMPECS)* 1.4 (2016), 15:1–15:31. DOI: 10.1145/2930659.

[J23] A. V. Papadopoulos, L. Bascetta, and G. Ferretti. “Generation of Human Walking Paths”. In: *Autonomous Robots* 40.1 (2016), pp. 59–75. DOI: 10.1007/s10514-015-9443-2.

[J24] A. V. Papadopoulos, C. Klein, M. Maggio, J. Dürango, M. Dellkrantz, F. Hernández-Rodriguez, E. Elmroth, and K.-E. Årzén. “Control-Based Load-Balancing Techniques: Analysis and Performance Evaluation via a

Randomized Optimization Approach". In: *Control Engineering Practice* 52 (2016), pp. 24–34. DOI: 10.1016/j.conengprac.2016.03.020.

[J25] A. V. Papadopoulos and M. Prandini. "Model reduction of switched affine systems". In: *Automatica* 70 (2016), pp. 57–65. DOI: 10.1016/j.automatica.2016.03.019.

[J26] A. V. Papadopoulos and A. Leva. "A model partitioning method based on dynamic decoupling for the efficient simulation of multibody systems". In: *Multibody System Dynamics* 34.2 (2015), pp. 163–190. DOI: 10.1007/s11044-014-9415-x.

[J27] A. V. Papadopoulos, M. Maggio, A. Leva, and E. Bini. "Hard Real-Time Guarantees in Feedback-based Resource Reservations". In: *Real-Time Systems* 51.3 (2015), pp. 221–246. DOI: 10.1007/s11241-015-9224-1.

[J28] A. V. Papadopoulos, M. Maggio, F. Terraneo, and A. Leva. "A Dynamic Modelling Framework for Control-based Computing System Design". In: *Mathematical and Computer Modelling of Dynamical Systems* 21.3 (2015). (invited paper), pp. 251–271. DOI: 10.1080/13873954.2014.942785.

[J29] A. V. Papadopoulos and A. Leva. "Automating efficiency-targeted approximations in modelling and simulation tools: dynamic decoupling and mixed-mode integration". In: *SIMULATION: Transactions of The Society for Modeling and Simulation International* 90.10 (2014), pp. 1158–1176. DOI: 10.1177/0037549714547296.

[J30] F. Dercole, M. De Carli, F. Della Rossa, and A. V. Papadopoulos. "Overpunishing is not necessary to fix cooperation in voluntary public goods games". In: *Journal of Theoretical Biology* 326.0 (2013), pp. 70–81. DOI: 10.1016/j.jtbi.2012.11.034.

[J31] A. Leva and A. V. Papadopoulos. "Tuning of event-based industrial controllers with simple stability guarantees". In: *Journal of Process Control* 23.9 (2013), pp. 1251–1260. DOI: 10.1016/j.jprocont.2013.07.010.

[J32] M. Maggio, A. V. Papadopoulos, and A. Leva. "On the Use of Feedback Control in the Design of Computing System Components". In: *Asian Journal of Control* 15.1 (2013). (invited paper), pp. 31–40. DOI: 10.1002/asjc.509.

[J33] M. Maggio, H. Hoffmann, A. V. Papadopoulos, J. Panerati, M. D. Santambrogio, A. Agarwal, and A. Leva. "Comparison of Decision Making Strategies for Self-Optimization in Autonomic Computing Systems". In: *ACM Transactions on Autonomous and Adaptive Systems* 7.4 (2012), 36:1–36:32. DOI: 10.1145/2382570.2382572.

[J34] A. V. Papadopoulos, M. Maggio, S. Negro, and A. Leva. "General control-theoretical framework for online resource allocation in computing systems". In: *IET Control Theory & Applications* 6.11 (2012), pp. 1594–1602. DOI: 10.1049/iet-cta.2011.0632.

[J35] A. Leva, S. Negro, and A. V. Papadopoulos. "PI/PID autotuning with contextual model parametrisation". In: *Journal of Process Control* 20.4 (2010), pp. 452–463. DOI: 10.1016/j.jprocont.2010.01.005.

International Conferences

[C1] E. Bini, A. V. Papadopoulos, J. Higgins, and N. Bezzo. "Optimal Reference Tracking for Sampled-Data Control Systems". In: *IEEE 61st Annual Conference on Decision and Control (CDC)*. (accepted). Cancún, Mexico, 2022.

[C2] D. Bujosa Mateu, M. Ashjaei, A. V. Papadopoulos, J. Proenza, and T. Nolte. "HERMES: Heuristic Multi-queue Scheduler for TSN Time-Triggered Traffic with Zero Reception Jitter Capabilities". In: *30th International Conference on Real-Time Networks and Systems (RTNS)*. Paris, France: Association for Computing Machinery, 2022, pp. 70–80. DOI: 10.1145/3534879.3534906.

[C3] D. Bujosa Mateu, A. Johanson, M. Ashjaei, A. V. Papadopoulos, J. Proenza, and T. Nolte. "The Effects of Clock Synchronization in TSN Networks with Legacy End-stations". In: *27th International Conference on Factory Automation*. (accepted). Stuttgart, Germany, 2022.

[C4] G. Gualandi, M. Maggio, and A. V. Papadopoulos. "Optimization-based attack against control systems with CUSUM-based anomaly detection". In: *30th Mediterranean Conferenece on Control and Automation (MED)*. (accepted). Athens, Greece, 2022, pp. 896–901.

[C5] S. Hariharan, A. V. Papadopoulos, and T. Nolte. "On in-vehicle network security testing methodologies in construction machinery". In: *27th International Conference on Factory Automation*. (accepted). Stuttgart, Germany, 2022.

[C6] B. Johansson, M. Rågberger, T. Nolte, and A. V. Papadopoulos. "Priority Based Ethernet Handling in Real-Time End System with Ethernet Controller Filtering". In: *48th Annual Conference of the IEEE Industrial Electronics Society (IECON)*. (accepted). Brussels, Belgium, 2022.

[C7] B. Johansson, M. Rågberger, A. V. Papadopoulos, and T. Nolte. “Kubernetes Orchestration of High Availability Distributed Control Systems”. In: *23rd IEEE International Conference on Industrial Technology (ICIT)*. (accepted). Shanghai, China, 2022.

[C8] M. Momeni, J. Relefors, L. Pettersson, A. V. Papadopoulos, and T. Nolte. “On the Bar Installation Order for the Automated Fabrication of Rebar Cages”. In: *39th International Symposium on Automation and Robotics in Construction (ISARC 2022)*. (accepted). Bogota, Colombia, 2022.

[C9] A. Al-Dulaimy, J. Taheri, A. V. Papadopoulos, and T. Nolte. “LOOPS: A Holistic Control Approach for Resource Management in Cloud Computing”. In: *12th ACM/SPEC International Conference on Performance Engineering (ICPE)*. Rennes, France: Association for Computing Machinery, 2021, pp. 117–124. DOI: 10.1145/3427921.3450254.

[C10] I. Ayala, M. Amor, L. Fuentes, and A. V. Papadopoulos. “Self-adapting Industrial Augmented Reality applications with proactive Dynamic Software Product Lines”. In: *26th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Västerås, Sweden, 2021, pp. 1–8. DOI: 10.1109/ETFA45728.2021.9613392.

[C11] I. Ayala, A. V. Papadopoulos, M. Amor, and L. Fuentes. “ProDSPL: Proactive Self-Adaptation Based on Dynamic Software Product Lines”. In: *Proceedings of the 25th ACM International Systems and Software Product Line Conference - Volume A*. SPLC ’21. Leicester, United Kingdom: Association for Computing Machinery, 2021, p. 81. DOI: 10.1145/3461001.3473064.

[C12] D. Bujosa Mateu, M. Ashjaei, A. V. Papadopoulos, J. Proenza, and T. Nolte. “LETRA: Mapping Legacy Ethernet-Based Traffic into TSN Traffic Classes”. In: *26th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Västerås, Sweden, 2021, pp. 1–8. DOI: 10.1109/ETFA45728.2021.9613637.

[C13] R. Caldas, R. Ghzouli, A. V. Papadopoulos, P. Pelliccione, D. Weyns, and T. Berger. “Towards Mapping Control Theory and Software Engineering Properties using Specification Patterns”. In: *IEEE International Conference on Autonomic Computing and Self-Organizing Systems (ACSOS)*. Washington DC, USA, 2021, pp. 281–286. DOI: 10.1109/ACSOS-C52956.2021.00067.

[C14] M. Frasheri, L. Esterle, and A. V. Papadopoulos. “Cooperative Multi-Agent Systems for the Multi-Target κ-Coverage Problem”. In: *Agents and Artificial Intelligence*. Ed. by A. P. Rocha, L. Steels, and J. van den Herik. Cham: Springer International Publishing, 2021, pp. 106–131. DOI: 10.1007/978-3-030-71158-0_5.

[C15] A. Friebe, F. Marković, A. V. Papadopoulos, and T. Nolte. “Adaptive Runtime Estimate of Task Execution Times using Bayesian Modeling”. In: *27th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA)*. Gangneung, South Korea, 2021, pp. 1–10. DOI: 10.1109/RTCSA52859.2021.00008.

[C16] A. Lager, A. V. Papadopoulos, G. Spampinato, and T. Nolte. “A Task Modelling Formalism for Industrial Mobile Robot Applications”. In: *20th International Conference on Advanced Robotics (ICAR)*. Ljubljana, Slovenia, 2021, pp. 296–303. DOI: 10.1109/ICAR53236.2021.9659481.

[C17] F. Marković, A. V. Papadopoulos, and T. Nolte. “On the Convolution Efficiency for Probabilistic Analysis of Real-Time Systems”. In: *33rd Euromicro Conference on Real-Time Systems (ECRTS)*. Ed. by B. B. Brandenburg. Vol. 196. Leibniz International Proceedings in Informatics (LIPIcs). Virtual Conference: Schloss Dagstuhl – Leibniz-Zentrum für Informatik, 2021, 16:1–16:22. DOI: 10.4230/LIPIcs.ECRTS.2021.16. **Outstanding paper award**. Acceptance rate: 19%.

[C18] B. Miloradović, B. Çürüklü, M. Ekström, and A. V. Papadopoulos. “Exploiting Parallelism in Multi-Task Robot Allocation Problems”. In: *21st IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC)*. Santa Maria da Feira, Portugal, 2021, pp. 197–202. DOI: 10.1109/ICARSC52212.2021.9429814.

[C19] N. Persson, T. Andersson, A. Fattouh, M. C. Ekström, and A. V. Papadopoulos. “A Comparative Analysis and Design of Controllers for Autonomous Bicycles”. In: *European Control Conference (ECC)*. Rotterdam, The Netherlands, 2021, pp. 1570–1576. DOI: 10.23919/ECC54610.2021.9655223.

[C20] N. Persson, M. C. Ekström, M. Ekström, and A. V. Papadopoulos. “Trajectory tracking and stabilisation of a riderless bicycle”. In: *24th IEEE International Conference on Intelligent Transportation (ITSC)*. Indianapolis, IN, USA, 2021, pp. 1859–1866. DOI: 10.1109/ITSC48978.2021.9564958.

[C21] J. Relefors, M. Momeni, L. Petterson, A. V. Papadopoulos, and T. Nolte. “Installation Order in Automatic Fabrication of Reinforcement Rebar Cages”. In: *26th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Västerås, Sweden, 2021, pp. 1–4. DOI: 10.1109/ETFA45728.2021.9613321.

[C22] S. M. Salman, S. Mubeen, A. V. Papadopoulos, and T. Nolte. “Scheduling Elastic Applications in Compositional Real-Time Systems”. In: *26th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Västerås, Sweden, 2021, pp. 1–8. DOI: 10.1109/ETFA45728.2021.9613375.

[C23] S. M. Salman, A. V. Papadopoulos, S. Mubeen, and T. Nolte. “Multi-Processor Scheduling of Elastic Applications inCompositional Real-Time Systems”. In: *17th International Conference on Embedded Software and Systems (ICESS)*. Online event, 2021. DOI: 10.1016/j.sysarc.2021.102358.

[C24] V. Struhár, S. S. Craciunas, M. Ashjaei, M. Behnam, and A. V. Papadopoulos. “REACT: Enabling Real-Time Container Orchestration”. In: *26th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Västerås, Sweden, 2021, pp. 1–8. DOI: 10.1109/ETFA45728.2021.9613685.

[C25] D. Bujosa Mateu, D. Hallmans, M. Ashjaei, A. V. Papadopoulos, J. Proenza, and T. Nolte. “Clock Synchronization in Integrated TSN-EtherCAT Networks”. In: *25th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Vol. 1. Vienna, Austria, 2020, pp. 214–221. DOI: 10.1109/ETFA46521.2020.9212153.

[C26] J. Cámara, A. V. Papadopoulos, D. Weyns, T. Vogel, D. Garlan, S. Huang, and K. Tei. “Towards Bridging the Gap between Control and Self-Adaptive System Properties”. In: *15th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*. Seoul, Republic of Korea: ACM, 2020, pp. 78–84. DOI: 10.1145/3387939.3391568.

[C27] M. Frasheri, J. Cano-Garcia, E. Gonzalez-Parada, B. Çürüklü, M. Ekström, A. V. Papadopoulos, and C. Urdiales. “Adaptive Autonomy in Wireless Sensor Networks”. In: *Proceedings of the 19th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS)*. Auckland, New Zealand: International Foundation for Autonomous Agents and Multiagent Systems, 2020, pp. 375–383. DOI: 10.5555/3398761.3398809. Acceptance rate: 23%.

[C28] M. Frasheri, L. Esterle, and A. V. Papadopoulos. “Modeling the Willingness to Interact in Cooperative Multi-Robot Systems”. In: *Proceedings of the 12th International Conference on Agents and Artificial Intelligence (ICAART)*. Vol. 1. INSTICC. Valletta, Malta: SciTePress, 2020, pp. 62–72. DOI: 10.5220/0008951900620072.

[C29] A. Friebe, A. V. Papadopoulos, and T. Nolte. “Identification and Validation of Markov Models with Continuous Emission Distributions for Execution Times”. In: *26th IEEE International Conference on Embedded and Real-Time Computing Systems and Applications (RTCSA)*. Gangneung, South Korea, 2020. DOI: 10.1109/RTCSA50079.2020.9203594.

[C30] B. Johansson, M. Rågberger, A. V. Papadopoulos, and T. Nolte. “Heartbeat Bully: Failure Detection and Redundancy Role Selection for Network-Centric Controller”. In: *46th Annual Conference of the IEEE Industrial Electronics Society (IECON)*. Singapore, 2020, pp. 2126–2133. DOI: 10.1109/IECON43393.2020.9254494.

[C31] A. Lager, G. Spampinato, A. V. Papadopoulos, and T. Nolte. “IoT and Fog Analytics for Industrial Robot Applications”. In: *25th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Vol. 1. Vienna, Austria, 2020, pp. 1297–1300. DOI: 10.1109/ETFA46521.2020.9212065.

[C32] A. Leva, S. Seva, F. Terraneo, A. V. Papadopoulos, and M. Maggio. “How control-friendly is a computing system? And how control-friendly could it be?” In: *Proceedings of the 21st IFAC World Congress (IFAC WC)*. Vol. 53. 2. Berlin, Germany: IFAC, 2020, pp. 7857–7864. DOI: 10.1016/j.ifacol.2020.12.1962.

[C33] B. Miloradović, B. Çürüklü, M. Ekström, and A. V. Papadopoulos. “A Genetic Algorithm Approach to Multi-Agent Mission Planning Problems”. In: *Operations Research and Enterprise Systems*. Ed. by G. H. Parlier, F. Liberatore, and M. Demange. Cham: Springer International Publishing, 2020, pp. 109–134. DOI: 10.1007/978-3-030-37584-3_6.

[C34] A. V. Papadopoulos, L. Versluis, A. Bauer, N. Herbst, J. von Kistowski, A. Ali-Eldin, C. L. Abad, J. N. Amaral, P. Tůma, and A. Iosup. “Methodological Principles for Reproducible Performance Evaluation in Cloud Computing”. In: *Software Engineering, Fachtagung des GI-Fachbereichs Softwaretechnik*. Ed. by M. Felderer, W. Hasselbring, R. Rabiser, and R. Jung. Vol. P-300. LNI. Innsbruck, Austria: Gesellschaft für Informatik e.V., 2020, pp. 93–94. DOI: 10.18420/SE2020_27.

[C35] S. M. Salman, T. Akbar Sitompul, A. V. Papadopoulos, and T. Nolte. “Fog Computing for Augmented Reality: Trends, Challenges and Opportunities”. In: *IEEE International Conference on Fog Computing (ICFC)*. Sydney, Australia, 2020, pp. 56–63. DOI: 10.1109/ICFC49376.2020.00017.

[C36] S. M. Salman, A. V. Papadopoulos, S. Mubeen, and T. Nolte. “A Systematic Migration Methodology for Complex Real-time Software Systems”. In: *23rd IEEE International Symposium on Real-Time Distributed Computing (ISORC)*. Nashville, TN, USA, 2020, pp. 192–200. DOI: 10.1109/ISORC49007.2020.00041.

[C37] S. M. Salman, V. Struhár, Z. Bakhshi, V.-L. Dao, N. Desai, A. V. Papadopoulos, T. Nolte, V. Karagiannis, S. Schulte, A. Venito, and G. Fohler. “Enabling Fog-based Industrial Robotics Systems”. In: *25th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Vol. 1. Vienna, Austria, 2020, pp. 61–68. DOI: 10.1109/ETFA46521.2020.9211887.

[C38] A. Friebe, A. V. Papadopoulos, and T. Nolte. “Work-In-Progress: Validation of Probabilistic Timing Models of a Periodic Task with Interference – A Case Study”. In: *40th IEEE Real-Time Systems Symposium (RTSS)*. Hong Kong, China, 2019, pp. 524–527. DOI: 10.1109/RTSS46320.2019.00055.

[C39] B. Johansson, B. Leander, A. Čaušević, A. V. Papadopoulos, and T. Nolte. “Classification of PROFINET I/O Configurations utilizing Neural Networks”. In: *24th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Zaragoza, Spain, 2019, pp. 1321–1324. DOI: 10.1109/ETFA.2019.8869024.

[C40] B. Johansson, A. V. Papadopoulos, and T. Nolte. “Concurrency defect localization in embedded systems using static code analysis: An Evaluation”. In: *30th International Symposium on Software Reliability Engineering (ISSRE)*. Berlin, Germany, 2019, pp. 7–12. DOI: 10.1109/ISSREW.2019.00034. (**Best industrial paper award candidate**).

[C41] A. Lager, G. Spampinato, A. V. Papadopoulos, and T. Nolte. “Towards Reactive Robot Applications in Dynamic Environments”. In: *24th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Zaragoza, Spain, 2019, pp. 1603–1606. DOI: 10.1109/ETFA.2019.8868963.

[C42] B. Miloradović, B. Cürüklü, M. Ekström, and A. V. Papadopoulos. “Extended Colored Traveling Salesperson for Modeling Multi-Agent Mission Planning Problems”. In: *International Conference on Operations Research and Enterprise Systems (ICORES)*. INSTICC. Prague, Czech Republic, 2019, pp. 237–244. DOI: 10.5220/0007309002370244.

[C43] B. Miloradović, M. Frasheri, B. Cürüklü, M. Ekström, and A. V. Papadopoulos. “TAMER: Task Allocation in Multi-Robot Systems Through an Entity-Relationship Model”. In: *Principles and Practice of Multi-Agent Systems (PRIMA)*. Ed. by M. Baldoni, M. Dastani, B. Liao, Y. Sakurai, and R. Zalila Wenkstern. Turin, Italy: Springer International Publishing, 2019, pp. 478–486. DOI: 10.1007/978-3-030-33792-6_32.

[C44] J. Relefors, M. Momeni, L. Petterson, E. Hellström, A. Thunell, A. V. Papadopoulos, and T. Nolte. “Towards Automated Installation of Reinforcement Using Industrial Robots”. In: *24th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Zaragoza, Spain, 2019, pp. 1595–1598. DOI: 10.1109/ETFA.2019.8869343.

[C45] V. Struhár, M. Ashjaei, M. Behnam, S. S. Craciunas, and A. V. Papadopoulos. “DART: Dynamic Bandwidth Distribution Framework for Virtualized Software Defined Networks”. In: *45th Annual Conference of the IEEE Industrial Electronics Society (IECON)*. Vol. 1. Lisbon, Portugal, 2019, pp. 2934–2939. DOI: 10.1109/IECON.2019.8927780.

[C46] J. Thörn, N. Vidimlic, A. Friebe, A. V. Papadopoulos, and T. Nolte. “Timing analysis of a periodic task on a microcontroller”. In: *24th IEEE Conference on Emerging Technologies and Factory Automation (ETFA)*. Zaragoza, Spain, 2019, pp. 1419–1422. DOI: 10.1109/ETFA.2019.8869210.

[C47] A. Čaušević, A. V. Papadopoulos, and M. Sirjani. “Towards a Framework for Safe and Secure Adaptive Collaborative Systems”. In: *2019 IEEE 43rd Annual Computer Software and Applications Conference (COMPSAC)*. Vol. 2. Milwaukee, Wisconsin, USA, 2019, pp. 165–170. DOI: 10.1109/COMPSAC.2019.10201.

[C48] W. Wang, D. Mosse, and A. V. Papadopoulos. “Packet Priority Assignment for Wireless Control Systems of Multiple Physical Systems”. In: *22nd IEEE International Symposium on Real-Time Distributed Computing (ISORC)*. Valencia, Spain, 2019, pp. 143–150. DOI: 10.1109/ISORC.2019.00036.

[C49] H. R. Faragardi, S. Dehnavi, M. Kargahi, A. V. Papadopoulos, and T. Nolte. “A Time-Predictable Fog-Integrated Cloud Framework: One Step Forward in the Deployment of a Smart Factory”. In: *The CSI International Symposium on Real-Time and Embedded Systems and Technologies (RTEST)*. Teheran, Iran, 2018, pp. 54–62. DOI: 10.1109/RTEST.2018.8397079.

[C50] M. Frasheri, B. Cürüklü, M. Ekström, and A. V. Papadopoulos. “Adaptive Autonomy in a Search and Rescue Scenario”. In: *Proceedings of the 12th IEEE International Conference on Self-Adaptive and Self-Organizing Systems*. Trento, Italy, 2018, pp. 150–155. DOI: 10.1109/SASO.2018.00026.

[C51] A. Leva, S. Seva, and A. V. Papadopoulos. “Progress Rate Control for Computer Applications”. In: *European Control Conference (ECC)*. Limassol, Cyprus, 2018, pp. 3173–3178. DOI: 10.23919/ECC.2018.8550414.

[C52] A. V. Papadopoulos, E. Bini, S. Baruah, and A. Burns. “AdaptMC: A Control-Theoretic Approach for Achieving Resilience in Mixed-Criticality Systems”. In: *30th Euromicro Conference on Real-Time Systems (ECRTS)*. Ed. by S. Altmeyer. Vol. 106. Leibniz International Proceedings in Informatics (LIPIcs). Barcelona, Spain: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2018, 14:1–14:22. DOI: 10.4230/LIPIcs.ECRTS.2018.14. URL: http://drops.dagstuhl.de/opus/volltexte/2018/8989. Acceptance rate: 33%.

[C53] A. V. Papadopoulos and M. Maggio. “Challenges in High Performance Big Data Frameworks”. In: *2018 International Conference on High Performance Computing Simulation (HPCS)*. AHPC. Orléans, France, 2018, pp. 153–156. DOI: 10.1109/HPCS.2018.00039.

[C54] A. Souza, A. V. Papadopoulos, L. Tomás Bolivar, D. Gilbert, and J. Tordsson. "Hybrid Adaptive Checkpointing for Virtual Machine Fault Tolerance". In: *IEEE International Conference on Cloud Engineering (IC2E)*. Orlando, Florida, USA, 2018, pp. 12–22. DOI: 10.1109/IC2E.2018.00023. Acceptance rate: 19%. (**Best paper award candidate**).

[C55] V. Struhár, A. V. Papadopoulos, and M. Behnam. "Fog Computing for Adaptive Human-robot Collaboration: Work-in-progress". In: *Proceedings of the International Conference on Embedded Software (EMSOFT)*. Turin, Italy: IEEE Press, 2018, 14:1–14:2. URL: http://dl.acm.org/citation.cfm?id=3283535.3283549.

[C56] V. Gulisano, A. V. Papadopoulos, Y. Nikolakopoulos, M. Papatriantafilou, and P. Tsigas. "Performance modeling of stream joins". In: *Proceedings of the 11th ACM International Conference on Distributed and Event-based Systems (DEBS)*. Barcelona, Spain: ACM, 2017, pp. 191–202. DOI: 10.1145/3093742.3093923. Acceptance rate: 24%.

[C57] A. Ilyushkin, A. Ali-Eldin, N. Herbst, A. V. Papadopoulos, B. Ghit, D. Epema, and A. Iosup. "An Experimental Performance Evaluation of Autoscaling Algorithms for Complex Workflows". In: *Proceedings of the 8th ACM/SPEC on International Conference on Performance Engineering (ICPE)*. L'Aquila, Italy: ACM, 2017, pp. 75–86. DOI: 10.1145/3030207.3030214. (**Best paper award candidate**).

[C58] E. B. Lakew, A. V. Papadopoulos, M. Maggio, C. Klein, and E. Elmroth. "KPI-agnostic Control for Fine-Grained Vertical Elasticity". In: *17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid)*. Madrid, Spain, 2017, pp. 589–598. DOI: 10.1109/CCGRID.2017.71. Acceptance rate: 24%.

[C59] A. Leva and A. V. Papadopoulos. "Modelling and Control of Big Data Frameworks". In: *Proceedings of the 20th IFAC World Congress (IFAC WC)*. Vol. 20. Toulouse, France: IFAC, 2017, pp. 6110–6115. DOI: 10.1016/j.ifacol.2017.08.2017.

[C60] M. Maggio, A. V. Papadopoulos, A. Filieri, and H. Hoffmann. "Automated Control of Multiple Software Goals using Multiple Actuators". In: *11th Joint Meeting of the european Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE)*. Paderborn, Germany, 2017, pp. 373–384. DOI: 10.1145/3106237.3106247.

[C61] M. Maggio, A. V. Papadopoulos, A. Filieri, and H. Hoffmann. "Self-Adaptive Video Encoder: Comparison of Multiple Adaptation Strategies Made Simple". In: *12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*. Buenos Aires, Argentina, 2017, pp. 123–128. DOI: 10.1109/SEAMS.2017.16. (**Best artefact award**).

[C62] G. A. Moreno, A. V. Papadopoulos, K. Angelopoulos, J. Cámara, and B. Schmerl. "Comparing Model-Based Predictive Approaches to Self-Adaptation: CobRA and PLA". In: *12th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*. Buenos Aires, Argentina, 2017, pp. 42–53. DOI: 10.1109/SEAMS.2017.2. Acceptance rate: 23% (**Best paper award candidate**).

[C63] A. V. Papadopoulos, S. Abbaspour Asadollah, M. Ashjaei, S. Mubeen, H. Pei-Breivold, and M. Behnam. "SLAs for Industrial IoT: Mind the Gap". In: *4th International Symposium on Intercloud and IoT (ICI)*. Prague, Czech Republic, 2017, pp. 75–78. DOI: 10.1109/FiCloudW.2017.70.

[C64] A. V. Papadopoulos, J. Krzywda, E. Elmroth, and M. Maggio. "Power-aware cloud brownout: Response time and power consumption control". In: *IEEE 56th Annual Conference on Decision and Control (CDC)*. Melbourne, Australia, 2017, pp. 2686–2691. DOI: 10.1109/CDC.2017.8264049.

[C65] A. V. Papadopoulos, M. Maggio, A. Leva, and E. Bini. "Hard Real-Time Guarantees in Feedback-based Resource Reservations". In: *38th IEEE Real-Time Systems Symposium (journal never presented on conference) (RTSS)*. Paris, France, 2017.

[C66] W. Tärneberg, A. V. Papadopoulos, A. Mehta, J. Tordsson, and M. Kihl. "Distributed Approach to the Holistic Resource Management of a Mobile Cloud Network". In: *1st International Conference on Fog and Edge Computing (ICFEC)*. Madrid, Spain, 2017, pp. 51–60. DOI: 10.1109/ICFEC.2017.10. Acceptance rate: 24%.

[C67] A. Ali-Eldin, A. Ilyushkin, B. Ghit, N. Herbst, A. V. Papadopoulos, and A. Iosup. "Which Cloud Auto-Scaler Should I Use for My Application?: Benchmarking Auto-Scaling Algorithms". In: *Proceedings of the 7th ACM/SPEC on International Conference on Performance Engineering (ICPE)*. Delft, The Netherlands: ACM, 2016, pp. 131–132. DOI: 10.1145/2851553.2858677.

[C68] K. Angelopoulos, A. V. Papadopoulos, V. E. S. Souza, and J. Mylopoulos. "Model Predictive Control for Software Systems with CobRA". In: *11th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*. 2016. DOI: 10.1145/2897053.2897054. (**Best paper award candidate**).

[C69] D. Desmeurs, C. Klein, A. V. Papadopoulos, and J. Tordsson. "Event-Driven Application Brownout: Reconciling High Utilization and Low Tail Response Times". In: *IEEE International Conference on Cloud and Autonomic Computing (ICCAC)*. Cambridge, MA, USA, 2015, pp. 1–12. DOI: 10.1109/ICCAC.2015.25.

[C70] A. Filieri, M. Maggio, K. Angelopoulos, N. D'Ippolito, I. Gerostathopoulos, A. B. Hempel, H. Hoffmann, P. Jamshidi, E. Kalyvianaki, C. Klein, F. Krikava, S. Misailovic, A. V. Papadopoulos, S. Ray, A. M. Sharifloo, S. Shevtsov, M. Ujma, and T. Vogel. "Software Engineering Meets Control Theory". In: *10th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*. Florence, Italy, 2015, pp. 71–82. DOI: 10.1109/SEAMS.2015.12.

[C71] A. Leva and A. V. Papadopoulos. "Disturbance rejection in autotuners: an assessment method and a rule proposal". In: *American Control Conference (ACC)*. Chicago, IL, USA, 2015, pp. 2876–2881. DOI: 10.1109/ACC.2015.7171171.

[C72] A. V. Papadopoulos, R. Carone, M. Maggio, and A. Leva. "A control-theoretical approach to thread scheduling for multicore processors". In: *IEEE Conference on Control Applications (CCA)*. Sydney, Australia: IEEE, 2015, pp. 1103–1110. DOI: 10.1109/CCA.2015.7320760.

[C73] A. V. Papadopoulos and M. Maggio. "Virtual Machine Migration in Cloud Infrastructures: Problem Formalization and Policies Proposal". In: *IEEE 54th Annual Conference on Decision and Control (CDC)*. Osaka, Japan: IEEE, 2015, pp. 6698–6705. DOI: 10.1109/CDC.2015.7403274.

[C74] F. Terraneo, A. Leva, S. Seva, M. Maggio, and A. V. Papadopoulos. "Reverse Flooding: exploiting radio interference for efficient propagation delay compensation in WSN clock synchronization". In: *Proceedings of the 36th IEEE Real-Time Systems Symposium (RTSS)*. San Antonio, TX, USA, 2015, pp. 175–184. DOI: 10.1109/RTSS.2015.24. (**Best paper award candidate**).

[C75] J. Dürango, M. Dellkrantz, M. Maggio, C. Klein, A. V. Papadopoulos, F. Hernández-Rodriguez, E. Elmroth, and K.-E. Årzén. "Control-theoretical load-balancing for cloud applications with brownout". In: *IEEE 53rd Annual Conference on Decision and Control (CDC)*. Los Angeles, CA, USA: IEEE, 2014, pp. 5320–5327. DOI: 10.1109/CDC.2014.7040221.

[C76] C. Klein, A. V. Papadopoulos, M. Dellkrantz, J. Dürango, M. Maggio, K.-E. Årzén, F. Hernández-Rodriguez, and E. Elmroth. "Improving Cloud Service Resilience using Brownout-Aware Load-Balancing". In: *IEEE 33rd International Symposium on Reliable Distributed Systems (SRDS)*. Nara, Japan: IEEE, 2014, pp. 31–40. DOI: 10.1109/SRDS.2014.14.

[C77] A. Leva, D. Mastrandrea, M. Bonvini, and A. V. Papadopoulos. "Object-Oriented Modelling and Simulation of Air Flow in Data Centres Based on a Quasi-3D Approach for Energy Optimisation". In: *IEEE/ACM 7th International Conference on Utility and Cloud Computing (UCC)*. London, UK: IEEE, 2014, pp. 554–559. DOI: 10.1109/UCC.2014.85.

[C78] A. V. Papadopoulos, L. Bascetta, and G. Ferretti. "A Comparative Evaluation of Human Motion Planning Policies". In: *Proceedings of the 19th IFAC World Congress (IFAC WC)*. Vol. 19. Cape Town, South Africa: IFAC, 2014, pp. 12299–12304. DOI: 10.3182/20140824-6-ZA-1003.01898.

[C79] A. V. Papadopoulos, F. Casella, and A. Leva. "Model separability indices for efficient dynamic simulation". In: *Proceedings of the 19th IFAC World Congress (IFAC WC)*. Vol. 19. Cape Town, South Africa: IFAC, 2014, pp. 10796–10801. DOI: 10.3182/20140824-6-ZA-1003.01940.

[C80] A. V. Papadopoulos and M. Prandini. "Model reduction of switched affine systems: a method based on balanced truncation and randomized optimization". In: *Proceedings of the 17th International Conference on Hybrid Systems: Computation and Control (HSCC)*. Berlin, Germany: ACM, 2014, pp. 113–122. DOI: 10.1145/2562059.2562131.

[C81] F. Terraneo, L. Rinaldi, M. Maggio, A. V. Papadopoulos, and A. Leva. "FLOPSYNC-2: efficient monotonic clock synchronisation". In: *Proceedings of the 35th IEEE Real-Time Systems Symposium (RTSS)*. Rome, Italy: IEEE, 2014, pp. 11–20. DOI: 10.1109/RTSS.2014.14. (**Best paper award candidate**).

[C82] A. Leva and A. V. Papadopoulos. "Teaching a conscious use of PI/PID tuning rules". In: *10th IFAC Symposium on Advances in Control Education (ACE)*. Vol. 10. Sheffield, UK: IFAC, 2013, pp. 25–30. DOI: 10.3182/20130828-3-UK-2039.00007.

[C83] A. Leva, A. V. Papadopoulos, and M. Maggio. "A general control-theoretical methodology for runtime resource allocation in computing systems". In: *IEEE 52nd Annual Conference on Decision and Control (CDC)*. Florence, Italy: IEEE, 2013, pp. 3487–3492. DOI: 10.1109/CDC.2013.6760418.

[C84] A. V. Papadopoulos, J. Åkesson, F. Casella, and A. Leva. "Automatic Partitioning and Simulation of Weakly Coupled Systems". In: *IEEE 52nd Annual Conference on Decision and Control (CDC)*. Florence, Italy: IEEE, 2013, pp. 3172–3177. DOI: 10.1109/CDC.2013.6760367.

[C85] A. V. Papadopoulos, L. Bascetta, and G. Ferretti. “Generation of Human Walking Paths”. In: *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*. Tokyo, Japan: IEEE, 2013, pp. 1676–1681. DOI: 10.1109/IROS.2013.6696574.

[C86] A. V. Papadopoulos and A. Leva. “Laboratories over the network: from remote to mobile”. In: *10th IFAC Symposium on Advances in Control Education (ACE)*. Vol. 10. Sheffield, UK: IFAC, 2013, pp. 84–89. DOI: 10.3182/20130828-3-UK-2039.00025.

[C87] M. Maggio, F. Terraneo, A. V. Papadopoulos, and A. Leva. “A PI-based control structure as an operating system scheduler”. In: *Proceedings IFAC Conference on Advances in PID Control (PID)*. Vol. 2. Brescia, Italy: IFAC, 2012, pp. 329–334. DOI: 10.3182/20120328-3-IT-3014.00056.

[C88] A. V. Papadopoulos and A. Leva. “Antiwindup-aware PI autotuning”. In: *Proceedings IFAC Conference on Advances in PID Control (PID)*. Vol. 2. Brescia, Italy: IFAC, 2012, pp. 554–559. DOI: 10.3182/20120328-3-IT-3014.00094.

[C89] A. V. Papadopoulos, M. Maggio, F. Casella, and J. Åkesson. “Function inlining in Modelica models”. In: *Proceedings of the 7th International Conference of Mathematical Modelling (MATHMOD)*. Vol. 7. Vienna, Austria: IFAC, 2012, pp. 1091–1094. DOI: 10.3182/20120215-3-AT-3016.00193.

[C90] A. V. Papadopoulos, M. Maggio, and A. Leva. “Control and design of computing systems: what to model and how”. In: *Proceedings of the 7th International Conference of Mathematical Modelling (MATHMOD)*. Vol. 7. Vienna, Austria: IFAC, 2012, pp. 102–107. DOI: 10.3182/20120215-3-AT-3016.00018.

[C91] P. Cremonesi, F. Garzotto, S. Negro, A. V. Papadopoulos, and R. Turrin. “Comparative evaluation of recommender system quality”. In: *Proceedings of the 2011 annual conference extended abstracts on Human factors in computing systems (CHI EA)*. Vancouver, BC, Canada: ACM, 2011, pp. 1927–1932. DOI: 10.1145/1979742.1979896.

[C92] P. Cremonesi, F. Garzotto, S. Negro, A. V. Papadopoulos, and R. Turrin. “Looking for “Good” Recommendations: A Comparative Evaluation of Recommender Systems”. In: *Proceedings of the 13th IFIP TC 13 international conference on Human-computer interaction (INTERACT)*. Ed. by P. Campos, N. Graham, J. Jorge, N. Nunes, P. Palanque, and M. Winckler. Vol. 6948. Lecture Notes in Computer Science. Lisbon, Portugal: Springer-Verlag, 2011, pp. 152–168. DOI: 10.1007/978-3-642-23765-2_11.

[C93] A. V. Papadopoulos, M. Maggio, S. Negro, and A. Leva. “Enhancing feedback process scheduling via a predictive control approach”. In: *Proceedings of the 18th IFAC World Congress (IFAC WC)*. Vol. 18. Milan, Italy: IFAC, 2011, pp. 13522–13527. DOI: 10.3182/20110828-6-IT-1002.01156.

[C94] A. Leva, S. Negro, and A. V. Papadopoulos. “PI(D) Tuning with Contextual Model Identification”. In: *Proceedings of the European Control Conference (ECC)*. Budapest, Hungary, 2009, pp. 4013–4018. DOI: 10.23919/ECC.2009.7075028.

International Workshops

[W1] A. Al-Dulaimy, C. Sicari, M. Ashjaei, A. V. Papadopoulos, A. Galletta, and M. Villari. “TOLERANCER: A Fault Tolerance Approach for Cloud Manufacturing Environments”. In: *Cloud Native Real Time Systems Workshop (CLONAR)*. (accepted). Stuttgart, Germany, 2022.

[W2] M. Shamseddine, A. Al-Dulaimy, W. Itani, T. Nolte, and A. V. Papadopoulos. “NodeGuard: A Virtualized Introspection Security Approach for the Modern Cloud Data Center”. In: *3rd Workshop on Secure IoT, Edge and Cloud systems (SIoTEC)*. (accepted). Messina, Italy, 2022.

[W3] V. Struhár, M. Ashjaei, M. Behnam, S. S. Craciunas, and A. V. Papadopoulos. “RT-SCALER: Adaptive Resource Allocation Framework for Real-Time Containers”. In: *1st International Workshop on Real-time And intelliGent Edge computing (RAGE)*. San Francisco, USA, 2022.

[W4] A. V. Papadopoulos and L. Esterle. “Situational Trust in Self-aware Collaborating Systems”. In: *Workshop on Self-Improving System Integration (SISSY) – IEEE International Conference on Autonomic Computing and Self-Organizing Systems Companion (ACSOS-C)*. Washington DC, USA, 2020, pp. 91–94. DOI: 10.1109/ACSOS-C51401.2020.00037.

[W5] A. V. Papadopoulos and L. Esterle. “Trust in Self-aware Systems”. In: *Self-Awareness in Cyber-Physical Systems (SelPhyS)*. Irvine, California, USA, 2020.

[W6] V. Struhár, M. Behnam, M. Ashjaei, and A. V. Papadopoulos. “Real-Time Containers: A Survey”. In: *2nd Workshop on Fog Computing and the IoT (Fog-IoT)*. Ed. by A. Cervin and Y. Yang. Vol. 80. OpenAccess Series in Informatics (OASIcs). Sydney, Australia: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2020, 7:1–7:9. DOI: 10.4230/OASIcs.Fog-IoT.2020.7. URL: https://drops.dagstuhl.de/opus/volltexte/2020/12001.

[W7] S. M. Salman, V. Struhár, A. V. Papadopoulos, M. Behnam, and T. Nolte. "Fogification of Industrial Robotic Systems: Research Challenges". In: *Proceedings of the Workshop on Fog Computing and the IoT (Fog-IoT)*. Montreal, Quebec, Canada: ACM, 2019, pp. 41–45. DOI: 10.1145/3313150.3313225.

[W8] A. Ilyushkin, A. Ali-Eldin, N. Herbst, A. V. Papadopoulos, G. Bogdan, D. Epema, and A. Iosup. "An Experimental Performance Evaluation of Autoscaling Algorithms for Complex Workflows". In: *ACM Symposium on Cloud Computing (SOCC)*. Santa Clara, CA, USA, 2016.

[W9] F. Terraneo, A. V. Papadopoulos, A. Leva, and M. Prandini. "FLOPSYNC-QACS: Quantization-Aware Clock Synchronization for Wireless Sensor Networks". In: *4th International Workshop on Real Time Computing and Distributed Systems in Emergent Applications (REACTION)*. Porto, Portugal, 2016.

[W10] K. Angelopoulos, A. V. Papadopoulos, and J. Mylopoulos. "Adaptive Predictive Control for Self-Adaptive Software Systems". In: *Proceedings of the 1st International Workshop on Control Theory for Software Engineering (CTSE)*. Bergamo, Italy: ACM, 2015, pp. 17–21. DOI: 10.1145/2804337.2804340.

[W11] A. V. Papadopoulos. "Design and Performance Guarantees in Cloud Computing: Challenges and Opportunities". In: *10th International Workshop on Feedback Computing*. Seattle, WA, USA, 2015.

[W12] A. V. Papadopoulos and A. Leva. "Automating Dynamic Decoupling in Object-Oriented Modelling and Simulation Tools". In: *5th International workshop on Equation-Based Object-Oriented Modeling Languages and Tools (EOOLT)*. Nottingham, UK, 2013, pp. 37–44.

[W13] M. Maggio, A. V. Papadopoulos, and A. Leva. "SMART Computing Systems: Sensing, Modelling, Actuating, Regulating, and Tuning". In: *Proceedings of the 7th International Workshop on Feedback Computing*. San Jose, CA, USA, 2012.

Editor of Conference Proceedings

[P1] A. V. Papadopoulos and A. Biondi, eds. *Front Matter - ECRTS 2020 Artifacts, Table of Contents, Preface, Artifact Evaluation Committee*. Vol. 6. Dagstuhl Artifacts Series 1. Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum für Informatik, 2020, 0:i–0:x. DOI: 10.4230/DARTS.6.1.0. URL: https://drops.dagstuhl.de/opus/volltexte/2020/12390.

[P2] S. Quinton, S. Altmeyer, and A. V. Papadopoulos, eds. *Front Matter - ECRTS 2019 Artifacts, Table of Contents, Preface, Artifact Evaluation Committee*. Vol. 5. Dagstuhl Artifacts Series 1. Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2019, 0:i–0:ix. DOI: 10.4230/DARTS.5.1.0. URL: http://drops.dagstuhl.de/opus/volltexte/2019/10728.

Technical Reports

[T1] M. Jansen, A. Al-Dulaimy, A. V. Papadopoulos, A. Trivedi, and A. Iosup. *The SPEC-RG Reference Architecture for the Edge Continuum*. Tech. rep. CoRR, 2022. DOI: 10.48550/ARXIV.2207.04159. arXiv: 2207.04159. URL: https://arxiv.org/abs/2207.04159.

[T2] A. Ilyushkin, A. Bauer, A. V. Papadopoulos, E. Deelman, and A. Iosup. *Performance-Feedback Autoscaling with Budget Constraints for Cloud-based Workloads of Workflows*. Tech. rep. CoRR, 2019. arXiv: 1905.10270. URL: http://arxiv.org/abs/1905.10270.

[T3] A. V. Papadopoulos, L. Versluis, A. Bauer, N. Herbst, J. von Kistowski, A. Ali-Eldin, C. L. Abad, J. N. Amaral, P. Tůma, and A. Iosup. *Methodological Principles for Reproducible Performance Evaluation in Cloud Computing*. Tech. rep. SPEC-RG-2019-03. SPEC, 2019. URL: https://research.spec.org/news/single-view/article/technical-report-on-reproducible-performance-evaluation-in-cloud-computing-published.html.

Software Artifacts

[A1] F. Marković, A. V. Papadopoulos, and T. Nolte. "On the Convolution Efficiency for Probabilistic Analysis of Real-Time Systems (Artifact)". In: *Dagstuhl Artifacts Series* 7.1 (2021). Ed. by F. Marković, A. V. Papadopoulos, and T. Nolte, 1:1–1:2. DOI: 10.4230/DARTS.7.1.1. URL: https://drops.dagstuhl.de/opus/volltexte/2021/13980.

[A2] A. V. Papadopoulos, E. Bini, S. Baruah, and A. Burns. "AdaptMC: A Control-Theoretic Approach for Achieving Resilience in Mixed-Criticality Systems (Artifact)". In: *Dagstuhl Artifacts Series* 4.2 (2018), 1:1–1:3. DOI: 10.4230/DARTS.4.2.1. URL: http://drops.dagstuhl.de/opus/volltexte/2018/8969.

[A3] M. Maggio, A. V. Papadopoulos, A. Filieri, and H. Hoffmann. "Self-Adaptive Video Encoder: Comparison of Multiple Adaptation Strategies Made Simple (Artifact)". In: *Dagstuhl Artifacts Series* 3.1 (2017), 2:1–2:3. DOI: 10.4230/DARTS.3.1.2. URL: http://drops.dagstuhl.de/opus/volltexte/2017/7140. (**Best artefact award**).

Other Publications

[O1] A. V. Papadopoulos and M. Maggio. *Autonomous Computing Systems: The Convergence of Control Theory and Computing Systems*. IEEE Software Blog. 2019. URL: http://blog.ieeesoftware.org/2019/07/autonomous-computing-systems.html.

Submitted to International Journals

[SJ1] A. Al-Dulaimy, M. Jansen, B. Johansson, A. Trivedi, A. Iosup, M. Ashjaei, A. Galletta, D. Kimovski, R. Prodan, K. Tserpes, G. Kousiouris, C. Giannakos, I. Brandic, N. Ali, A. Bondi, and A. V. Papadopoulos. "The Computing Continuum: From IoT to the Cloud". In: *ACM Computing Surveys* (2022). (submitted under review).

[SJ2] B. Miloradović, B. Çürüklü, M. Ekström, and A. V. Papadopoulos. "Optimizing Parallel Task Execution for Multi-Agent Mission Planning". In: *IEEE Transactions on Intelligent Transportation Systems* (2022). (submitted under review).

[SJ3] M. Frasheri, V. Struhár, A. V. Papadopoulos, and A. Čaušević. "Ethics of Autonomous Collective Decision-Making: the CAESAR Framework". In: *Science and Engineering Ethics* (2020). (submitted under review).

Pedagogical courses

- *The higher education institution and the educational commission (PEA918)* – 2.5 ECTS (passed), Dr. Helena Darnell-Berggren, Mälardalen University, Västerås, Sweden, Jun 2018
- *Supervising and Examining Scholarly Papers and Degree Projects at First- and Second-Cycle Levels* – 2.5 ECTS (passed), Dr. Cecilia Lindh, Mälardalen University, Västerås, Sweden, Dec 2017
- *Supervisors – Third Cycle Programmes (Forskarhandledningsutbildning)* (passed), Prof. Hans Öberg, Mälardalen University, Västerås, Sweden, Dec 2016
- *Communicating Science (GB_S11) – 5 ECTS* (passed), Prof. A. Ahlberg, Prof. J. Löfgreen, Lund University, Lund, Sweden, Jun 2015
- *Introduction to Teaching and Learning in Higher Education (BG_A01) – 5 ECTS* (passed), Prof. A. Ahlberg, Prof. R. Andersson, Prof. J. Löfgreen, Lund University, Lund, Sweden, Jan 2015

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Associations	ACM Member (from 2019), ACM SIGBED member (from 2019), IEEE Senior Member (from 2012, Senior from 2019), IEEE Control Systems Society Member (from 2012), IEEE Computer Society Member (from 2017), IEEE Robotics and Automation Society (from 2018), IEEE Systems Council (from 2015), IEEE Computer Society Technical Committee on Real-Time Systems (from 2016), IEEE Computer Society Technical Community on Cloud Computing (from 2017), IEEE Computer Society Technical Council on Software Engineering (from 2017), Member of the Lund Center for Control of Complex Engineering Systems (LCCC), Lund, Sweden (from 2014)

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