



Marko Bajec

Curriculum Vitae

Full Professor, Head of the Laboratory for Data Technologies

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Marko Bajec is a *Full Professor* at the *Faculty of Computer & Information Science, University of Ljubljana*. He is member of the *management board and senate* of the faculty. Since 2009, he is on the position of the *Head of the Laboratory for Data Technologies*. He is also a *cofounder* and a *board member* of a spin-off company Optilab, a leading Slovenian company in *fraud detection* in insurance. From July 2013, he acts as a *Vice Dean for Economic Affairs* at the Faculty for Computer and Information Science. His research interests are related to *data technologies* (since 2009) and *IT Governance* (before 2009) and include: information retrieval, web search and extraction, data integration, data management, data analysis, software development methods, IT/IS strategy planning.

Bibliography

In the last 15 years, Marko Bajec has published more than 50 original scientific papers in peer reviewed journals and more than 170 papers altogether. His paper entitled »*A Methodology and Tool Support for Management Business Rules in Organisations*« has been selected several times as one of the top 25 articles published in the international journal *Information Systems* (see top25.sciencedirect.com). One of his recent publications "*Ubiquitousness of link-density and link-pattern communities in real-world networks*" he has co-authored with his young researcher, was published in *The European Physical Journal B* and got special recognition in scientific news, such as *ACM.org*, *IEEE Computer.org*, *Springer*, *Science daily*, *Space daily* etc.

Journal papers (indexed in SCI) published in the last 5 years

KRALLINGER, Martin, ŽITNIK, Slavko, BAJEC, Marko, et al. The CHEMDNER corpus of chemicals and drugs and its annotation principles. *Journal of cheminformatics*, ISSN 1758-2946, 2015, vol. 7, suppl. 1, pp 1-17, IF(2014)=4.54.

ŠUBELJ, Lovro, ŽITNIK, Slavko, BLAGUS, Neli, BAJEC, Marko. Node mixing and group structure of complex software networks. *Advances in complex systems*, ISSN 0219-5259, 2014, vol. 17, no. , pp 1-26, IF(2013)=0,786.

ŠUBELJ, Lovro, BAJEC, Marko. Group detection in complex networks : an algorithm and comparison of the state of the art. *Physica. A*, ISSN 0378-4371. March 2014, vol. 397, pp 144-156, IF(2013)=1.722.

BLAGUS, Neli, ŠUBELJ, Lovro, BAJEC, Marko. Assessing the effectiveness of real-world network simplification. *Physica. A*, ISSN 0378-4371, Nov. 2014, vol. 413, pp 134-146, IF(2013)=1.722

ŠUBELJ, Lovro, FIALA, Dalibor, BAJEC, Marko. Network-based statistical comparison of citation topology of bibliographic databases. *Scientific reports*, ISSN 2045-2322, 2014, 4, pp 1-10, IF(2013)=5.078

ŽITNIK, Slavko, ŠUBELJ, Lovro, BAJEC, Marko. SkipCor : skip-mention coreference resolution using linear-chain conditional random fields. *PLoS one*, ISSN 1932-6203, Jun. 2014, vol. 9, no. 6, pp 1-14, IF(2013)= 3.534.

- ŠUBELJ, Lovro, BAJEC, Marko. Group detection in complex networks : an algorithm and comparison of the state of the art. *Physica. A.* March 2014, vol. 397, str. 144-156, IF(2012)=1,676.
- BLAGUS, Neli, ŠUBELJ, Lovro, BAJEC, Marko. Self-similar scaling of density in complex real-world networks. *Physica, A.* [Print ed.], 2012, vol. 391, no. 8, str. 2794-2802, IF(2011)= 1.373.
- ŠUBELJ, Lovro, BAJEC, Marko. Ubiquitousness of link-density and link-pattern communities in real-world networks. *Eur. phys. j., B Cond. matter phys. (Print)*, 2012, vol. 85, no. 1, str. 1-11, IF(2011)=1.534.
- ŽITNIK, Slavko, ŠUBELJ, Lovro, LAVBIČ, Dejan, VASILECAS, Olegas, BAJEC, Marko. General context-aware data matching and merging framework. *Informatika (Vilnius)*, 2013, vol. 24, no. 1, str. 119-152, IF(2011)=1.627.
- ŠUBELJ, Lovro, BAJEC, Marko. Robust network community detection using balanced propagation. *Eur. phys. j., B Cond. matter phys. (Print)*, 2011, vol. 81, no. 3, str. 353-362, IF(2011)=1.534.
- ŠUBELJ, Lovro, FURLAN, Štefan, BAJEC, Marko. An expert system for detecting automobile insurance fraud using social network analysis. *Expert syst. appl.*. [Print ed.], 2011, vol. 38, no. 1, str. 1039-1052, IF(2011)=2.203.
- ŠUBELJ, Lovro, BAJEC, Marko. Community structure of complex software systems : analysis and applications. *Physica, A.* [Print ed.], 2011, vol. 390, no. 16, str. 2968-2975, IF(2011)= 1.373.
- ŠUBELJ, Lovro, BAJEC, Marko. Unfolding communities in large complex networks : combining defensive and offensive label propagation for core extraction. *Phys. rev., E Stat. nonlinear soft matter phys. (Print)*, 2011, vol. 83, no. 3, str. 1-12, IF(2011)=2.255.
- FURLAN, Štefan, VASILECAS, Olegas, BAJEC, Marko. Method for selection of motor insurance fraud management system components based on business performance. *Technol. econ. dev. econ. (Spausd.)*. [Print ed.], 2011, vol. 17, no. 3, str. 567-593, IF(2011)=3.235.
- ŽVANUT, Boštjan, BAJEC, Marko. A tool for IT process construction. *Inf. softw. technol.*. [Print ed.], Apr. 2010, vol. 52, no. 4, str. 397-410, IF(2010)=1.507.
- VAVPOTIČ, Damjan, BAJEC, Marko. An approach for concurrent evaluation of technical and social aspects of software development methodologies. *Inf. softw. technol.*. [Print ed.], 2009, vol. 51, no. 2, str. 528-545, IF(2009)=1.821.

Projects

In the last 10 years, Bajec has led or coordinated more than 20 industrial and research projects in total amount more than 26 FTE.

Projects from the last 3 years

- *SWITCH: Software Workbench for Interactive, Time Critical and Highly self-adaptive cloud applications, European Project (Framework Programmes) (643963), 2015–2018*
- *Anomaly detection in operational data.* Industry-founded Project, Celtra d.o.o., 2014-2015
- *NABu: Development of algorithms for network analysis in large company (430-168/2013/91).* Structural Funds Project, Slovenian Ministry of Education, Science and Sport , 2014-2015
- *Uniform highly available and robust application platform for telecommunications services,* Iskratel d.d., 2013-2014

- *Intelligent data acquisition with ontology support*, Slovenian Research Agency, 2012 – 2013
- *TellMeMore and WhoKnowsWho: Development of a Prototype System*, Optilab d.o.o.; 2011-
- *Competence Centre OPCOMM – Open Intelligent Communication Platform*, Structural Funds (3211-10-000468), 2011–2013
- *Competence Centre CLASS – Cloud Assisted Services*, Structural Funds (3211-10-000467), 2011–2013

International Experience

Marko Bajec has served as a program committee member of several international conferences, such as CAiSE, IEEE RE, IEEE RCIS, ICISOFT, POEM, DB&IS, DATA, ADBIS, ICSEA, IBIMA, ME, MUSE, ICIST, OTI etc. Since 2009 he has been a member of the program board of the top class conference CAiSE (International Conference on Advances in Software Engineering). In 2012, he acted as a CAiSE WS co-chair. In 2014, he was a program chair of the IEEE conference RCIS 2014 (Research Challenges in Information Science). He was also appointed as a general chair for the conference CAiSE 2016 to be held in Ljubljana. In the years 2005-2013, he was actively involved in the organisation of the largest Slovenian conference on informatics (DSI) with 500+ participants. He has acted as DSI program chair and steering committee member in the years 2005-2007 and 2008-present, respectively. As a reviewer he has served for a number of journals, including *Information Systems* (Elsevier), *Journal of Intelligent Information Systems* (Springer), *Information Systems Frontiers* (Springer), *Information and Software Technology* (Elsevier), *Software and Systems Modeling* (Springer), *People and Sustainable Organization* (Peter Lang pub.), *Computer Science and Information Systems* (COMsis), *International Journal of Information System Modeling and Design* (IGI Pub.) etc. He is also involved as the editorial board member of the *International Journal of Information System Modeling and Design*.

Awards and Recognitions

In 2010, Marko Bajec was awarded from the Slovenian Society INFORMATIKA for his contribution in transferring knowledge to industry.

In 2013, he was awarded at the international conference on Information Society for on-going achievements.

In 2013, his research work “An expert system for detecting automobile insurance fraud using social network analysis” performed with his young researchers Lovro Šubelj and Štefan Furlan received a special recognition from ARRS for outstanding research results in 2011.

In 2013, his young researcher Marko Janković got best paper award at the conference IEEE RCIS 2013.

In 2013, his young researcher from industry, Slavko Žitnik and his colleague Marinka Žitnik, took first place in the BioNLP Shared Task challenge – Identification of gene transactions at the ACL 2013 conference.

In 2014, he received a Gold Plaque from University of Ljubljana for outstanding achievements in research and pedagogical work.

In 2014, he was received a Mentor of the Year award from Slovenian association of doctoral students.

Marko Bajec

A handwritten signature in blue ink, appearing to read 'Marko Bajec', with a stylized, cursive script.

Ljubljana, February 20, 2015