

Dejan Mitrović, PhD

Curriculum Vitae

Address:

Zalando SE
Mollstr. 1
10178 Berlin
Germany

Contact:

Phone: +49-(0)176-2356-0496
E-mail: mitrovic.dejan@gmail.com
Web: <http://www.dejanmitrovic.com>

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PERSONAL DETAILS

Date of birth:	December 28, 1982
Place of birth:	Zrenjanin, Vojvodina, Serbia
Sex:	Male
Marital status:	Married
Citizenship:	Serbia

LANGUAGES

Serbian (Mother tongue)
English (Fluent)
German (A1)
Slovak (Reading knowledge)

EDUCATION

Faculty of Sciences, University of Novi Sad, Serbia:

- ◇ PhD in Computer Science 2015 (PhD thesis was in the field of distributed artificial intelligence)
- ◇ MSc in Computer Science 2008 (MSc thesis was in the field of computer graphics)
- ◇ BSc in Computer Science 2006 (BSc thesis was in the field of computer graphics)

PROFESSIONAL EXPERIENCE

- ◇ Software Engineer, 2010 - present
Zalando SE, Berlin, Germany
- ◇ Research and Teaching Assistant, 2010 - 2015
Faculty of Sciences, University of Novi Sad, Serbia
- ◇ Junior Researcher, 2008 - 2010
Faculty of Sciences, University of Novi Sad, Serbia
- ◇ Freelance software developer, 2004 - 2015

SOFTWARE DEVELOPMENT

Principal developer of the open-source Siebog multiagent middleware:

<https://github.com/gcvt/siebog>.

- ◇ Programming languages: proficiency in Java, Scala, C/C++, CoffeeScript and Delphi; experience in working with JavaScript, Erlang, Prolog, and AgentSpeak(L)
- ◇ Experienced developer of highly-available server-side applications based on Java EE technologies, including, but not limited to, EJB, JPA/Hibernate, JMS, CDI, JSP, Servlets, WSDL/SOAP and RESTful web services
- ◇ Solid knowledge of the Spring Framework (including MVC, REST, Security, AOP, etc.)
- ◇ Practical knowledge of Big Data processing using Scala/Scalding, Apache Hadoop, Apache Cassandra, Aurelius Titan, DynamoDB, and Riak
- ◇ Solid understanding of multithreaded, reactive (e.g. Akka actors-based), and message-driven (e.g. RabbitMQ) scalable architectures
- ◇ Experience in JVM and Java EE memory profiling, and optimizing clustered applications running on JBoss/WildFly
- ◇ Experience in developing applications for cloud platforms, namely Google AppEngine and Amazon Web Services)
- ◇ Solid understanding of clean coding principles and test-driven development

- ◊ Practical knowledge of the popular tools for source code management (SVN, Git, Hg), build-automation (Ant, Gradle, Maven), automated testing (JUnit), and source quality management (SonarQube)
- ◊ Client-side application development using Java-based frameworks (GWT, SmartGWT, and Vaadin), as well as HTML5 and related technologies
- ◊ Thorough understanding of both fixed-function and programmable 3D rendering pipeline, including assembly and high-level shaders. Solid background in game development-related mathematics
- ◊ Win32 application development: Win32 API, DirectShow, COM, ActiveX, and GDI+ in C/C++ and Delphi
- ◊ Database-driven application development based on MySQL and SQL Server
- ◊ Author of a few programming languages, compilers and interpreters, with strong skills in compiler construction and automata theory

TEACHING

Faculty of Sciences, University of Novi Sad, Serbia, conducted exercises for the following courses:

- ◊ Computer graphics 2, 2013 - present
- ◊ Operating systems 1, 2011 - present
- ◊ Object-oriented programming 2, 2010 - present
- ◊ Object-oriented programming 1, 2009 - present
- ◊ Computer graphics 1, 2008 - present
- ◊ Artificial intelligence 1, 2010 - 2011
- ◊ Data structures and algorithms 2, 2009 - 2010
- ◊ Programming languages, 2009 - 2010

Specialized high school for mathematically gifted students *Jovan Jovanović Zmaj*, Novi Sad, Serbia:

- ◊ Computer programming and programming languages, 2010 - 2011

RESEARCH CONTRACTS

- ◊ *Emotional Intelligence and Applications Based on Multi-Agent Systems*, 2014 - 2015.
Supported by the Ministry of Education, Science and Technological Development (Republic of Serbia) and the National Natural Science Foundation of China
- ◊ *Intelligent techniques and their integration into wide-spectrum decision support*, 2011 - 2014.
Supported by the Ministry of Science and Technological Development (Republic of Serbia), Project no. OI174023
- ◊ *Infrastructure for technology enhanced learning in Serbia*, 2011 - 2014.
Supported by the Ministry of Science and Technological Development (Republic of Serbia), Project no. III47003
- ◊ *Intelligent techniques for data integration and decision support in the medical domain*, 2011 - 2012. Supported by the Ministry of Science and Technological Development (Republic of Serbia) and DAAD (Federal Republic of Germany)
- ◊ *Correlating images and words: Enhancing image analysis through machine learning and semantic technologies*, 2010 - 2011.
Supported by the Ministry of Science and Technological Development (Republic of Serbia) and the Slovenian Research Agency
- ◊ *Abstract methods and applications in computer science*, 2006 - 2010.
Supported by the Ministry of Science and Technological Development (Republic of Serbia), Project no. 144017

EVENTS ORGANIZED

Organizing Co-Chair:

- ◇ 5th Balkan Conference in Informatics (BCI 2012)
Novi Sad, Serbia, September 16 - 20, 2012

Secretary of the Organizing Committee:

- ◇ Workshop on Applications of Software Agents (WASA 2012)
Novi Sad, Serbia, September 18 - 20, 2012
- ◇ Workshop on Applications of Software Agents (WASA 2011)
Novi Sad, Serbia, July 3 - 5, 2011
- ◇ Fourteenth East-European Conference on Advances in Databases and Information Systems (ADBIS 2010), Novi Sad, Serbia, September 20 - 24, 2010

Member of the Organizing Committee:

- ◇ Workshop on Applications of Software Agents (WASA 2015)
Sinaia, Romania, September 2 - 4, 2015
- ◇ Workshop on Applications of Software Agents (WASA 2014)
Thessaloniki, Greece, June 2 - 4, 2014
- ◇ Workshop on Applications of Software Agents (WASA 2013)
Sinaia, Romania, October 11 - 13, 2013

SPECIALIZATIONS AND SHORT-TERM SCHOLARSHIPS

- ◇ Technical University of Kosice, Slovakia, 1 month CEEPUS mobility grant, January 19 - February 11, 2014.
- ◇ Humboldt University of Berlin, Germany, *Software Engineering and Reverse Engineering*, December 11 - 22, 2013.
- ◇ Fudan University, Shanghai, China, *Emotional Intelligence and Applications Based on Multi-Agent Systems*, November 24 - December 8, 2013.
- ◇ University of Novi Sad, Serbia, *Cognitive Robotics with Practical Exercises*, March 12 - 21, 2013.
- ◇ Humboldt University of Berlin, Germany, *Intelligent techniques for data integration and decision support in the medical domain*, December 9 - 21, 2012.
- ◇ University of St. Kliment Ohridski, Sofia, Bulgaria, *Quality assurance enhancement: theory and practice*, Tempus project 145677-TEMPUS-2008-RS-SMGR, *Internal quality assurance at Serbian universities*, January 11 - 13, 2012.
- ◇ Humboldt University of Berlin, Germany, *Intelligent techniques for data integration and decision support in the medical domain*, November 3 - 18, 2011.
- ◇ University of Bologna, Italy, *First International Spring School on Declarative Agent Languages and Technologies (DALT2011)*, University Residential Center Bertinoro, April 10 - 15, 2011.
- ◇ Eötvös Loránd University, Hungary, 1 month CEEPUS mobility grant, January 15 - February 15, 2011.
- ◇ Vrnjačka Banja, Serbia, *Biomedical Image Analysis and Bioinformatics*, DAAD Project Center of Excellence for Applications of Mathematics, September 24 - 30, 2010.
- ◇ University "Politehnica" of Bucharest, Romania, *The South-Eastern European Multi-Agent Systems Summer School*, July 5 - 10, 2010.
- ◇ Institute "Jožef Štefan", Ljubljana, Slovenia, *Correlating Images and Words: Enhancing Image Analysis through Machine Learning and Semantic Technologies*, April 19 - 23, 2010.

LIST OF PUBLICATIONS

- [1] Dejan Mitrović, Mirjana Ivanović, Milan Vidaković, and Zoran Budimac. Reliable interaction in multiagent systems. In *9th International Symposium on Intelligent Distributed Computing, Studies in Computational Intelligence*. Springer, October 2015 (in print).
- [2] Dejan Mitrović, Mirjana Ivanović, and Zoran Budimac. Test-driven development of software agents. In *7th Balkan Conference in Informatics, International Conference Proceedings Series*, pages 24:1–24:5. ACM, September 2015.
- [3] Dejan Mitrović, Mirjana Ivanović, Milan Vidaković, and Zoran Budimac. A scalable distributed architecture for html5-based software agents. In *7th International Conference on Computational Collective Intelligence Technologies and Applications*, volume 9329 of *Lecture Notes in Computer Science*, pages 67–76. Springer, 2015.
- [4] Dejan Mitrović, Mirjana Ivanović, Rafael H. Bordini, and Costin Bădică. Jason interpreter, enterprise edition. *Informatica*, 2015 (in print).
- [5] Mirjana Ivanović, Dejan Mitrović, Zoran Budimac, Ljubomir Jerinić, and Costin Bădică. HAPA: Harvester and pedagogical agents in e-learning environments. *International Journal of Computers, Communications & Control*, 10(2):200–210, April 2015.
- [6] Dejan Mitrović, Mirjana Ivanović, Milan Vidaković, and Zoran Budimac. Extensible Java EE-based agent framework in clustered environments. In Joerg Mueller, Michael Weyrich, and Ana L. C. Bazzan, editors, *12th German Conference on Multiagent System Technologies*, volume 8732 of *Lecture Notes in Computer Science*, pages 202–215. Springer International Publishing, 2014.
- [7] Dejan Mitrović, Mirjana Ivanović, and Costin Bădică. Delivering the multiagent technology to end-users through the web. In *Proceedings of the 4th International Conference on Web Intelligence, Mining and Semantics (WIMS14)*, WIMS '14, pages 54:1–54:6, New York, NY, USA, 2014. ACM.
- [8] Costin Bădică, Sorin Ilie, Mirjana Ivanović, and Dejan Mitrović. Role of agent middleware in teaching distributed network application development. In Gordan Jezic, Mario Kusek, Ignac Lovrek, Robert J. Howlett, and Lakhmi C. Jain, editors, *Agent and Multi-Agent Systems: Technologies and Applications*, volume 296 of *Advances in Intelligent Systems and Computing*, pages 267–276. Springer International Publishing, 2014.
- [9] Mirjana Ivanović, Zoran Putnik, Dejan Mitrović, and Bela Stantić. Possible routes on a highway of elearning – promising architecture for elearning systems. In Gordan Jezic, Mario Kusek, Ignac Lovrek, Robert J. Howlett, and Lakhmi C. Jain, editors, *Agent and Multi-Agent Systems: Technologies and Applications*, volume 296 of *Advances in Intelligent Systems and Computing*, pages 289–302. Springer International Publishing, 2014.
- [10] Mirjana Ivanović, Miloš Radovanović, Zoran Budimac, Dejan Mitrović, Vladimir Kurbalija, Dai Weihui, and Zhao Weidong. Emotional intelligence and agents – survey and possible applications. In *Proceedings of the 4th International Conference on Web Intelligence, Mining and Semantics (WIMS 2014)*, page Article 52. ACM, New York, NY, USA, 2014.
- [11] Dejan Mitrović, Mirjana Ivanović, and Zoltan Geler. Agent-based distributed computing for dynamic networks. *Information Technology and Control*, 43(1):88–97, 2014.
- [12] Mirjana Ivanović, Dejan Mitrović, Zoran Budimac, Boban Vesin, and Ljubomir Jerinić. Different roles of agents in personalized learning environments. In D.K.W. Chiu et al., editor, *10th International Conference on Web-Based Learning (ICWL 2011)*, volume 7697 of *Lecture Notes in Computer Science*, pages 161–170. Springer-Verlag Berlin Heidelberg, 2014.

- [13] Dejan Mitrović, Mirjana Ivanović, Zoran Budimac, and Milan Vidaković. Radigost: Interoperable web-based multi-agent platform. *Journal of Systems and Software*, 90:167–178, 2014.
- [14] Dejan Mitrović, Mirjana Ivanović, and Costin Bădică. Jason agents in Java EE environments. In Emil Petre and Marius Brezovan, editors, *3rd Workshop on Applications of Software Agents (WASA 2013), held within 17th International Conference on System Theory, Control and Computing (ICSTCC 2013)*, pages 768–771, Sinaia, Romania, October 2013.
- [15] Saša Tošić, Dejan Mitrović, and Mirjana Ivanović. Agent planning in AgScala. In Theodore E. Simos, editor, *Proceedings of Symposium on Computer Languages, Implementations, and Tools (SCLIT 2013)*, volume 1558 of *AIP Conference Proceedings*, pages 362–365, September 2013.
- [16] Dejan Mitrović, Mirjana Ivanović, and Hans-Dieter Burkhard. Towards a Jason infrastructure for soccer playing agents. In Marcin S. Szczuka, Ludwik Czaja, and Magdalena Kacprzak, editors, *Proceedings of the 22nd International Workshop on Concurrency, Specification and Programming*, volume 1032 of *CEUR Workshop Proceedings*, pages 294–295, 2013.
- [17] Dejan Mitrović, Mirjana Ivanović, and Hans-Dieter Burkhard. Intelligent Jason agents in virtual soccer simulations. In Matthias Klusch, Matthias Thimm, and Marcin Paprzycki, editors, *11th German Conference on Multiagent System Technologies*, volume 8076 of *Lecture Notes in Computer Science*, pages 334–345. Springer, 2013.
- [18] Mirjana Ivanović, Dejan Mitrović, and Miloš Radovanović. Elective course OOP II: Creation and experiences. *Innovation in Teaching and Learning in Information and Computer Sciences*, 12(1):62–69, November 2013. doi: 10.11120/ital.2013.00003.
- [19] Dejan Mitrović, Mirjana Ivanović, and Zoran Budimac. Erlang and Scala for agent development. In *The 6th International Conference on Information Technology*, May 2013.
- [20] Milan Vidaković, Mirjana Ivanović, Dejan Mitrović, and Zoran Budimac. Extensible Java EE-based agent framework – past, present, future. In Maria Ganzha and Lakhmi C. Jain, editors, *Multiagent Systems and Applications*, volume 45 of *Intelligent Systems Reference Library*, pages 55–88. Springer Berlin Heidelberg, 2013.
- [21] Dejan Mitrović, Mirjana Ivanović, Zoran Budimac, and Milan Vidaković. Supporting heterogeneous agent mobility with ALAS. *Computer Science and Information Systems*, 9(3):1203–1229, 2012.
- [22] Dejan Mitrović, Mirjana Ivanović, and Zoran Budimac. Towards an agent-oriented programming language based on Scala. In Theodore E. Simos, editor, *Proceedings of Symposium on Computer Languages, Implementations, and Tools (SCLIT 2012)*, volume 1479 of *AIP Conference Proceedings*, pages 478–481, September 2012.
- [23] Dejan Mitrović, Mirjana Ivanović, Milan Vidaković, and Ali Al-Dahoud. Developing software agents using Enterprise JavaBeans. In *Local Proceedings of the Fifth Balkan Conference in Informatics (BCI 2012)*, pages 147–149, 2012.
- [24] Dejan Mitrović, Zoltan Geler, and Mirjana Ivanović. Distributed distance matrix generator based on agents. In *Proceedings of the 2nd International Conference on Web Intelligence, Mining and Semantics (WIMS 2012)*, page Article 40. ACM, New York, NY, USA, 2012.
- [25] Mirjana Ivanović, Milan Vidaković, Dejan Mitrović, and Zoran Budimac. Evolution of Extensible Java EE-based Agent Framework. In Gordan Jezic, Mario Kusek, Ngoc-Thanh Nguyen, Robert Howlett, and Lakhmi Jain, editors, *Agent and Multi-Agent Systems. Technologies and Applications*, volume 7327 of *Lecture Notes in Computer Science*, pages 444–453. Springer Berlin / Heidelberg, 2012.

- [26] Mirjana Ivanović, Dejan Mitrović, Zoran Budimac, and Milan Vidaković. Metadata harvesting learning resources – an agent-oriented approach. In *Proceedings of the 15th International Conference on System Theory, Control and Computing (ICSTCC 2011)*, pages 306–311, October 2011.
- [27] Dejan Mitrović, Mirjana Ivanović, and Milan Vidaković. Introducing ALAS: a novel agent-oriented programming language. In Theodore E. Simos, editor, *Proceedings of Symposium on Computer Languages, Implementations, and Tools (SCLIT 2011)*, volume 1389 of *AIP Conference Proceedings*, pages 861–864, September 2011.
- [28] Dejan Mitrović, Zoran Budimac, Mirjana Ivanović, and Milan Vidaković. Agent-based approaches to managing fault-tolerant networks of distributed multi-agent systems. *Multiagent and Grid Systems*, 7(6):203–218, 2011.
- [29] Dejan Mitrović, Mirjana Ivanović, Zoran Budimac, and Milan Vidaković. An overview of agent mobility in heterogeneous environments. In *Proceedings of the Workshop on Applications of Software Agents (WASA 2011)*, pages 52–58, 2011.
- [30] Dejan Mitrović, Zoran Budimac, Mirjana Ivanović, and Milan Vidaković. Improving fault-tolerance of distributed multi-agent systems with mobile network-management agents. In *Proceedings of the International Multiconference on Computer Science and Information Technology*, volume 5, pages 217–222, October 2010.

LIST OF PRESENTATIONS

- ◇ D. Mitrović, M. Ivanović, M. Vidaković, and Z. Budimac. Extensible Java EE-based agent framework in clustered environments. In *12th German Conference on Multiagent System Technologies*, Stuttgart, Germany, September 23 - 25, 2014.
- ◇ D. Mitrović, M. Ivanović, H.-D. Burkhard. Intelligent Jason agents in virtual soccer simulations. In *11th German Conference on Multiagent System Technologies*, Koblenz, Germany, September 16 - 20, 2013.
- ◇ D. Mitrović, M. Ivanović, and C. Bădică. Jason agents in Java EE environments. In *17th International Conference on System Theory, Control and Computing*, Sinaia, Romania, October 11 - 13, 2013.
- ◇ D. Mitrović, M. Ivanović, Z. Budimac, and Lj. Jerinić. Teaching Java with the assistance of harvester and pedagogical agents. In *13th Workshop Software Engineering and Reverse Engineering*, Bansko, Bulgaria, August 26 - 31, 2013.
- ◇ D. Mitrović, M. Ivanović, and Z. Budimac. Erlang and Scala for agent development. In *6th International Conference on Information Technology*, Amman, Jordan, May 8 - 10, 2013.
- ◇ D. Mitrović, and D. Mašulović. Teaching Computer Graphics with Java. In *12th Workshop Software Engineering and Reverse Engineering*, Opatija, Croatia, September 2 - 9, 2012.
- ◇ D. Mitrović, Z. Geler, and M. Ivanović. Distributed distance matrix generator based on agents. In *2nd International Conference on Web Intelligence, Mining and Semantics*, Craiova, Romania, June 13 - 15, 2012.
- ◇ M. Ivanović, D. Mitrović, Z. Budimac, and M. Vidaković. Metadata harvesting learning resources – an agent-oriented approach. In *15th International Conference on System Theory, Control and Computing*, Sinaia, Romania, October 14 - 16, 2011.
- ◇ M. Ivanović, D. Mitrović, and M. Radovanović. Elective Course OOP II: Creation, Experiences, Students' Opinions. In *11th Workshop Software Engineering and Reverse Engineering*, Ohrid, FYR of Macedonia, August 22 - 27, 2011.
- ◇ D. Mitrović, M. Ivanović, Z. Budimac, and M. Vidaković. An overview of agent mobility in heterogeneous environments. In *1st Workshop on Applications of Software Agents*, Novi Sad, Serbia, July 3 - 5, 2011.

- ◇ D. Mitrović, Z. Budimac, M. Ivanović, and M. Vidaković. Improving fault-tolerance of distributed multi-agent systems with mobile network-management agents. In *International Multiconference on Computer Science and Information Technology*, Wisla, Poland, October 18 - 20, 2010.
- ◇ D. Mitrović, and M. Ivanović. New topic for Java course: Introduction to 3D graphics programming with JOGL. In *10th Workshop Software Engineering and Reverse Engineering*, Ivanjica, Serbia, September 5 - 12, 2010.