


PERSONAL INFORMATION

Gregor Papa



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 gregorpapa

Sex Male | Date of birth 07/10/1973 | Nationality Slovenian

WORK EXPERIENCE

20/2/2018 - present

Associate Professor

Jožef Stefan International postgraduate School, Ljubljana, Slovenia

1/9/2016 - present

JSI Coordinator

SRIP Smart Cities and Communities, Slovenia

9/12/2014 - present

Head of department

Jožef Stefan Institute, Ljubljana, Slovenia

17/10/2007 - 19/2/2018

Assistant Professor

Jožef Stefan International postgraduate School, Ljubljana, Slovenia

29/10/2002 - present

Researcher

Jožef Stefan Institute, Ljubljana, Slovenia

15/10/1997 - 28/10/2002

Research Assistant

Jožef Stefan Institute, Ljubljana, Slovenia

EDUCATION AND TRAINING

5/4/2000 - 28/10/2002

PhD in Electrical Engineering

Faculty of Electrical Engineering, University of Ljubljana, Slovenia

- Supervisor: prof. dr. Franc Bratkovič
- Title: Concurrent operation scheduling and unit allocation with an evolutionary technique in the process of integrated-circuit design

1/10/1997 - 4/4/2000

MSc in Electrical Engineering

Faculty of Electrical Engineering, University of Ljubljana, Slovenia

- Supervisor: prof. dr. Franc Bratkovič
- Title: High-level chip design with genetic algorithms

1/10/1992 - 25/2/1997

BSc in Electrical Engineering

Faculty of Electrical Engineering, University of Ljubljana, Slovenia

- Supervisor: prof. dr. Baldomir Zajc
- Title: Built-in self-test implementation through high-level synthesis

PERSONAL SKILLS

Mother tongue(s) Slovenian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C1	C1	C1	C1
German	B1	B1	B1	B1	A2
French	B1	B1	A2	A1	A2
Croatian	C1	B2	B2	B2	B1
Serbian	C1	B2	B2	B2	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user

Communication skills ▪ Good communication skills gained through my research career

Organisational / managerial skills

- Head of Department and Research program group P2-0098 (2014-)
- Adviser at Strategic research and innovation partnership on Smart cities and communities within Slovenian Smart Specialisation Strategy (2016-)
- co-organizer of regular Slovenian workshops on »Nature-inspired algorithms« (2004-2021)
- National representative within ECSEL JU projects DAIS (2021-2024), iRel40 (2020-2023), MANTIS (2015-2018)
- A program committee chair of “International conference on bioinspired optimization methods and their applications - BIOMA 2016”
- An organizing committee chair of biennial “International conference on bioinspired optimization methods and their applications”, BIOMA 2014, BIOMA 2012, BIOMA 2010, BIOMA 2008, BIOMA 2006, BIOMA 2004
- A program committee member of biennial “International conference on bioinspired optimization methods and their applications”, BIOMA 2020, BIOMA 2018, BIOMA 2016, BIOMA 2014, BIOMA 2012, BIOMA 2010, BIOMA 2008, BIOMA 2006, BIOMA 2004
- An organizing committee chair and a program committee member of the “13th International Conference on Parallel Problem Solving from Nature”, PPSN 2014
- Member of the program committee of several international conferences (IEEE Congress on Evolutionary Computation, Genetic and Evolutionary Computation Conference, International Conference on Parallel Problem Solving from Nature, European Conference on Genetic Programming, Smart Systems and Technologies, ...)
- Journal editorial board: Automatika (section Applied Computational Intelligence)
- Journal Topics Board: Sensors

Reviewer skills

- Serving REA as an external expert for EC projects
- Serving SPIRIT Slovenia as an external expert for national industrial projects
- International Journals: Engineering Applications on Artificial Intelligence, Applied Intelligence, IEEE Systems, Man and Cybernetics: Systems, Computers & Electrical Engineering, Applied Soft Computing, Journal of Guidance, Control, and Dynamics
- International conferences

Digital skills	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

- Proficient user of office suite (word processor, spread sheet, presentation software)
- Good command of photo and video editing software
- Programming languages (Java, C, PHP, HTML5), MySQL, ...
- Programming for Windows, Android

Research expertise ▪ Multi-objective meta-heuristic optimization methods

- Adaptive optimization algorithms
- Hardware implementations of high-complexity algorithms

Driving licence B category

ADDITIONAL INFORMATION

Publications

Selected journal publications

- Gašper Petelin, Margarita Antoniou, Gregor Papa, Multi-objective approaches to ground station scheduling for optimization of communication with satellites. *Optimization and Engineering*, 2021, doi: 10.1007/s11081-021-09617-z
- Marko Pavlin, Franc Novak, Gregor Papa, Low power contactless bioimpedance sensor for monitoring breathing activity. *Sensors*, 2021, vol 21 (6), pp 2081, doi: 10.3390/s21062081
- Tadej Krivec, Gregor Papa, Juš Kocijan. Simulation of variational Gaussian process NARX models with GPGPU. *ISA transactions*, 2021, vol 109, pp 141-151, doi: 10.1016/j.isatra.2020.10.011
- Tamara Jakovljević, Milica Janković, Andrej Savič, Ivan Soldatović, Petar Todorović, Tadeja Jere Jakulin, Gregor Papa, Vanja Kovič. The sensor hub for detecting the developmental characteristics in reading in children on a white vs. colored background/colored overlays. *Sensors*, 2021, vol. 21, no. 2, pp 406-1-406-13, doi: 10.3390/s21020406
- Michele Albano, Luis Lino Ferreira, Giovanni Di Orio, Pedro Maló, Godfried Webers, Erkki Jantunen, Iosu Gabilondo, Mikel Viguera, Gregor Papa. Advanced sensor-based maintenance in real-world exemplary cases. *Automatika*, 2020, vol. 61, no. 4, pp 537-553, doi: 10.1080/00051144.2020.1794192
- Monika Simjanoska, Stefan Kochev, Jovan Tanevski, Ana Madevska Bogdanova, Gregor Papa, Tome Eftimov. Multi-level information fusion for learning a blood pressure predictive model using sensor data. *Information fusion*, 2020, vol. 58, pp 24-39, doi: 10.1016/j.inffus.2019.12.008
- Rok Hribar, Primož Potočnik, Jurij Šilc, Gregor Papa, "A comparison of models for forecasting the residential natural gas demand of an urban area", *Energy (Oxford)*, vol. 167, pp 511-522, Jan. 2019
- Marina Santo-Zamik, Franc Novak, Gregor Papa, "Thermal phenomena in LTCC sensor structures", *Sens. actuators, A, Phys. (Print)*, vol. 290, pp 198-206, 2019
- Gregor Papa, Barbara Koroušič-Seljak, Peter Korošec, Milivoj Piletič, Irena Hren, Marko Pavlin, "Innovative pocket-size Bluetooth kitchen scale", *Agro Food ind. hi-tech*, vol. 29, no. 5, pp 29-32, 2018.
- Marina Santo-Zamik, Franc Novak, Gregor Papa, "Sensors in proactive maintenance: a case of LTCC pressure sensors", *Maintenance and reliability*, vol. 20, no. 2, pp 267-272, 2018
- Branko Skočir, Gregor Papa, Anton Biasizzo, "Multi-hop communication in Bluetooth Low Energy ad-hoc wireless sensor network", *Inf. MIDEEM*, vol. 48, no. 2, pp 85-95, 2018
- Špela Poklukar, Gregor Papa, Franc Novak, "A formal framework of human-machine interaction in proactive maintenance: MANTIS experience", *Automatika*, vol. 58, no. 4, pp 450-459, 2018
- Anja Kostevšek, Jiri Klemeš, Petar Varbanov, Gregor Papa, Janez Petek, "The concept of an ecosystem model to support the transformation to sustainable energy systems", *Appl. energy*, vol. 184, pp 1460-1469, 2016
- Peter Vrtič, Mario Vražič, Gregor Papa, "Design of an axial flux permanent magnet synchronous machine using analytical method and evolutionary optimization", *IEEE trans. energy convers.*, issue 1, vol. 31, pp 150-158, mar. 2016
- Uroš Jovanovič, Aleš Štivec, Daniel Vladušič, Gregor Papa, Jurij Šilc, "Big-data analytics: a critical review and some future directions", *Int. j. bus. intell. data min.*, vol. 10, no. 4, pp 337-355, 2015
- Uroš Bole, Aleš Popovič, Jure Žabkar, Gregor Papa, Jurij Jaklič, "A case analysis of embryonic data mining success", *Int. j. inf. manage.*, vol. 35, iss. 2, pp 253-259, Apr. 2015
- Gregor Papa, "Parameter-less algorithm for evolutionary-based optimization: for continuous and combinatorial problems", *Computat. optimiz. appl.*, vol. 56, issue 1, pp 209-229, 2013
- Peter Korošec, Uroš Bole, Gregor Papa, "A multi-objective approach to the application of real-world production scheduling", *Expert syst. appl.*, vol. 40, issue 15, pp 5839-5853, 2013
- Peter Korošec, Gregor Papa, "Metaheuristic approach to transportation scheduling in emergency situations", *Transport (Vilnius. Spausd.)*, vol. 28, no. 1, pp 46-59, 2013
- Gregor Papa, Vida Vukašinović, Peter Korošec, "Guided restarting local search for production planning", *Eng. appl. artif. intell.*, vol. 25, no. 2, pp 242-253, 2012
- Tomasz Garbolino, Gregor Papa, "Genetic algorithm for test pattern generator design, Automatic evolution of circuits", *Appl. intell. (Boston)*, vol. 32, no. 2, pp 193-204, 2010
- Peter Korošec, Gregor Papa, Vida Vukašinović, "Production scheduling with a memetic algorithm", *International journal of innovative computing and applications*, vol. 2, no. 4, pp 244-252, 2010
- Gregor Klajnšek, Borut Žalik, Franc Novak, Gregor Papa, "A quadtree-based progressive lossless

- compression technique for volumetric data sets", J. inf. sci. eng., vol. 24, no. 4, pp 1187-1195, 2008
- Tea Tušar, Peter Korošec, Gregor Papa, Bogdan Filipič, Jurij Šilc, "A comparative study of stochastic optimization methods in electric motor design", Appl. intell. (Boston), vol. 27, no. 2, pp 101-111, 2007
- Nada Lavrač, Peter Ljubič, Tanja Urbančič, Gregor Papa, Mitja Jermol, Stefan Bollhalter, "Trust modeling for networked organizations using reputation and collaboration estimates", IEEE trans. syst. man cybern., Part C Appl. rev., vol. 37, no. 3, pp 429-439, 2007
- Gregor Papa, Barbara Koroušič-Seljak, "An artificial intelligence approach to the efficiency improvement of a universal motor", Eng. appl. artif. intell., vol. 18, pp 47-55, 2005
- Gregor Papa, Jurij Šilc, "The parameters tuning for evolutionary synthesis algorithm", Informatica (Ljublj., Tisk. izd.), vol. 28, no. 2, pp 167-172, 2004
- Gregor Papa, Barbara Koroušič-Seljak, Boris Benedičič, Tomaž Kmecl, "Universal motor efficiency improvement using evolutionary optimization", IEEE trans. ind. electron., vol. 50, pp 602-611, 2003
- Gregor Papa, Jurij Šilc, "Chip design based on genetic approach", J. Elektr. Eng., vol. 53, pp 76-80, 2002
- Gregor Papa, Jurij Šilc, "Automatic large-scale integrated circuit synthesis using allocation-based scheduling algorithm", Microprocess. micro syst., vol. 26, pp 139-147, 2002

Projects Selected projects

- ECSEL: Distributed Artificial Intelligent Systems - DAIS (2021-2024)
- ECSEL: Intelligent Reliability 4.0 - iRel40 (2020-2023)
- ECSEL: Intelligent Secure Trustable Things - InSecTT (2020-2023)
- SRIP: Smart cities and communities - SRIP PMiS (2016-2023)
- HZDR bilateral: Crossing borders and scales: CFD and High-performance computing - CROSSING (2019-2021)
- H2020: TEchnology TRAnSfer via Multinational Application eXperiments - TETRAMAX (2017-2021)
- ARRS: Biomedical data fusion by nonnegative matrix tri-factorization - BDF (2017-2020)
- H2020: Uncertainty Treatment and OPTimisation In Aerospace Engineering - UTOPIAE (2017-2020)
- COST: Improving Applicability of Nature-Inspired Optimisation by Joining Theory and Practice - ImAppNIO (2016-2020)
- H2020: Synergy for Smart Multi-Objective Optimisation - SYNERGY (2016-2019)
- H2020: mhealth platform for Parkinson's disease management - PD_manager (2015-2018)
- ECSEL: Cyber Physical System based Proactive Collaborative Maintenance - MANTIS (2015-2018)
- ARTEMIS: Adaptive Cooperative Control in Urban (sub) Systems - ACCUS (2013-2016)
- Upgrade of household appliance - BSHupgrade (2013-2015)
- Mobile application and pocket-size scale for diabetic patients - LIBRA (2013-2014)
- eDietetik - eDietetik (2012-2014)
- Wireless pocket-size scale - BT scale (2010-2012)
- Mobile application for food ingredients informing - (2009-2010)
- CRP: The role of Luka Koper in logistic support of the Slovenian Armed Forces and allies - (2006-2008)
- FP6: Adaptive Robots for Flexible Manufacturing Systems - ARFLEX (2005-2008)
- FP6: European Collaborative networked Organizations LEADership initiative - ECOLEAD (2004-2008)

Membership

- ACM - Association for Computing Machinery
- IEEE - Institute of Electrical and Electronics Engineers

Pedagogic activities / Courses

Deputy of the Information and Communication Technologies programme at Jožef Stefan International Postgraduate School

Courses at Jožef Stefan International Postgraduate School:

- Computer Structures and systems
- Advanced Approaches to Planning and Scheduling
- Hardware/Software Codesign
- Human-Computer Interaction

PhD, MSc and BSc mentorship