

CURRICULUM VITAE

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SUMMARY:

- Teaches courses at bachelor and master levels in electrical engineering and computer and information science fields, including managing databases and data, AI and signal/image analysis and processing
- (co)supervisor of over 30 graduation/final thesis

RESEARCH INTERESTS:

- computer modeling of disordered systems using continuous and discrete percolation models, modeling solar cell characteristics, analysis of quantum dot nucleation probability in thin films, digital signal/image processing and analysis, computer vision

EDUCATION:

- PhD programme at Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB)- Title of doctoral thesis: “Modeling the nucleation and conductivity in a system of quantum dots” – PhD in Electrical engineering, the field of Electronics
- BSc programme at Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture in Split (FESB)- Title of thesis: “Computer modeling of the percolation model in nanostructures” – Bachelor of Science degree in Computer science

SCIENTIFIC PROJECTS:

A member of a scientific projects:

- "Optimization and design of time-frequency distributions", MZOS, project number: 069-0362214-1575, leader: prof. Viktor Sučić PhD
- "Continuous color detection and image sensor pixel characterization technique", MZOS, project number: 069-0362214-1575, leader: prof. Vera Gradišnik, PhD.
- COST action CA17137 - A network for Gravitational Waves, Geophysics and Machine Learning, dr. sc. Elena Cuoco (MC Croatia: izv. prof. dr. sc. Ivan Štajduhar), 2018 - 2021, European cooperation in Science and Technology, MC substitute

SCIENTIFIC BOARDS:

- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science (SpliTech2016), July 13-15, 2016. Split, Croatia
- Member of the organizing committee, The 9th International Exergy, Energy and Environment Symposium (IEEES-9), May 14-17, 2017, Split, Croatia
- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science (SpliTech2017), July 12-14, 2017, Split, Croatia
- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science (SpliTech2018), June 26-29, 2018, Split, Croatia.
- Member of the program committee, International Conference on Hydrogen Production (ICH2P-2018), July 16-19, Zagreb, Croatia
- Member of the program committee, 2nd International Conference on Research, Innovation and Commercialization (ICRIC-2018), 2018, Zagreb, Croatia
- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science SpliTech (SpliTech2019), June 18-21, 2019, Bol, Croatia.
- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science SpliTech (SpliTech2020), September 23-26, 2020, Split/online, Croatia.

- Member of the program committee, International Multidisciplinary Conference on Computer and Energy Science SpliTech (SpliTech2021), 8-11 September 2021, Split, Bol/online, Croatia.

SCIENTIFIC JOURNALS BOARDS:

- Member of editorial board of journal „Engineering Review“, published by Technical Faculty, Rijeka, 2013-2016.

BIBLIOGRAPHY

ARTICLES IN SCIENTIFIC JOURNALS AND BOOK CHAPTERS:

1. Saulig, Nicoletta; Lerga, Jonatan; Miličić Siniša; **Tomasović, Željka**,
2. Block-Adaptive Rényi Entropy-Based Denoising for Non-Stationary Signals; Sensors, 22 (2022) 21; 8251, 14. 10.3390/s22218251 (Scientific paper)
3. **Milanovic, Zeljka**; Saulig, Nicoletta; Marasović, Ivan; Seršić, Damir,
4. Spectrogram-based assessment of small SNR variations, with application to medical electrodes// EURASIP Journal on Advances in Signal Processing, 2019:38 (2019) 1, 14. 10.1186/s13634-019-0634-4 (Scientific paper)
5. Saulig, Nicoletta; Lerga, Jonatan; **Milanovic, Zeljka**; Ioana, Cornel, Extraction of Useful Information Content from Noisy Signals Based on Structural Affinity of Clustered TFDs' Coefficients// IEEE transactions on signal processing, 67 (2019) 12; str. 3154-3167. 10.1109/TSP.2019.2912134 (Scientific paper)
6. Saulig, Nicoletta; **Milanovic, Zeljka**; Ioana, Cornel, A Local Entropy-Based Algorithm for Information Content Extraction from Time-frequency Distributions of Noisy Signals// Digital signal processing, 70 (2017) str. 155-165. 10.1016/j.dsp.2017.08.005 (Scientific paper)
7. **Milanovic, Zeljka**; Zulim, Ivan; Pivac, Branko, Effects of substrate temperature on change in percolation properties of ultra-thin dielectric films// Physica status solidi. C, Current topics in solid state physics, 13 (2016) 10-12; str. 756-759. 10.1002/pssc.201610041 (Scientific paper)
8. Marasović, Ivan; **Milanovic, Zeljka**; Zulim, Ivan, Modelling and detection of failure in medical electrodes// Automatika: časopis za automatiku,

- mjerenje, elektroniku, računarstvo i komunikacije, 60(1) (2015) str. 1-9.
(Scientific paper)
9. **Milanovic, Zeljka**; Pivac, Branko; Zulim, Ivan, Nucleation simulation using a model of hard/soft discs// *Physica A, Statistical mechanics and its applications*, 417 (2015) str. 86-95. 10.1016/j.physa.2014.09.039 (Scientific paper)
 10. Marasović, Ivan; **Milanovic, Zeljka**; Betti, Tihomir, Resistance Fluctuations in GaAs Nanowire Grids// *Journal of nanomaterials*, 2014 (2014) str. 428390-1-428390-9. 10.1155/2014/428390 (Scientific paper)
 11. Garma, Tonko; **Milanovic, Zeljka**; Marasović, Ivan, Insulation verification using low voltage and high current sensitivity; *Engineering review (Technical Faculty University of Rijeka)*, 32 (2012) 2; str. 86-95. (Scientific paper)

EDITED BOOK:

1. Proceedings, 3rd International Conference on Smart and Sustainable Technologies (SpliTech 2018): Split, Croatia, June 26-29, 2018/ Perković, Toni; **Milanovic, Zeljka**; Vukojević, Katarina et al. (editor) Institute of Electrical and Electronics Engineers (IEEE), 2018. (Conference Proceedings)
2. Proceedings of the 9th Exergy, Energy and Environment Symposium/ Nižetić, Sandro; Šolić, Petar; **Milanovic, Zeljka** (editor) Fakultet elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu, 2017. (Conference Proceedings)
3. 2017 2nd International Multidisciplinary Conference on Computer and Energy Science (SpliTech)/ Perković, Toni; **Milanovic, Zeljka**, Vukojević, Katarina; Rodriguez, Joel J. P. C. et al. (editor) Fakultet elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu, 2017. (Conference Proceedings)
4. 2016 International Multidisciplinary Conference On Computer And Energy Science (SpliTech)/ **Milanovic, Zeljka**; Perković, Toni; Nižetić, Sandro et al. (editor) Fakultet elektrotehnike, strojarstva i brodogradnje Sveučilišta u Splitu, 2016. (Conference Proceedings)

SCIENTIFIC CONFERENCE PAPERS:

1. Pintarić, Neven; **Tomasović, Željka**; Development of Digital Competence Framework for Open Science// 2023. str. 1-6.
doi.org/10.23919/SpliTech58164.2023.10193131 (Scientific paper)
2. Abramović, Matej; **Tomasović, Željka**; Saulig, Nicoletta; Marasović, Ivan, Edge Detection Using Vector Quantization and Local Entropy Measures Applied to Spectrogram Component Extraction// 2023. str. 1-4.
10.23919/SpliTech58164.2023.10193655 (Scientific paper)
3. Saulig, Nicoletta; Etinger, Darko; **Milanovic, Zeljka**, Error Origin Analysis for Adaptive Time-Frequency Distribution Thresholding of Nonstationary Signals// Proceedings Elmar - International Symposium Electronics in Marine/ Muštra, M.; Vukovic J.; Zovko-Cihlar B. (editor). Hrvatsko društvo Elektronika u pomorstvu (ELMAR), 2019. str. 57-60.
10.1109/elmar.2019.8918894 (Scientific paper)
4. **Milanovic, Zeljka**; Saulig, Nicoletta; Marasović, Ivan, Signal Feature Recognition in Time-Frequency Domain Using Edge Detection Algorithms// Proceedings of the 4th International Conference on Smart and Sustainable Technologies (SpliTech 2019)/ Perković, Toni; Vukojević, Katarina; Rodrigues, Joel et al. (editor). Institute of Electrical and Electronics Engineers (IEEE), 2019. 1, 4. (Scientific paper)
5. Saulig, Nicoletta; Etinger, Darko; **Milanovic, Zeljka**, Analysis of entropy-based denoising algorithm's performance on signals in colored noise environments// Proceedings of Elmar-2018/ Muštra, Mario; Grgić, Mislav; Zovko-Cihar, Branka et al. (editor). 2018. str. 147-150. (Scientific paper)
6. Saulig, Nicoletta; **Milanovic, Zeljka**; Lerga, Jonatan; Griparić, Karlo, On the Selection of the Proper Number of Classes in TFD Segmentation for Extraction of Useful Information Content from Noisy Signals// 3rd International Conference on Smart and Sustainable Technologies Splitech 2018/ 2018. str. 1-5. (Scientific paper)
7. Lerga, Jonatan; Saulig, Nicoletta; Lerga, Rebeka; **Milanovic, Zeljka**, Effects of TFD Thresholding On EEG Signal Analysis Based On The Local Rényi Entropy// Proceedings of the 2nd International Multidisciplinary Conference on Computer and Energy Science SpliTech 2017/ 2017. str. 1-6. (Scientific paper)
8. **Milanovic, Zeljka**; Saulig, Nicoletta; Sučić, Viktor, A virtual instrument for efficient blind-source separation of nonstationary signals// Proceedings of

- the First International Multidisciplinary Conference on Computer and Energy Science (SpliTech2016)/ 2016. (Scientific paper)
9. **Milanovic, Zeljka**; Betti, Tihomir; Pivac, Branko; Percolation approach to modeling the conductivity of thin films// EMRS Spring meeting 2016, PROGRAMME AND BOOK OF ABSTRACTS/ 2016. str. T-20-T-20. (Conference Abstract)
 10. Pivac, Branko; **Milanovic, Zeljka**; Zulim, Ivan; Effects of percolation modeled surface roughness on electrical properties of ultra-thin mos capacitors and mis solar cells// EMRS Spring meeting 2016, program and book of abstracts/ 2016. str. K-10-K-10. (Conference Abstract)
 11. Saulig, Nicoletta; **Milanovic, Zeljka**; Mauša, Goran; Performance Comparison of Blind Source Separation Algorithms for Nonstationary Signals// Proceedings of International Conference on Innovative Technologies (IN-TECH 2015)/ 2015. (Scientific paper)
 12. **Milanovic, Zeljka**; Marasović, Ivan; Saulig, Nicoletta; Car, Zlatan; Analysis of Corkscrew Electrode Failure Origins// Proceedings of International Conference on Innovative Technologies (IN-TECH 2015)/ 2015. (Scientific paper)
 13. Marasović, Ivan; Saulig, Nicoletta; **Milanovic, Zeljka**; Renyi Entropy Based Failure Detection of Medical Electrodes// Proceedings of the 23rd International Conference on Software, Telecommunications and Computer Networks (SoftCOM 2015)/ 2015. (Scientific paper)
 14. Pivac, Branko; **Milanovic, Zeljka**; Zulim, Ivan; Modeling of surface roughness effects on C-V characteristics of ultra thin MOS capacitors// 16th International Conference on Thin Films Programme and book of abstracts/ Radić, Nikola; Zorc, Hrvoje (editor). Hrvatsko Vakuumsko Društvo (HVD), 2014. str. 175-176. (Conference Abstract)
 15. Pivac, Branko; **Milanovic, Zeljka**; Zulim, Ivan; Modeling of surface roughness effects on C-V characteristics of ultra thin MOS capacitors// Proceedings of International Conference on Thin Films, ICTF16/ 2014. (Conference Abstract)
 16. Saulig, Nicoletta; **Milanovic, Zeljka**; Orović, Irena; Stanković, Srdjan; Sučić, Viktor; Entropy Based Extraction and Classification of Frequency Hopping Signals from their TFDs// Proceedings of International Symposium ELMAR-2013/ 2013. (Scientific paper)

17. **Milanovic, Zeljka**; Saulig, Nicoletta; Sučić, Viktor; Nonstationary signal blind source separation using clustering algorithms// Proceedings of INTECH 2013/ 2013. (Scientific paper)
18. **Milanovic, Zeljka**; Marasović, Ivan; Zanchi, Vlasta; Analysis of PD response on different input voltages and incident light wavelengths// Proceedings of International Conference on Innovative Technologies IN-TECH 2012/ Car, Zlatan; Kudlaček, Jan; Pepelnjak, Tomaž (editor). 2012. str. 381-385. (Scientific paper)
19. **Milanovic, Zeljka**; Betti, Tihomir; Marasović, Ivan; Zulim, Ivan; Pivac, Branko; Model za procjenu pouzdanosti dielektričnog sloja u modernim MOS tranzistorima// Knjiga sažetaka 7. znanstvenog sastanka Hrvatskog fizikalnog društva/ Gajović, Andreja; Tokić, Vedrana; Zorić, Maja et al. (editor). Hrvatsko fizikalno društvo, 2011. (Conference Abstract)
20. **Milanovic, Zeljka**; Marasović, Ivan; Betti, Tihomir; Simulation of directed percolation on ideal and real random diode networks// Proceedings of International Conference on Innovative Technologies IN-TECH 2011/ Kudlaček, Jan; Car, Zlatan; Pepelnjak, Tomaž et al. (editor). 2011. str. 377-380. (Scientific paper)
21. Pivac, Branko; Betti, Tihomir; Zulim, Ivan; **Milanovic, Zeljka**; Perkolacijski model proboja tankog dielektričkog sloja// Knjiga sažetaka 6. znanstvenog sastanka Hrvatskog fizikalnog društva/ Buljan, Hrvoje; Horvatić, Davor (editor). Hrvatsko fizikalno društvo, 2009. str. 160-160. (Conference Abstract)
22. Gradišnik, Vera; **Milanovic, Zeljka**; Effect of Light and Voltage-Induced Defects on a-Si:H Three-Color Detector Transient Response// Proceedings of 45th International Conference on Microelectronics, Devices and Materials and the Workshop on Advanced Photovoltaic Devices and Technologies/ M. Topič, J. Krč, I. Šorli (editor). Society for Microelectronics, Electronic Components and Materials (MIDEM), 2009. str. 301-304. (Scientific paper)

WORKSHOPS AND PANELS AT INTERNATIONAL SCIENTIFIC CONFERENCES:

1. **Tomasović, Željka**, „Basics of Image Processing in Python (Google Colab environment)“// BAL- ADRIA Summer School on Digital Humanities, Zadar, Hrvatska, 19.06.2023. - 23.06.2023.