



## Nermin Čović

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**Email address:** [nermin.covic@etf.unsa.ba](mailto:nermin.covic@etf.unsa.ba) **Phone number:** (+387) 61606667

**Gender:** Male **Date of birth:** 28/11/1994 **Nationality:** Bosnian-Herzegovinian

### WORK EXPERIENCE

[ 10/2018 – Current ] **University teaching and research assistant**

*University of Sarajevo - Faculty of Electrical Engineering*

**City:** Sarajevo

**Country:** Bosnia and Herzegovina

**Main activities and responsibilities:**

- Occupied in the following courses: Engineering Mathematics 1, Engineering Mathematics 2, Digital Control Systems, Nonlinear Control Systems, Machine Learning and Intelligent Control, Robotics 1, Systems Identification, Resources Optimization, Optimal Control, Linear Control Systems, Basics of Control Systems, Signals and Systems, Signals Theory, Embedded Systems
- Involved in the research projects through the PhD education.

[ 07/2017 – 09/2018 ] **President of the Embedded Systems Club**

*University of Sarajevo - Faculty of Electrical Engineering*

**City:** Sarajevo

**Country:** Bosnia and Herzegovina

**Main activities and responsibilities:**

Running club meetings. Making professional connections. Responsible for recruiting new members and giving task assignments.

[ 11/2016 – 09/2018 ] **Member of the Embedded Systems Club**

*University of Sarajevo - Faculty of Electrical Engineering*

**City:** Sarajevo

**Country:** Bosnia and Herzegovina

**Main activities and responsibilities:**

One of the club founders. Worked on several projects.

[ 01/2015 – 07/2018 ] **Teaching fellow**

*University of Sarajevo - Faculty of Electrical Engineering*

**City:** Sarajevo

**Country:** Bosnia and Herzegovina

**Main activities and responsibilities:**

Occupied in the following courses: Engineering Mathematics 1, Engineering Mathematics 2, Electronic Elements and Circuits, Digital Electronics, Power Electronics, Embedded Systems, Optimal Control

### EDUCATION AND TRAINING

[ 01/2020 – Current ] **PhD Student in Electrical Engineering**

*University of Sarajevo - Faculty of Electrical Engineering*

**Address:** Sarajevo, Bosnia and Herzegovina

<https://www.youtube.com/watch?v=EGJnvsyMNa8&t=0s> <https://www.youtube.com/watch?v=oM7mHtuISFQ>

**Main subject / occupational skills covered:**

The research is going on in the field of motion planning of robotic manipulators in dynamic environments.

**Consultant:** Assoc. Prof. Bakir Lacevic

[ 2016 – 09/2018 ] **Master of Science in Electrical Engineering**

*University of Sarajevo - Faculty of Electrical Engineering*

**Address:** Sarajevo, Bosnia and Herzegovina

**Main subject / occupational skills covered:**

**Master Thesis:** Identification of Dynamic Systems using Zero-Order Iterative Optimization Methods [09/2018]

**Mentor:** Assoc. Prof. Bakir Lacevic

[ 2013 – 2016 ] **Bachelor of Science in Electrical Engineering**

*University of Sarajevo - Faculty of Electrical Engineering*

**Address:** Sarajevo, Bosnia and Herzegovina

**Main subject / occupational skills covered:**

**Bachelor Thesis:** Universal Power Electronics Board [09/2016]

**Mentor:** Prof. Senad Huseinbegovic

## LANGUAGE SKILLS

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**Mother tongue(s):** Bosnian

**Other language(s):**

**English**

**LISTENING C2 READING C2 WRITING C1**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

## DIGITAL SKILLS

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### My Digital Skills

Windows Linux OS | Robotic Operative System (ROS) | LaTeX | Inkscape | Multisim | Proteus | Video Editing KDenlive | Microsoft Office (Word, Excel, Power Point, Project, Access, Teams)

### Programming languages

C | C++ | Python | MATLAB | Simulink | Arduino | C#

## ORGANISATIONAL SKILLS

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**Excellent leadership, team-building, mentoring and organisational skills gained as the president of the Embedded Systems Club**

**Skills gained through the organisation of tutorials, lab exercises, exams and tests**

## COMMUNICATION AND INTERPERSONAL SKILLS

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**Experience in teaching and tutoring - graded excellent in students' polls**

**Excellent communication skills gained through the experience as a teaching assistant**

## HOBBIES AND INTERESTS

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Making electronic toys/devices, working with alarm and security systems, 3D printing, playing basketball, riding bicycle, skiing, swimming

## DRIVING LICENCE

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Cars: B

06/2013

## NETWORKS AND MEMBERSHIPS

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### Networks (Research Profiles)

- ORCID: <https://orcid.org/my-orcid?orcid=0000-0001-7625-3512>
- ResearchGate: <https://www.researchgate.net/profile/Nermin-Covic>
- Google Scholar: <https://scholar.google.com/citations?user=gmKfxfcAAAAJ&hl=en&authuser=1>
- Publons: <https://publons.com/researcher/3690711/nermin-covic/>

### Memberships

- Institute of Electrical and Electronics Engineers (IEEE) [2016 - Current]
- IEEE Robotics and Automation Society [2018 - Current]
- IEEE Control System Society [2018 - Current]
- Embedded Systems Club (ESC) at The Faculty of Electrical Engineering Sarajevo [2016 - 2018]
- Faculty of Electrical Engineering Sarajevo Student Association (STELEKS) [2014 - 2018]

## HONOURS AND AWARDS

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- [ 2020 ] **Award for The Results of Scientific/Art Work Awarding institution:** University of Sarajevo
- [ 2018 ] **Golden Badge Award for Bachelor and Master Degree Awarding institution:** University of Sarajevo  
GPA: 9.79/10.0
- [ 2017 ] **First Place Award for The Most Innovative Project on Sarajevo Innovations Festival Awarding institution:** STELEKS - Faculty of Electrical Engineering Sarajevo
- [ 2017 ] **Remarkable Paper Certificate Awarding institution:** BH K CIGRÉ, Neum
- [ 2017 ] **Certificate of Appreciation for Volunteering at European Researchers' Night in Sarajevo**
- [ 2016 ] **Golden Badge Award for Bachelor Degree Awarding institution:** University of Sarajevo  
GPA: 9.67/10.0
- [ 2015 ] **Member of the 2nd place winner team in science Awarding institution:** International Electrical Engineering Student Gathering - Elekrijada, Montenegro
- [ 2013 ] **Special Achievement Award Awarding institution:** The First Bosniak High School, Sarajevo

## PROJECTS

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- [ 10/2019 – 09/2021 ] **Sensor-based Motion Planning for Collaborative Robots**  
Leader: Assoc. Prof. Bakir Lacevic

[ 01/2017 – 10/2018 ] **Making The Humanoid Robot - InMoov**

Leader: Musical bend Dubioza Kolektiv

[ 11/2016 – 09/2018 ] **Through Embedded Systems Club**

- [Infinity Mirror](#)
- [RGB LED Matrix Display 64x120](#)
- [Mobile Controlled Mini Race Car](#)
- [RGB LED Matrix Display 10x20](#)
- [LED Cube 10x10x10](#)

[ 10/2016 – 09/2018 ] **Through study papers**

- dsPIC Microcontroller Implementation of Non-recursive Newton's Algorithm for Amplitude and Frequency Estimation in Power Systems
- Different Types of Controller Synthesis for Micro Aerial Vehicles
- Analysis of Self Induction Machine's Steady State using Wingsuit Flying Search
- Shape Recognition using Neural Networks
- SCADA - The Water Supply System in Sarajevo
- [Hexapod Robot Movement Controlling](#)
- Free Fall - A Novel Algorithm for Global Optimization

## CONFERENCES AND SEMINARS

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[ 09/2021 ] **IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)** Prague, Czech Republic

[ 06/2020 ] **IEEE International Conference on Robotics and Automation (ICRA)** Paris, France (virtual)

[ 12/2017 ] **IEEE Student and Young Professional Congress** International Burch University (IBU), Sarajevo, Bosnia and Herzegovina

[ 10/2017 ] **The Second Sarajevo Innovations Festival (SIFI)** Sarajevo, Bosnia and Herzegovina

[ 09/2017 ] **The 13th Consulting Seminar of BH K CIGRÉ** Neum, Bosnia and Herzegovina

[ 03/2017 ]

**International Conference on Medical and Biological Engineering in Bosnia and Herzegovina (CMBEBIH)**

Sarajevo, Bosnia and Herzegovina

[ 10/2016 ] **The First Sarajevo Innovations Festival (SIFI)** Sarajevo, Bosnia and Herzegovina

## PUBLICATIONS

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[ 2022 ]

**N. Covic, D. Osmanovic and B. Lacevic. Asymptotically Optimal Path Planning for Robotic Manipulators: Multi-Directional, Multi-Tree Approach**

Submitted in June 2022

[ 2021 ]

**N. Covic, B. Lacevic and D. Osmankovic. Path Planning for Robotic Manipulators in Dynamic Environments Using Distance Information**

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2021), Prague, Czech Republic, Sep 27 - Oct 01, 2021

[ 2020 ] **N. Covic and B. Lacevic. Wingsuit Flying Search - A Novel Global Optimization Algorithm**

In Proceedings of IEEE Access, vol. 8, pp. 53883-53900, March 2020

[ 2017 ] **N. Covic and A. Basic. Free Fall - A Novel Algorithm for Global Optimization**

In Proceedings of The Second Sarajevo Innovations Festival (SIFI), Sarajevo, Bosnia and Herzegovina, October 2017

[ 2017 ]

**E. Kurtic, N. Covic and S. Huseinbegovic. A Novel Approach in Teaching Power Electronics at The Faculty of Electrical Engineering in Sarajevo**

In Proceedings of The 13th Consulting Seminar of the Bosnian - Herzegovinian Committee of the International Council on Large Electric Systems - BH K CIGRÉ, Neum, Bosnia and Herzegovina, September 2017

[ 2016 ]

**N. Covic and E. Kurtic. Universal Power Electronics Board. In Proceedings of The First Sarajevo Innovations Festival (SIFI)**

Sarajevo, Bosnia and Herzegovina, October 2016