

Slaviša Jovanović

Associate professor (MCF HDR)

Institut Jean Lamour
UMR 7198 CNRS
Université de Lorraine
Campus Artem, 2 allée
André Guinier BP 50840
F-54011 Nancy Cedex
☎ +333.72.74.26.44
✉ slavisa.jovanovic@univ-lorraine.fr



Education

- 2022 **Professorial dissertation (*Habilitation à diriger des recherches - HDR*)**, Université de Lorraine, Institut Jean Lamour, Nancy, France.
- 2009 **PhD in microelectronics and instrumentation**, Université Henri Poincaré, Laboratoire d'Instrumentation Électronique de Nancy - LIEN, Nancy, France.
- 2006 **Master of Science in Electronics**, Université Henri Poincaré Nancy - Institut National Polytechnique de Lorraine (INPL), Nancy, France.
- 2004 **Dipl. ing. degree in Electronics**, University of Belgrade, Serbia.

Professional experiences

- 2022-now **Associate professor**, Université de Lorraine, Institut Jean Lamour, Nancy, France.
- 2012-2022 **Assistant professor**, Université de Lorraine, Institut Jean Lamour, Nancy, France.
- 2010-2012 **Research engineer**, Université Henri Poincaré, Laboratoire IADI, Nancy, France.
- 2009-2010 **Post-doctoral fellow**, Université Henri Poincaré, Laboratoire IADI, Nancy, France.
- 2006-2009 **PhD student**, Université Henri Poincaré, Laboratoire LIEN, Nancy, France.
- 2006 (6m) **Master Research internship**, Université Henri Poincaré, Laboratoire LIEN, Nancy, France.
- 2004 **National military service**, Užice, Belgrade, Serbia.
- 2003-2004 (6m) **Internship**, HDL House Design, Belgrade, Serbia.

Research activities

Projects

- 2022-2026 ANR Project Hydres (participant): Hybrid photovoltaic-thermoelectric systems for solar energy harvesting
- 2020-2023 Erasmus+ Project (participant) : sensors, artificial intelligence for remote health monitoring
- 2020 Region project on artificial intelligence (participant) : FPGA implementation of CNN
- 2018-2021 ANR Project (participant) : Chipmunks, Mutual coupling and synchronisation of Nano-Contact Vortex Oscillator (NCVO) for information processing

2009-2012 ANR project (participant) : ARDMAHN, Dynamic reconfigurable architecture for home networking

2011 - Motus - OSEO - maturation and technology transfert project

Publications

Summary

Book chapters: 2

Refereed publications (journals): 17

Refereed national publications: 4

Refereed international conferences: 39

Refereed national conferences and workshops : 14

Refereed pedagogical conferences : 7

Patents: 1

Selected publications

Slavisa Jovanovic, Hassan Rabah and Serge Weber: **Larger- scale distributed and scalable SOM-based architecture for high-dimensional data reduction**, *In: AI for Emerging Verticals: Human-robot computing, sensing and networking. Ed. by Muhammad Zeeshan Shakir and Naeem Ramzan. Computing. Institution of Engineering and Technology, 2020. Chap. 16, pp. 315–336.*

S. Jovanović and H. Hikawa, **A Survey of Hardware Self-Organizing Maps**, *in IEEE Transactions on Neural Networks and Learning Systems*, doi: 10.1109/TNNLS.2022.3152690.

Kaicong Sun, Maurice Koch, Zhe Wang, Slavisa Jovanovic, Hassan Rabah and Sven Simon: **An FPGA-Based Residual Recurrent Neural Network for Real-Time Video Super-Resolution**, *IEEE Transactions on Circuits and Systems for Video Technology*, doi: 10.1109/TCSVT.2021.3080241.

S. Jovanović, H. Rabah, S. Weber, K. B. Khalifa and M. H. Bedoui: **Scalable, dynamic and growing hardware self-organizing architecture for real-time vector quantization**, *2020 27th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Glasgow, Scotland, UK, 2020, pp. 1-4, doi: 10.1109/ICECS49266.2020.9294921.*

Mehdi Abadi, Slavisa Jovanovic, Khaled Ben Khalifa, Serge Weber and Mohamed Hédi Bedoui: **A Scalable and Adaptable Hardware NoC-based Self Organizing map**, *Microprocessors and Microsystems, Volume 57, March 2018, Pages 1-14.*

Mehdi Abadi, Slavisa Jovanovic, Khaled Ben Khalifa, Serge Weber and Mohamed Hédi Bedoui: **A Multi-Application, Scalable and Adaptable Hardware SOM Architecture**, *International Joint Conference on Neural Networks (IJCNN), Budapest, Hungary, Jul. 14-19, 2019.*

Slavisa Jovanovic, Hassan Rabah and Serge Weber: **High performance scalable hardware SOM architecture for real-time vector quantization**, *Third IEEE Intern. Conf. on Image Processing, Appl. and Systems (IPAS 2018), Sophia-Antipolis, France, Dec. 12-14, 2018.*