



Dr. Dragi Kimovski

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PERSONAL INFORMA- TION

Place of birth: Bitola, R. Macedonia

EDUCATION

Doctoral Degree in Computer Science October 2009 - February 2013
Institution: Technical University of Sofia, Bulgaria
Field of study: Computer systems, networks and complexes
Thesis title: Flow control mechanism for high performance interconnection networks

Masters Degree in Computer Science October 2007 - February 2009
Institution: Technical University of Sofia, Bulgaria
Field of study: Computer systems and technologies

Bachelor Degree in Computer Science September 2003 - July 2007
Institution: Technical University of Sofia, Bulgaria
Field of study: Computer systems and technologies

CURRENT POSITIONS

Non-Tenured Assistant Professor - Postdoc since March 2018
Institution: Institute of Information Technologies
University of Klagenfurt, Austria
Main research activity: H2020 ASPIDE, H2020 ARTICONF, AtomicFog.

Senior researcher and lecturer January 2016 - February 2018
Institution: Department of computer science
University of Innsbruck, Austria
Main research activity: WP leader withing the H2020 ENTICE project.

Assistant professor in computer science since October 2013
Institution: University of Information Science and Technology
Ohrid, Macedonia
Field of work/research: Teaching and researching in the area of High performance computing systems

**PREVIOUS
POSITIONS**

Acting (Interim) Dean December 2013 - January 2015
Institution: Faculty of Computer Science and Engineering
University of Information Science and Technology
Ohrid, Macedonia
Field of work/research: Administrative management of
teaching and research activities

Research coordinator July 2013 - September 2014
Institution: Faculty of Computer Science and Engineering
University of Information Science and Technology
Ohrid, Macedonia
Field of work/research: Management of the research activities
conducted by the doctoral students

Teaching and research assistant August 2009 - October 2013
Institution: Faculty of Communication Networks and Security
University of Information Science and Technology
Ohrid, Macedonia
Field of work/research: Teaching undergraduate courses
and researching in the area of High performance computing

**VISITING
POSITIONS**

Visiting professor September 2015 - October 2015
Institution: **University of Michigan, USA**
Field of work/research: High Performance Computing
Application for Modelling of the Metabolic Factors
Involved in Obesity and Weight Loss

Visiting professor June 2015 - June 2015
Institution: **University of Ljubljana, Slovenia**
Field of work/research: Lecturing in Computer Engineering

Visiting professor September 2014 - October 2014
Institution: **University of Bologna, Italy**
Field of work/research: High Performance Applications in Cloud environment

Visiting postdoctoral researcher January 2014 - March 2013
Institution: **University of Granada, Spain**
Field of work/research: High Performance Feature Selection
for EEG and BCI applications

**PROJECT
MANAGEMENT POSI-
TIONS**

H2020 ASPIDE - Position: Scientific Coordinator starting from June 2018
Institution: **University of Klagenfurt**
ASPIDE: Exascale programming models for extreme data processing

OeAD AtomicFog - Position: Project Coordinator starting from June 2018
Institution: **University of Klagenfurt/UIST**
ATOMICFOG: Resource management in Fog.

H2020 ENTICE - Position: WP Leader January 2016 - February 2018
Institution: **University of Innsbruck**
ENTICE: dEcentralized repositories for traNsparent and efficienT vIrtual maChine
opErations, H2020-ICT-2014-1, 2015 - 2018, WP4 Leader.

**TEACHING
EXPERI-
ENCE**

Graduate courses:

- **Current Topics in Multimedia Communication: Server, Cluster, and Cloud Computing** - University of Klagenfurt (2017/18 - Summer Semester)
- **Parallel Systems** - University of Innsbruck (2016/17 - Winter Semester)
- **Advanced Parallel and Distributed Systems** - University of Innsbruck (2016/17 - Summer Semester)
- **High Performance Computing** - University of Information Science and Technology (2013,2014,2015 - Winter Semester)

Undergraduate courses:

- **Advanced C++ Programming** - University of Klagenfurt (2018/19 - Winter Semester)
- **Introduction in Computer Science** - University of Klagenfurt (2018/19 - Winter Semester)
- **Distributed Systems** - University of Klagenfurt (2017/18 - Summer Semester)
- **Computer Organization** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2016 as assistant professor)
- **Parallel Data Processing** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2015 as assistant professor)
- **Computing Systems Configurations** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2014 as assistant professor)
- **Network Architectures** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2015 as assistant professor)
- **Client-Server Architectures** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2015 as assistant professor)
- **Human-computer Interaction** - University of Information Science and Technology (2009-2013 as associate lecturer/ 2013-2014 as assistant professor)
- **Parallel Programming** - Technical University of Sofia (2010-2012)

FELLOWSHIPS AND AWARDS

- Fellowships:**
- Weiser Grant for Visiting Professor at the University of Michigan, USA
 - PENTA – ERASMUS Grant for Visiting Professor at the University of Bologna, Italy
 - Scholarship for Post-Doc research at the University of Granada, Spain
 - Scholarship (36 Months) for PhD Studies at the Technical University of Sofia, Bulgaria
 - Grant for attending the “School for Wireless Power Transfer” at University of Aveiro, Portugal
 - Grant for attending the first “School in Nanotechnology” at TUT, Tampere, Finland

Awards:

- Best Foreign Undergraduate Student Award at the Technical University of Sofia
- Appreciation for active involvement in international projects with the Division of Hematology and Medical Oncology at Weill Cornell Medical College, New York, USA.
- Significant contribution to the conference organization, Sixth International Conference – Computer Science 2011
- Best Paper Award, Sixth International Conference – Computer Science 2011

**REVIEW
AND TCP
ACTIVITIES**

TCP member

- IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing: CC-GRID 2019
- TAPEMS 2019 - 3rd International Workshop on Theoretical Approaches to Performance Evaluation, Modeling and Simulation
- Euro-Par 2018 Workshops - LSDVE - Workshop on Large Scale Distributed Virtual Environments
- ACM Symposium on High-Performance Parallel and Distributed Computing: HPDC 2017, Poster TCP member
- IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing: CC-GRID 2017
- Multiple Access Communications: MACOM 2013, 2014, 2015 and 2016
- Sixth International Conference on Computer Science 2011

Journal editing

- Section Editor at the European Journal of Information Science and Technology

Reviews:

- IEEE Transactions on Parallel and Distributed Computing
- IEEE Transactions on Emerging Topics in Computing
- IEEE Transactions on Big Data
- IEEE Spectrum
- Elsevier Future Generation Computer Systems
- Elsevier Applied Soft Computing Journal
- Elsevier Journal of Grid Computing
- ACM Transactions on Multimedia Computing Communications and Applications
- Journal of Knowledge and Information Systems
- IETE Technical Review Journal
- The 27th International Symposium on High-Performance Parallel and Distributed Computing
- Conference on Parallel, Distributed, and Network-Based Processing 2017
- IEEE/ACM International Conference on Utility and Cloud Computing
- FiCloud 2016 : The 5th International Conference on Future Internet of Things and Cloud
- IEEE International Symposium on Parallel and Distributed Processing with Applications 2016
- Cloud Computing Technoeconomic Engineering 2016
- International Conference on Performance Engineering 2016
- 16th, 17th and 18th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing

MEMBERSHIPS

- IEEE Memeber
- NESUS COST ACTION Management Committee Member
- CHRONOS COST ACTION Management Committee Member

ACADEMIC LEADER-SHIP

During my academic career I have proven my self, both as a researcher, lecturer and manager of academic activities and projects. As a concrete proof to my foremost dedication to science and scientific leadership, I would like to point out the following achievements:

- Project coordinator of the development of the first High Performance Cluster in the Republic of Macedonia, located at the University of Ohrid.
- Research coordinator at the University of Information Science and Technology in Macedonia, where I was responsible for coordinating the activities of the PhD and Master students affiliated to the University.
- Acting Dean at the Faculty of Computer Science and Engineering in Ohrid, where I was managing the teaching and administrative activities at the mentioned higher education institution.
- Work Package Leader within the H2020 ENTICE project, where I was responsible for managing the research activities in the area of Cloud computing at the University of Innsbruck in Austria.
- Supervision of more than 15 bachelor thesis and two Master thesis in the area parallel and distributed systems.

LANGUAGES

- Macedonian - Mother language
- English - Fluent speaker
- German - Advanced speaker
- Bulgarian - Fluent speaker
- Serbian - Fluent speaker

REFERENCES

1. Prof. Thomas Fahringer, University of Innsbruck, Austria
e-mail:tf@dps.uibk.ac.at
2. Prof. Julio Ortega, University of Granada, Spain
e-mail: jortega@ugr.es
3. Prof. Kayvan Najarian, University of Michigan - Ann Arbor, US
e-mail: kayvan@med.umich.edu

LIST OF PUBLICATIONS

Journals with Impact Factor

1. Vincenzo de Maio, Dragi Kimovski, "Multi-Objective Scheduling of Extreme Data Scientific Workflows in Fog", Future Generation Computing Systems, DOI: <https://doi.org/10.1016/j.future.2019.12.054>, January 2020 - Impact Factor = 5.768
2. Sandi Gec, Dragi Kimovski, Uros Pascinski, Radu Prodan and Vlado Stankovski "Semantic approach for multi-objective optimisation of the ENTICE distributed Virtual Machine and container images repository", Concurrency and Computation: Practice and Experience, DOI: 10.1002/cpe.4264, August 2017 – Impact Factor = 1.133
3. Dragi Kimovski, Attila Marosi, Sandi Gec, Nishant Saurabh, Atilla Kertezcs, Gabor Kecskemeti, Vlado Stankovski, Radu Prodan "Distributed Environment for Efficient Virtual Machine Image Management", Concurrency and Computation: Practice and Experience, DOI: 10.1002/cpe.4220, July 2017 – Impact Factor = 1.133
4. Dragi Kimovski, Nishant Saurabh, Vlado Stankovski, Radu Prodan, "Multi-Objective Middleware for Distributed VMI Repositories in Federated Cloud Environment", Scalable Computing: Practice and Experience, No.4/Vol.17, 2016
5. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos, "Leveraging cooperation for parallel multi-objective feature selection in high-dimensional EEG data", Concurrency and Computation: Practice and Experience No.18/Vol.27, 2015 – Impact Factor = 0.997
6. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos, "Parallel alternatives for evolutionary multi-objective optimization in unsupervised feature selection", Elsevier Expert Systems with Applications No.9/Vol.42, 2015 – Impact Factor = 1.965
7. Plamenka Borovska, Dragi Kimovski, Atanas Hristov, "Modular Router Architecture For High-Performance Interconnection Networks", Technical Gazette Journal No.5/Vol. 22 – Impact Factor = 0.615
8. Giuseppe Galletti, Alexandre Matov, Himisha Beltran, Jacqueline Fontugne, Juan Miguel Mosquera, Cynthia Cheung, Theresa Y. MacDonald, Matthew Sung, Sandra O'Toole, James G. Kench, Sung Suk Chae, Dragi Kimovski, Scott T. Tagawa, David M. Nanus, Mark A. Rubin, Lisa G. Horvath, Paraskevi Giannakakou and David S. Rickman, "ERG induces taxane resistance in castration-resistant prostate cancer", Nature Communications 5, 2014, - Impact Factor = 11.329
9. Plamenka Borovska, Dragi Kimovski "Adaptive flow control in high-performance interconnection networks", Springer Journal of Supercomputing, No.1/Vol.68, 2014, Impact Factor = 0.86

Journals indexed by Scopus

10. Sasko Ristov, Roland Matha, Dragi Kimovski, Radu Prodan, Marjan Gusev, "A new model for cloud elastic services efficiency", International Journal of Parallel, Emergent and Distributed Systems, DOI: <https://doi.org/10.1080/17445760.2018.1434174>,
11. Milan, Mihajlovic, LA Bongo, R Ciegis, N Frasher, J Gong, D Kimovski, P Kropf, S Margenov, "Applications for ultrascale computing", Supercomputing Frontiers and Innovations, No.1/Vol.2, 2015
12. Dragi Kimovski, Plamenka Borovska, "Novel Flow Control Mechanism for High Performance System Area Networks", Computer and Communication Engineering, No.1/2012, ISSN 1314-2291
13. Dragi Kimovski "Step-Back-On-Blocking Switch Architecture for System Area Interconnection Networks", Computer and Communication Engineering, No.2/2012, ISSN 1314-2291
14. Plamenka Borovska, Desislava Ivanova, Dragi Kimovski, "Architectural Aspects of the most Powerful Modern Supercomputers", Computer and Communication Engineering, No.1/2009, ISSN 1314-2291

Conferences - Less than 25% acceptance rate

15. Vladislav Kashansky, Dragi Kimovski, Radu Prodan, Prateek Agrawal, Fabrizio Marozzo, Iuhasz Gabriel, Marek Justyna and Javier Garcia-Blas, "M3AT: Monitoring Agents Assignment Model for Data-Intensive Applications", 28th Euromicro International Conference on Parallel, Distributed and Network-Based Processing 2020, Vasteras, Sweden

16. Narges Mehran, Dragi Kimovski, Radu Prodan "MAPO: A Multi-Objective Model for IoT Application Placement in a Fog Environment", 9th International Conference on the Internet of Things, IoT 2019, Bilbao, Spain
17. Nishant Saurabh, Julian Remmers, Dragi Kimovski, Jose Barbosa "Semantics-aware Virtual Machine Image Management in IaaS Clouds", 33rd IEEE International Parallel Distributed Processing Symposium, Brasil
18. Dragi Kimovski, Humaira Ijaz, Nishant Saurabh and Radu Prodan, "An Adaptive Nature-inspired Fog Architecture", 2nd IEEE International Conference on Fog and Edge Computing (ICFEC 2018), Washington DC, USA
19. Dragi Kimovski, Sasko Ristov, Roland Matha and Radu Prodan, "Multi-objective Service Oriented Network Provisioning in ultra-scale systems", EUROPAR 2017 LSVDE Workshop, Spain, August 2017
20. Polona Štefanič, Dragi Kimovski, George Suciú Jr and Vlado Stankovski, "Non-Functional Requirements Optimisation for Multi-Tier Cloud Applications: An Early Warning System Case Study", IEEE Conference on Cloud and Big Data Computing, CBDcom 2017
21. Julio Ortega, Dragi Kimovski, John Q. Gan, Andrés Ortiz, Miguel Damas, "A Parallel Island Approach to Multiobjective Feature Selection for Brain-Computer Interfaces", 14th International Work-Conference on Artificial Neural Networks 2017
22. Nishant Saurabh, Dragi Kimovski, Francesco Gaetano and Radu Prodan, "A Two-Stage Multi-Objective Optimization of Erasure Coding in Overlay Networks", CCGrid 2017, Madrid, Spain 2017
23. Dragi Kimovski, Nishant Saurabh, Sandi Gec, Vlado Stankovski, Radu Prodan, "Multi-objective Optimization Framework for VMI distribution in Federated Cloud Repositories", EUROPAR 2016 LSVDE Workshop, Grenoble, France, August 2016
24. Nishant Saurabh, Dragi Kimovski, Simon Ostermann, Radu Prodan, "VM Image Repository and Distribution Models for Federated Clouds: State of the Art, Possible Directions and Open Issues", EUROPAR 2016 LSVDE Workshop, Grenoble, France, August 2016
25. Dragi Kimovski, Nishant Saurabh, Sandi Gec, Polona Stefancic, Gabor Kecskemeti, Vlado Stankovski, Radu Prodan, Thomas Fahringer, "Towards Decentralized Repository Services for Efficient and Transparent Virtual Machine Operations: The ENTICE Approach", IEEE International Conference on Cloud Networking, CloudNet 2016, Pisa, Italy, October 2016
26. Sandi Gec, Dragi Kimovski, Radu Prodan, Vlado Stankovski, "Using constraint-based reasoning for Multi-objective Optimization of the ENTICE environment", 12th International Conference on Semantics, Knowledge and Grids 2016, China, August 2016
27. Ljupco Baleski, Dragi Kimovski, Ninoslav Marina, "Hexagon Interconnection Network Topology", 7th International Congress on Ultra Modern Telecommunications and Control Systems and Workshops (ICUMT) 2015 Location: Brno, CZECH REPUBLIC, Pages: 259-264
28. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos, "Parallel cooperation for large-scale multiobjective optimization on feature selection problems", 18th European Conference, Evo Applications 2015, Pages: 693 - 705
29. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos "Feature selection in high-dimensional EEG data by parallel multi- objective optimization", 2014 IEEE International Conference on Cluster Computing (CLUSTER) 2014, Pages 314-322
30. Plamenka Borovska, Dragi Kimovski, "alfaOmegaHighway Interconnection Network Architecture for High Performance Computing", The Seventeenth IEEE Symposium on Computers and Communication 2012, Pages: 345-347

Other indexed conferences

31. Radu Prodan, Thomas Fahringer, Dragi Kimovski, Gabor Kecskemeti, Attila Marosi, Vlado Stankovski, "Use Cases Towards a Decentralized Repository for Transparent and Efficient Virtual Machine Operations", 25rd Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP 2017)

32. Atanas Hristov, Iva Nikolova, Georgy Zaprayanov, Dragi Kimovski, "Resource Management Optimization in Multi-Processor Platforms", Third Nesus Workshop 2016, Sofia, Bulgaria
33. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos, "Cooperacion paralela para seleccion multiobjetivo de características en problemas de dimension elevada", X Congreso Espanol de Metaheurísticas, Algoritmos Evolutivos y Bioinspirados - MAEB 2015, Pages 551-559
34. Dragi Kimovski, Julio Ortega, Andres Ortiz, Raul Banos, "Computacion evolutiva paralela y seleccion de características multiobjetivo para clasificacion no supervisada de EEGs", XXV Jornadas de Paralelismo - Jornadas Sarteco 2014, Valladolid
35. A . Matov , D. Kimovski at al, "Computational Analysis of Microtubule Dynamics for Personalized Prostate Cancer Therapy", American Association on Cancer Research 2013, USA
36. Dragi Kimovski, Atanas Hristov, "Buffer Management in High performance Routers", International Scientific Conference On Information, Communication, Energy Systems And Technologies, ICEST 2013, Macedonia
37. Plamenka Borovska, Dragi Kimovski, Atanas Hristov, "Step-Back-On-Blocking Flow Control Mechanism For High Performance Interconnection Networks", Xth International Conference CHER 21, 2012
38. Plamenka Borovska, Dragi Kimovski, Atanas Hristov, "Performance Evaluation Of Intel Threading Building Blocks And Openmp Programming Models", Xth International Conference CHER 21, 2012
39. Dragi Kimovski, Atanas Hristov, "Development of Virtual Storage System", Sixth International Conference – Computer Science 2011, Macedonia
40. Dragi Kimovski, Atanas Hristov, "Development of Hybrid MPI/CUDA Based Cluster for Educational Purposes", Sixth International Conference – Computer Science 2011, Macedonia
41. Dragi Kimovski, Atanas Hristov, "Development of highly parallel "Beowulf" cluster and optimization of MPI based implementation of the N-Queens problem with regards to the architecture of the system", X International Conference ETAI 2011, Macedonia