ADIS ALIHODZIC

CONTACT INFORMATION

Department of Mathematics
Faculty of Science
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Zmaja od Bosne, 71000, Sarajevo
Bosnia and Herzegovina

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PERSONAL INFORMATION

Citizenship: Bosnia-Herzegovina
Gender: Male

EMPLOYMENT

Faculty of Science in Sarajevo

2007-2011 *Teaching Assistant*
2011-2015 Senior Teaching Assistant
2016-Present *Assistant Professor*

EDUCATION

University of Sarajevo, Sarajevo, Bosnia and Herzegovina
Ph.D. in Computer Science, January 2016
Thesis: "The improvements of metaheuristic Bat-inspired algorithm for constrained problems."

University of Sarajevo, Sarajevo, Bosnia and Herzegovina
M.Sc. in Applied Mathematics-Computer Science, July 2011
Master Thesis: "The reconstruction of multidimensional images from the projections using integral transforms with the applications in medicine."

University of Sarajevo, Sarajevo, Bosnia and Herzegovina
B.Sc. in Applied Mathematics-Computer Science, December 2006
"The Fortune's algorithm for computing of Voronoi diagrams.**"**

RESEARCH INTERESTS

Optimization Problems, Computer Vision, Computer Graphics, Computational Geometry, Mathematical Modeling, Fuzzy Logic, Image Processing, Fuzzy Image Processing, Data Compression, Stereo Matching, High Dynamic Range Imaging, Image and Video Compression, Object Recognition, Machine Learning, Algorithms, Data Structures.

PUBLICATIONS

1. Milan Tuba and Nebojsa Bacanin and Adis Alihodzic, Multilevel Image Thresholding by Fireworks Algorithm, In: Proceedings of the 25th International Conference Radioelektronika, April, 21-23, 2015, Pardubice, Czech Republic, IEEE & Čes, pp. 326-330, isbn: 978-1-4799-8117-5
2. Milan Tuba and Nebojsa Bacanin and Adis Alihodzic, Multilevel Image Thresholding by Fireworks Algorithm, In: Proceedings of the 25th International Conference Radioelektronika, April, 21-23, 2015, Pardubice, Czech Republic, IEEE & Čes, pp. 326-330, isbn: 978-1-4799-8117-5
3. Adis Alihodzic and Milan Tuba, Improved Bat Algorithm Applied to Multilevel Image Thresholding, The Scientific World Journal, special issue Computational Intelligence and Metaheuristic Algorithms with Applications, 2014, vol. 2014 (2014), no. Article ID 176718, p. 16, 10.1155/2014/176718
4. Milan Tuba and Adis Alihodzic and Nebojsa Bacanin, Cuckoo Search and Bat Algorithm Applied to Training Feed-Forward Neural Networks, Studies in Computational Intelligence, 2014, vol. 585/2015, pp. 139-162, issn: 1860-949X, doi: 10.1007/978-3-319-13826-8_8
5. Adis Alihodzic and Milan Tuba, Improved Hybridized Bat Algorithm for Global Numerical Optimization, In: Proceedings of the 16th IEEE International Conference on Computer Modelling and Simulation (UKSim-AMSS '14), March 26-28, 2014, Cambridge, UK, IEEE, pp. 57-62, isbn: 978-1-4799-4923-6, doi: 10.1109/UKSim.2014.97
6. Milan Tuba and Nebojsa Bacanin and Adis Alihodzic, Firefly algorithm for multi-objective RFID network planning problem, In: Proceedings of the 22nd Conference on Telecommunications Forum Telfor (TELFOR'14), November 25-27 2014, Belgrade, Serbia, IEEE, pp. 95-98, isbn: 978-1-4799-6190-0, doi: 10.1109/TELFOR.2014.7034365
7. Adis Alihodzic and Milan Tuba, Bat Algorithm (BA) for Image Thresholding, In: Proceedings of the 12th International Conference on Signal Processing (SIP '13), Septembar 17-19, 2013, Baltimore, MD, USA, WSEAS, pp. 364-369, isbn: 978-960-474-330-8, http://www.wseas.us/e-library/conferences/2013/Baltimore/TESIMI/TESIMI-50.pdf
8. Adis Alihodzic and Milan Tuba, Framework for Bat Algorithm Optimization Metaheuristic, In: Proceedings of the 4th International Conference on Bioscience and Bioinformatics (ICBB '13), August 27-29, 2013, Chania, Crete Island, Greece, WSEAS, pp. 157-162, isbn: 978-960-474-326-1, http://www.wseas.us/e-library/conferences/2013/ Chania /BIOMED/BIOMED-25.pdf
9. Capor-Hrošik, R., Alihdožić, A., Tuba, M., „Firefly Algorithm for Constrained Optimization Problems", 12th International Conference on Signal Processing (SIP '13), Baltimore, MD, USA, September 17-19, 2013.
10. Adis Alihodzic, Nedzad Dukic, Comparisons of algorithms for image reconstruction in the plane: C with MEX vs. MATLAB, Technics Technologies Education Management (TTEM), 2013, vol. 8, no. 4, issn: 1840-1503, e-ISSN: 1986-809X
11. Alihodzić, A., Dukić, N., „Comparisons of Algorithms for Dd Medical Image Reconstruction and Filtering", *Arhivska praksa, 2013*.
12. N. Dukic, A. Alihodzic. Fuzzy formulas in data modeling" has been reviewed positively and is accepted for Publication in Mathematica Balkanica 2013.
13. Almir Alihodžić and Dževad Zečić and Dejan Erić and Adis Alihodžić, Mogućnost primjene savremene portfolio teorije na tržištu kapitala Bosne i Hercegovine, Business Development Conference 2010, 12 November, 2010, Ekonomski fakultet, CIP i BSC, Zenica, pp. 199-213, issn: 1840-4006.

CONFERENCE PRESENTATIONS

1. Alihodzić, A., Tuba, M., "Improved Hybridized Bat Algorithm for Global Numerical Optimization", IEEE, 2014.
2. Alihodzić, A., Tuba, M., „Bat Algorithm for Image Thresholding", 12th International Conference on Signal Processing (SIP '13), Baltimore, MD, USA, September 17-19, 2013.
3. Capor-Hrošik, R., Alihdožić, A., Tuba, M., „Firefly Algorithm for Constrained Optimization Problems", 12th International Conference on Signal Processing (SIP '13), Baltimore, MD, USA, September 17-19, 2013.
4. Alihodzić, A., Tuba, M., „Framework for Bat Algorithm Optimization Metaheuristic", 4th International Conference on Bioscience and Bioinformatics (ICBB '13), Chania, Crete Island, Greece, August 27-29, 2013.
5. N. Dukic, A. Alihodzić, "Mathematical Conference (MICOM)", Sarajevo, 2012.

6. Alihodzic, A., Alihodzić, A., "The possibility of application of modern portfolio theories in the capital market of Bosnia and Herzegovina", Zenica, November 2010.

TEACHING EXPERIENCE

Faculty of Mathematics
Teaching Assistant, **Department of Mathematics**, University of Sarajevo

- Computer Graphics
- Computational Geometry
- Artificial intelligence
- Operating Systems
- Databases
- Mathematical modelling
- Computer Networking
- Image Processing
- Fuzzy Systems And Neural Networks
- The Web And Network Programming

Faculty of Mechanical Engineering

Teaching Assistant, **Defense Technologies Department**, University of Sarajevo

- Assisted with Programming, I course
- Assisted with Expert Systems and Knowledge Base course;

RESEARCH EXPERIENCE

Faculty of Mathematics, University of Skopje

- *Participated in the Ph.D. course: Data Structures and High-Performance Computing, which took place in Skopje from 7.11.2011 to 3.12.2012*

Faculty of Mathematics, University of Shkodra

- *Participated in courses: Mathematical Modeling I and Mathematical Modeling II, which took place in Shkodra from 04.07.2010 to 30.07.2010*

Faculty of Mathematics, University of Sarajevo

- *Member of the scientific team on a research project, "Fuzzy relational databases and fuzzy formulas in the field of artificial intelligence" under the guidance doc. Dr. Nedžad Dukic, Sarajevo, 2010*
- *Participated in several seminars that were held on the theme: "Micro-Programming," Sarajevo, 2009*

OTHER EXPERIENCE

Software Engineer, Integrated Business Solutions

- *He was designed and implemented the "Free SMS and Voice Service" for Android mobile devices, February 2012*

IT Support, Faculty of Mathematics, University of Graz

- *Participated in a seminar in mathematical modeling on the subject: Application of IT technology in mathematical modeling, which was held from 07.09.2009 to 11.09.2009 in Graz*

Balkan Mathematical Olympiad, Faculty of Mathematics, University of Sarajevo

- *Participated in the organization "Balkan Mathematical Olympiad" which took place in Sarajevo on 25-30 June 2009 year*

COMPUTER SKILLS

Programming Languages: Fortran, C, C++, Java, C#, Matlab, ABAP, PL/SQL, Pascal, Perl, Clipper, Lotus 1-2-3, Delphi, Visual Basic, PHP, ASP, HTML, Javascript, Mel-Script, Ajax and so on.

APIs and Frameworks: DirectX, OpenCV, Android, Play, Node.js

Databases: DBASE, PARADOX, FOXPRO, ACCESS, SQL, MYSQL, ORACLE.

Algorithm Development Environments: VISUAL STUDIO 2013, MATLAB, MATHEMATICA.

Software Packages: Microsoft Office, Corel Draw, Adobe Photoshop, Maya, 3D Studio Max, MotionBuilder, Photoshop, Illustrator, After Effects, Nuke, Poser Pro, Unity, Auto CAD, QuarkXPress, Latex and so on.

Operating Systems: Dos, Unix, Minix, FreeBSD, Linux (all versions), Windows (all versions).

Algorithm Implementations: FFT, DWT, Fortune's algorithm, Optical Flow, Mean Shift Image Segmentation, Poisson Image Editing, Genetic algorithm (GA), Differential Evolution (DE) Algorithm, Particle Swarm Optimization (PSO) Algorithm, Ant Colony Optimization (ACO), Artificial Bee Colony (ABC) Algorithm, Harmony Search (HS) Algorithm, Firefly Algorithm (FFA), Bat Algorithm (BA), Cuckoo Search (CS) Algorithm, Fireworks Algorithm (FA) and so on.

EDITORIAL BOARD MEMBER

International Journal of Bio-Inspired Computation

REVIEWER

The Scientific World Journal 2014

International Journal of Innovative Computing and Applications 2016

Journal of the Operational Research Society of India 2016

3rd Intl. Conference on Soft Computing & Machine Intelligence (ISCMI 2016) November 23-25, 2016, Dubai, UAE

FOREIGN LANGUAGE SKILLS

Languages:

- English – "native" reading and writing, "near native" listening and conversation
- Russian – "good" reading and writing, "basic" listening and conversation
- German – "basic" reading and writing, listening and conversation

HONORS & AWARDS

Fellowship, 2003/2004