Dr. Zoran Miljković

Personal data

Address:
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Faculty of Mechanical Engineering,
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Nationality:
Serbian

Date of birth:
August 25th, 1961

Research or academic title

Full Professor

Research field/area

Mechanical engineering /
Robotics and Artificial Intelligence, Machining Technology, Intelligent Manufacturing Systems, Mechatronics, Autonomous Systems and Machine Learning, Development and Application of Artificial Neutral Networks in Manufacturing Technologies, Group Technologies, Development of Teaching Means and Equipment, Innovation in Higher Engineering Education.

Education

2000	**Doctor of technical science (PhD-Mech.Eng.)** University of Belgrade - Faculty of Mechanical Engineering, Department of Production Engineering Dissertation title: Development of Control Algorithms for Autonomous Industrial Robots Based on the Recognition System and Learning
1994	**Magister Scientiae – MSc-Mech.Eng. (four semesters & thesis-research prerequisite to PhD)** University of Belgrade - Faculty of Mechanical Engineering, Department of Production Engineering Thesis title: Research and Development of Microrobot for Assembly of Mechatronic Fits
1988	**Dipl.-Ing. (ten semesters with diploma work)** University of Belgrade - Faculty of Mechanical Engineering, Department of Production Engineering Thesis title: Warehousing Automation System

Employment

Feb. 1990 - Present	**Full Professor (since November 2010)** University of Belgrade - Faculty of Mechanical Engineering, Department of Production Engineering Laboratory for Industrial Robotics and Artificial Intelligence (ROBOTICS & AI)
Jan. 1989 – Jan. 1990	**Designer - constructor of food equipment** Minel - food equipment Pančevo - Belgrade
Nov. 1988 – Jan. 1989	**Technical subjects teacher** Technical centre - "Radoje Dakić" Belgrade

Publications (selected)

1. **Miljković,Z.**, Mitić,M., Lazarević,M., Babić,B., Neural Network Reinforcement Learning for Visual Control of Robot Manipulators, Journal *Expert Systems with Applications* (ISSN 0957-4174), Vol. 40 Issue: 5, pp. 1721-1736, Elsevier, April 2013.
http://www.sciencedirect.com/science/article/pii/S

Languages
Serbian, English, German

Number of citations (excluded self-citations)
1005

Hirsch index
15

Certificates
- **Robotics and Autonomous Systems** - Certificate of Outstanding Contribution in Reviewing, awarded July 2017 in recognition of the contribution made to the quality of the journal.
- **Applied Soft Computing Journal** - Certificate of Outstanding Contribution in Reviewing, awarded October 2017 in recognition of the contribution made to the quality of the journal.
- Certificate of Reviewing - **Expert Systems with Applications**. Awarded in recognition of the review contributed to the journal in December 2014 (7 reviews).
- Certificate of Reviewing - **Swarm and Evolutionary Computation**. Awarded in recognition of the review contributed to the journal in July 2018 (2 reviews).
- Certificate of Reviewing - **Neurocomputing**. Awarded in recognition of the review contributed to the journal in December 2017 (1 review).
- Certificate of Reviewing - **Engineering Applications of Artificial Intelligence**. Awarded in recognition of the review contributed to the journal in June 2014 (1 review).

0957417412010640 **(Online available - 9 October 2012 – DOI: 10.1016/j.eswa.2012.09.010), Elsevier, (Science Citation Index-Web of Science® – IF = 1,965 (2013); source KoBSON)**

2. **Miljković,Z.,** Vuković,N., Mitić,M., Babić,B., **New Hybrid Vision-Based Control Approach for Automated Guided Vehicles**, *The International Journal of Advanced Manufacturing Technology* (Print ISSN 0268-3768), Vol. 66 Issues: 1-4, pp. 231-249, Springer-Verlag London Ltd., April 2013. http://link.springer.com/article/10.1007%2Fs00170-012-4321-y (Online ISSN 1433-3015_Available online: 6 July 2012_First™ Articles; DOI: 10.1007/s00170-012-4321-y), (**Science Citation Index-Web of Science® – IF = 1,779 (2013)**; source **KoBSON**)

3. Vuković,N., Petrović,M., **Miljković,Z.,** **A comprehensive experimental evaluation of orthogonal polynomial expanded random vector functional link neural networks for regression**, *Applied Soft Computing* (ISSN 1568-4946), Special Issue: *Non-Iterative Learning*, Vol. 70, pp. 1083-1096, September 2018, Elsevier, https://www.sciencedirect.com/science/article/pii/S1568494617306154 (Available online: 12 October 2017; DOI: 10.1016/j.asoc.2017.10.010; https://doi.org/10.1016/j.asoc.2017.10.010) (**Science Citation Index-Web of Science® – IF = 4.873 (2018)**; source **KoBSON**)

4. Petrović,M., **Miljković,Z.,** Jokić,A., **A novel methodology for optimal single mobile robot scheduling using whale optimization algorithm**, *Applied Soft Computing* (ISSN 1568-4946), Vol. 81, In Press (105520), August 2019, Elsevier, https://doi.org/10.1016/j.asoc.2019.105520 (Available online: 23 May 2019) (**Science Citation Index-Web of Science® – IF = 4.873 (2018),** source **KoBSON**)

5. Petrović,M., Villalonga,A., **Miljković,Z.,** Castaño,F., Strzelczak,S., Haber,R., **Optimal Tuning of Cascade Controllers for Feed Drive Systems using Particle Swarm Optimization**, Proceedings of the 17th IEEE International Conference on Industrial Informatics - Artificial Intelligence in Industrial Applications (IEEE-INDIN 2019_ISBN: 978-1-7281-2927-3/19 ©2019 IEEE), pp. 325-330, Helsinki, Finland, 22-25 July, 2019.
Conferences ranking by Qualis, Rank: B3

Other information

- Excellent knowledge of *Microsoft Office* PC package;
- Industrial robots programming;
- Long-term experience in educational activities: "Curriculum Development and ECTS at the University of Belgrade – Faculty of Mechanical Engineering";
- External expert (2006-2020) assisting to "Research Executive Agency - REA" (Established by European Commission – Brussels);
- Evaluator of *Tempus* and *Erasmus Mundus* proposals (2009-2013) within the "EACEA/07 – Executive Agency" (Established by European Commission – Brussels);
- Miljković, Z., **Systems of artificial neural networks in production technologies** (scientific monograph in Serbian), University of Belgrade - Faculty of Mechanical Engineering, Belgrade, (2003), The scientific monograph "Systems of Artificial Neural Networks in Production Technologies" **won the prize "St. Sava" for the best book issued** at the Faculty of Mechanical Engineering in 2003;
- Miljković, Z., Aleksendrić, D., **Artificial neural networks – solved examples with short theory background**

Projects and activities (selected)

2017–2018	Babić, B., Miljković, Z. and Petrović, M., *Information technologies in production engineering*, Project within program activity "Development of Higher Education", Project funded by the Ministry of Education, Science and Technological Development of the Government of the Republic of Serbia
2011 - 2019	Babić, B., Miljković, Z., Bugarić, U., et al. *An innovative, ecologically based approach to the implementation of intelligent manufacturing systems for the production of sheet metal parts*, Grant: TR-35004, Project funded by the Ministry of Education, Science and Technological Development of the Government of the Republic of Serbia
2009–2012	144856-TEMPUS-2008-RS-JPGR "*International Accreditation of Engineering Studies*"
2006-2008	TEMPUS JEP 40069-2005 - "*Multidisciplinary Studies of Design in Mechanical Engineering*"
2004	Miljković,Z., Milanović,D., Nešić,N., Stošić,D., Milanović,S., *Production process planning for Siemens electro-cupboard manufacturing and layout design of the plant within the* "*Montprojekt*" *- Belgrade*, Manufacturing project funded by company "Montprojekt" – Belgrade

Products, services (datasets, software)

1. Miljković, Z., **BPnet** - "*Back-Propagation*" - artificial neural *network* (*software* within projects: 11E08PT1 and MIS.3.02.0127.B. - Ministry of Science and Technological Development – Government of the Republic of Serbia).

2. Miljković,Z., **ART Simulator** - "*Adaptive Resonance Theory*" - artificial neural network (*software* within projects: 11E08PT1,

(university textbook in Serbian),
University of Belgrade - Faculty of Mechanical Engineering, Belgrade, (issues 2009, 2018), The textbook "Artificial neural networks – solved examples with short theory background" **won the prize "St. Sava" for the best book issued** at the Faculty of Mechanical Engineering in 2009;

- Kalajdžić, M., (Editor), Tanović, Lj., Babić, B., Glavonjić, M., Miljković, Z., et al., **Cutting Technology** (university manual-auxiliary textbook in Serbian), University of Belgrade - Faculty of Mechanical Engineering, Belgrade.

S.5.33.69.0144 and MIS.3.02.0127.B. - Ministry of Science and Technological Development – Government of the Republic of Serbia).

3. Miljković,Z., **Make it** – *Software for image processing* (*software* within projects: 11E08PT1 and S.5.33.69.0144 - Ministry of Science and Technological Development – Government of the Republic of Serbia).

4. Miljković,Z., **Laboratory Model of the Flexible Manufacturing System for Production of SIVACON Electrical Cupboard** (*technical solution*, prototype of the flexible manufacturing system for electrical cupboard production).

5. Miljković,Z., Mitić,M., **Empirical Control Strategy for Autonomous Robot Based on Recognition System and Machine Learning** (*methodology*, intelligent control system for autonomous mobile robot).