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## LANGUAGES

- English - Full professional proficiency
- Italian - B2
- French - A2
- Chinese - HSK2 and HSKK

## PROFESSIONAL EXPERIENCE

**2021 - now**
**Associate Professor at Faculty of Electrical Engineering, University of Montenegro**

**2016 - 2021**
**Assistant Professor at Faculty of Electrical Engineering, University of Montenegro**

**2015 - 2022**
**Director at Confucius Institute at University of Montenegro**

## MOST IMPORTANT AWARDS

**2023**
**2 BIG SEE Awards for 3D Modelling and 3D Printing**
The Center for Creative Economy of Southeast Europe, based in Ljubljana

**2021**
**BIG SEE Award for 3D Modelling and 3D Printing**
The Center for Creative Economy of Southeast Europe, based in Ljubljana

**2015**
**Danubius Young Scientist Award**
Austrian Federal Ministry for Science, Research and Economy (BMWFW) and the Institute for the Danube Region and Central Europe (IDM)

**2013**
**The most successful woman in science**
Ministry of Science in the Government of Montenegro

## COST PROJECTS

**Montenegrin MC Member inCOST (European Cooperation in Science and Technology) Actions:**

**2023-2027** **CA22145 - Computational Techniques for Tabletop Games Heritage**

**2021-2025** **CA20133 - CROSS-BORDER TRANSFER AND DEVELOPMENT OF SUSTAINABLE RESOURCE RECOVERY STRATEGIES TOWARDS ZERO WASTE**

**2018-2022** **CA17124 - Digital forensics: evidence analysis via intelligent systems and practices**

**2017-2021** **CA16222 - Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport**

**2017-2021** **CA16116 - Wearable Robots for Augmentation, Assistance or Substitution of Human Motor Functions**

**2014-2018** **IC1403 - Cryptanalysis of ubiquitous computing systems**

**2014-2018** **IC1306 - Cryptography for Secure Digital Interaction**

**2012-2016** **IC1204 - Trustworthy Manufacturing and Utilization of Secure Devices**

### Project leader for:

Erasmus plus 2023-2026 **SMART Innovation Centers for the development of innovative and entrepreneurial thinking to facilitate the development of sustainable smart solutions in the Western Balkans**, supported by European Union

National project 2020 **3D Printing Solutions for COVID-19 (3DPRI-COVID19)**, supported by Ministry of Science in Montenegro

National project 2020-2022 **Digital Forensics and Data Security in Montenegro (DFDSM)**, supported by Ministry of Science in Montenegro

Bilateral project 2019-2021 **Research and application of service robots for non-production based on microcontroller's monitoring** with Changsha University of Science and Technology, PR Republic of China; supported by Ministry of Science in Montenegro and Ministry of Science and Technology in PR Republic of China

National project 2019-2021 **Montenegrin Wearable Robots (MWR)**, supported by Ministry of Science in Montenegro

### Team member:

Bilateral project 2019-2021 **Piloting a blockchain-based capital market system in Montenegro** with Beijing Institute of Technology, PR Republic of China; supported by Ministry of Science in Montenegro and Ministry of Science and Technology in PR Republic of China

Bilateral project 2014-2016 **Mechatronic components in mechatronic systems – sensors' development and applications** with Bosnia and Herzegovina; supported by Ministry of Science in Montenegro and Bosnia and Herzegovina

Tempus IV project Project 158644-DE-JPCR 2010-2013 **Development of Regional Interdisciplinary Mechatronic Studies - DRIMS**, supported by European Commission

National project 2012-2015 **Genesis of New Special Tran Functions and Their Application in Typology of Conducting Fluids, Transport of Plutonium and Data Safety in Nanotechnologies**, supported by Ministry of Science in Montenegro

National project 2008-2012 **Analytical Solutions for Some Families of Nonlinear Inverse Problems**, supported by Ministry of Science in Montenegro

**Reviewer in International Journals:**

- IEEE Transactions on Very Large Scale Integration (VLSI) Systems, ISSN: 1063-8210
- IEEE Transactions on Circuits and Systems I: Regular papers, ISSN: 1549-8328
- IEEE Transactions on Circuits and Systems II: Express Letters, ISSN: 1549-7747
- Elsevier Integration, the VLSI Journal, ISSN:0167-9260
- Springer Neural Computing & Applications, ISSN:0941-0643
- ACM Transactions on Design Automation of Electronics Systems (TODAES), ISSN:1084-4309
- World Scientific Journal of Circuits, Systems and Computers, ISSN:0218-1266

**Programme and Scientific Committee Membership:**

- International Conference on Computer Technology Applications (ICCTA)
- International Conference on Cryptology with Springer Proceedings (AFRICACRYPT)
- International Conference on Codes, Cryptology and Information Security - South East Asia (C2IS-SEA)
- International Conference on Information, Communication and Automation Technologies (ICAT)
- International Conference ICT Innovations with Springer Proceedings (ICT)
- International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD)
- Conference on PhD Research in Microelectronics and Electronics (PRIME)
- International Conference New Technologies with Springer Proceedings (NT)

**THE MOST IMPORTANT REFERENCES:**

a) Books:

[1] **M. Djukanovic**, M.M. Markus, V. Gavriloski, J. Jovanova, "Introduction to Mechatronics", Faculty of Mechanical Engineering, University of Montenegro, (ISBN: 978-9940-527-30-3), Podgorica 2013.

b) Chapters in Springer Books:

[2] Jovanović, M., **Đukanovic, M.**, Marić, A., Medin, A. (2023). 3D Printed Toys for Children with Disabilities – Study Case in Montenegro. In: Karabegovic, I., Kovačević, A., Mandzuka, S. (eds) New Technologies, Development and Application VI. NT 2023. Lecture Notes in Networks and Systems, vol 687. Springer, Cham. https://doi.org/10.1007/978-3-031-31066-9_29.
[3] **Djukanovic, M.**, Radunović, L., Bosković, V., Chuang, B. (2022). Realization of the Robotic ARM/Plotter. In: Karabegović, I., Kovačević, A., Mandžuka, S. (eds) New Technologies, Development and Application V. NT 2022. Lecture Notes in Networks and Systems, vol 472. Springer, Cham. https://doi.org/10.1007/978-3-031-05230-9_26.
[4] **Djukanovic M.**, Novicevic L., Zhu L., Jiang P. (2021) Dictionary Based Brute Force Attack – Study Case of Montenegro and China. In: Karabegović I. (eds) New Technologies, Development and Application IV. Lecture Notes in Networks and Systems, vol 233: 647-652. ISBN: 978-3-030-75274-3. Springer, Cham. https://doi.org/10.1007/978-3-030-75275-0_71.
[5] **Djukanovic M.**, Jovanovic M., Pejovic N., Lutovac D. (2021) 3D Printing Solutions in the Fight Against Covid-19 Pandemic. In: Karabegović I. (eds) New Technologies, Development and Application IV. Lecture Notes in Networks and Systems, vol 233: 310-322. ISBN: 978-3-030-75274-3. Springer, Cham. https://doi.org/10.1007/978-3-030-75275-0_35.
[6] Batina L., **Djukanovic M.**, Heuser A., Picek S. (2021) It Started with Templates: The Future of Profiling in Side-Channel Analysis. In: Avoine G., Hernandez-Castro J. (eds) Security of Ubiquitous Computing Systems, pp. 133-145. ISBN: 978-3-030-10590-7. Springer, Cham. https://doi.org/10.1007/978-3-030-10591-4_8.
[7] **Djukanovic M.**, Novicevic L., Jovanovic M. (2020) Montenegrin Dictionary Based Brute Force Attack. In: Karabegović I. (eds) New Technologies, Development and Application III. Lecture Notes in Networks and Systems, vol 128: 530-536. ISBN: 978-3-030-46816-3. Springer, Cham. https://doi.org/10.1007/978-3-030-46817-0_61.
[8] **Djukanovic M.**, Radunovic L., Vujovic P., Konatar A. (2020) Importance of Additive Manufacturing Technology for Startup Launching: A Case Study. In: Karabegović I. (eds) New Technologies, Development and Application III. Lecture Notes in Networks and Systems, vol 128: 276-284. ISBN: 978-3-030-46816-3. Springer, Cham. https://doi.org/10.1007/978-3-030-46817-0_31.
[9] Jovana J., Xiaoqin S., **Milena D.** (2020) Projects of Renewable Energy Resources: An Analytical Overview of the Windfarm's Electricity Generation on the Hillside Možura. In: Karabegović I. (eds) New

Technologies, Development and Application III. Lecture Notes in Networks and Systems, vol 128: 667-679. ISBN: 978-3-030-46816-3. Springer, Cham. https://doi.org/10.1007/978-3-030-46817-0_77.
[10] **Djukanovic M.**, Grujicic R., Radunovic L., Boskovic V. (2019) Programming of the Robotic Arm/Plotter System. In: Avdaković S. (eds) Advanced Technologies, Systems, and Applications III. Lecture Notes in Networks and Systems, vol 60: 342-354. ISBN: 978-3-030-02576-2. Springer, Cham. https://doi.org/10.1007/978-3-030-02577-9_34.
[11] Bubanja M., **Djukanovic M.**, Mijanovic-Markus M., Vujovic M. (2019) Control of Robot for Ventilation Duct Cleaning. In: Avdaković S. (eds) Advanced Technologies, Systems, and Applications III. Lecture Notes in Networks and Systems, vol 60: 366-374. ISBN: 978-3-030-02576-2. Springer, Cham. https://doi.org/10.1007/978-3-030-02577-9_36.
[12] Ćalasan M., Nikitović L., **Djukanovic M.** (2019) Influence of Additional Rotor Resistance and Reactance on the Induction Machine Speed at Field Weakening Operation for Electrical Vehicle Application. In: Avdaković S. (eds) Advanced Technologies, Systems, and Applications III. Lecture Notes in Networks and Systems, vol 60: 333-341. ISBN: 978-3-030-02576-2. Springer, Cham. https://doi.org/10.1007/978-3-030-02577-9_33.
[13] Bubanja M., Markus M.M., **Djukanovic M.**, Vujovic M. (2019) Robot for Cleaning Ventilation Ducts. In: Karabegović I. (eds) New Technologies, Development and Application. NT 2018. Lecture Notes in Networks and Systems, vol 42: 180-190. ISBN: 978-3-319-90892-2. Springer, Cham. https://doi.org/10.1007/978-3-319-90893-9_22.
[14] **Djukanovic M.**, Grujicic R., Radunovic L., Boskovic V. (2019) Conceptual Solution of the Robotic Arm/Plotter. In: Karabegović I. (eds) New Technologies, Development and Application. NT 2018. Lecture Notes in Networks and Systems, vol 42: 170-179. ISBN: 978-3-319-90892-2. Springer, Cham. https://doi.org/10.1007/978-3-319-90893-9_21.
[15] **Djukanovic M.**, Bellizia D., Scotti G., Trifiletti A. (2017) Multivariate Analysis Exploiting Static Power on Nanoscale CMOS Circuits for Cryptographic Applications. In: Joye M., Nitaj A. (eds) Progress in Cryptology - AFRICACRYPT 2017. Lecture Notes in Computer Science, vol 10239: 79-94. ISBN: 978-3-319-57338-0. Springer, Cham. https://doi.org/10.1007/978-3-319-57339-7_5

c) Published papers in the Journals on SCI list

[16] Jovanović, M.; Mateo Sanguino, T.d.J.; Damjanović, M.; **Đukanović, M.**; Thomopoulos, N. Driving Sustainability: Carbon Footprint, 3D Printing, and Legislation concerning Electric and Autonomous Vehicles. Sensors 2023, 23, 9104. https://doi.org/10.3390/s23229104
[17] **M. Đukanović**, L. Kašćelan, S. Vuković, I. Martinović, M. Ćalasan. A machine learning approach for time series forecasting with application to debt risk of the Montenegrin electricity industry. Energy Reports, volume 9, p. 362 - 369 Posted: 2023. https://doi.org/10.1016/j.egyr.2023.05.240
[18] **Djukanović, M.**, Damjanovic, M., Radunovic, L., & Jovanovic, M. (2022). Optimisation of PLA Filament Consumption for 3D Printing Using the Annealing Method in Home Environment. Strojniški Vestnik - Journal of Mechanical Engineering, 68(3), 185–190. https://doi.org/10.5545/sv-jme.2021.7426
[19] **Djukanović, M.**; Mavrić, A.; Jovanović, J.; Roganović, M.; Bošković, V. Design of 3D Printing Thermo-Sensored Medical Gear in Detecting COVID-19 Symptoms. Appl. Sci. 2021, 11, 419. https://doi.org/10.3390/app11010419
[20] Etzioni, S.; Hamadneh, J.; Elvarsson, A.B.; Esztergár-Kiss, D.; **Djukanovic, M.**; Neophytou, S.N.; Sodnik, J.; Polydoropoulou, A.; Tsouros, I.; Pronello, C.; Thomopoulos, N.; Shiftan, Y. Modeling Cross-National Differences in Automated Vehicle Acceptance. Sustainability 2020, 12, 9765. https://doi.org/10.3390/su12229765
[21] Bellizia, D.; **Djukanovic, M.**; Scotti, G.; Trifiletti, A. Template attacks exploiting static power and application to CMOS lightweight crypto-hardware. International Journal of Circuit Theory and Applications 2017, vol 45, issue 2, pp. 229-241. https://doi.org/10.1002/cta.2286
[22] Slavica M. Perovich, **Milena Dj. Djukanovic**, Tatijana Dlabac, Danilo Nikolic and Martin P. Calasan, “Concerning a novel mathematical approach to the solar cell junction ideality factor estimation”, Applied Mathematical Modelling, Volume 39, Issue 12, June 2015, pp. 3248–3264, ISSN:0307-904X.
[23] M. Alioto, S. Bongiovanni, **M. Djukanovic**, G. Scotti, A. Trifiletti, "Effectiveness of Leakage Power Analysis attacks on DPA-resistant logic styles under process variations", IEEE Transactions on Circuits and Systems I (TCAS-I): Regular Papers, (ISSN: 1549-8328), Issue 99, August 2013, pp. 1-14.
[24] **M. Djukanovic**, L. Piattella, N. Roberto, P. Tommasino,A. Trifiletti,"Design methodology of high-power and high-efficiency composite amplifiers", Microwave and Optical Technology Letters, (ISSN: 0895-2477), Vol. 55, Issue 07, July 2013, pp. 1500-1504.
[25] **M. Jovanovic**, "Leakage Power Analysis (LPA) Attack on Cryptographic Device Realized in CMOS 90-nanometer Technology", Electronic Design News Journal, Volume 54, Issue 10, May 2009, pp. 23-26, ISSN: 0012-7515.

d) Published papers in the Journals which are not on SCI list

[26] I. Karabegovic, M. Felic, **M. Djukanovic**, "Design and Application of Service Robots in Assisting Patients and Rehabilitation of Patients", International Journal of Engineering & Technology IJET / IJENS, (ISSN: 2227-2712), Vol. 13, Issue 02, May 2013, pp. 11-17
[27] **M. Djukanovic**, V. Vujicic, "Ways of attacking Smart Cards and their Countermeasures", Transactions on Internet Research, (ISSN: 1820-4503), Volume 8, Jan. 2012
[28] **M. Jovanovic**, "Istorija kriptografije, kriptografskih algoritama i pametnih kartica", ETF Journal of Electrical Engineering (YU ISSN: 0353-5207), vol 18, no. 1, Nov. 2009, Page(s) 111-124

e) Papers presented on the International conferences

[29] **M. Djukanovic**, S. Rogic, L. Novicevic, V. Popovic-Bugarin, M. Jovanovic, "Application of Apriori Algorithm for CRM Improvement - Case Study from Montenegro", ICCTA '22: Proceedings of the 2022 8th International Conference on Computer Technology Applications, May 2022, Pages 48-56
[30] **M. Djukanovic**, L. Giancane, G. Scotti, A. Trifiletti, M. Alioto, "Leakage Power Analysis Attacks: Effectiveness on DPA Resistant Logic Styles under Process Variations", Proceedings of 2011 IEEE International Symposium on Circuits and Systems (ISCAS2011) (ISSN: 0271-4302), May 2011, Page(s) 2043-2046
[31] **M. Djukanovic**, L. Giancane, G. Scotti, A. Trifiletti, "Impact of Process Variations on LPA Attacks Effectiveness", Proceedings of 2009 International Conference on Computer and Electrical Engineering (ICCEE09), Volume 1,Dec. 2009, Page(s) 102-106
[32] S.M. Perovich, S.I. Bauk, **M.Dj. Jovanovich**, "Concerning an Analytical Solution of Some Families of Nonlinear Functional Equations", American Institute of Physics Conference Proceedings (Subseries Mathematical and Statistical Physics) (ISSN:0094-243X), Volume 936, Sept. 2007, Page(s) 412-415
[33] **M. Djukanovic**, M. Mijanovic Markus, “Educational robots as an introduction to mechatronic education”, 28th Electrical Engineering Symposium EIS, May 2014, Shibenik, Croatia
[34] E. Husak, I. Karabegovic, **M. Djukanovic**, M. Mahmic, “Optimization of structures in micro-electro-mechanic systems’ development”, 28thElectrical Engineering Symposium EIS, May 2014, Shibenik, Croatia
[35] I. Karabegovic,E. Husak, **M. Djukanovic**, E. Karabegovic,M. Mahmic, “Use of sensors in mechatronic systems for maintenance of vehicles on the road”, 28thElectrical Engineering Symposium EIS, May 2014, Shibenik, Croatia
[36] **M. Djukanovic**, “Attacks on Smart Cards’ hardware and their up-to-date Countermeasures”, First International Conference Sinteza 2014, April 2014, Belgrade, Serbia
[37] E. Husak,I. Karabegovic, **M. Djukanovic**, "Robot joint control in open and closed loop", 26th International Electrical Engineering Symposium EIS, May 2013, Shibenik, Croatia
[38] S. Vojic, **M. Djukanovic**, "Mechatronics systems in vehicles", 26th International Electrical Engineering SymposiumEIS, May 2013, Shibenik, Croatia
[39] **M. Jovanovic**, "DPA Attack on FPGA Implemented Cryptographic Core", VIPSI Conference, July 2008, Pisa, Italy
[40] **M. Jovanovic**, "Differential Power Attack on FPGA Implemented Serpent Cryptographic Core", 52nd Etran Conference, June 2008, Palic, Serbia
[41] S. M. Perovich, **M. Dj. Jovanovic**, "An analytical approach for some families of voltage distribution diodes networks equations", 14th International Symposium on Power Electronics, November 2007, Novi Sad, Serbia
[42] **M. Jovanovic**,"FPGA Realization of Special Serpent Crypto-Core", 6th International Scientific Conference on Production Engineering RIM, October 2007, Plitvice Lakes, Croatia
[43] **M. Jovanovic**, "Correlation Power Analysis (CPA) Attack on Cryptographic Device with Serpent Algorithm Realized in CMOS 90-nanometer Technology", VIPSI Conference, August 2007, San Miniato, Italy
[44] L. Giancane, **M. Jovanovic**, G. Scotti, A. Trifiletti, "Leakage Power Analysis of Cryptographic Devices Implemented in Nanometer CMOS Technologies", 51st Etran Conference, June 2007, Igalo, Montenegro
[45] **M. Jovanovic**, Z. Mijanovic, "Leakage Analysis Attacks for CMOS Cryptographic Hardware and TDPL Technology as Countermeasure", 13th YUINFO Conference, March 2007, Kopaonik, Serbia
[46] M. Zogovic, Z. Jaksic, G. Blagojevic, **M. Jovanovic**, R. Stojanovic,"The Example of Flexible FPGA Based 1D Median Filter Realization", 50th Etran Conference, June 2006, Beograd, Serbia
[47] M. Zogovic, **M. Jovanovic**, R. Stojanovic, "VHDL realization of mean and median filters", March 2006, Zabljak, Montenegro