

Bosnia and Herzegovina

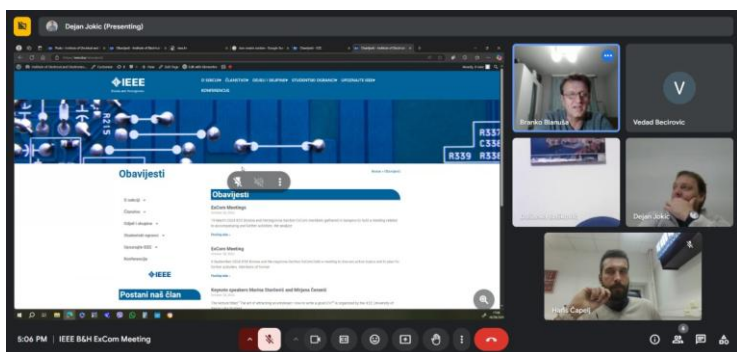
Branko Blanuša

Section Vitality

We usually don't have practice of Vice-Chair becoming the next Section Chair. We had Section ExCom meetings from the last IEEE R8 Meeting.

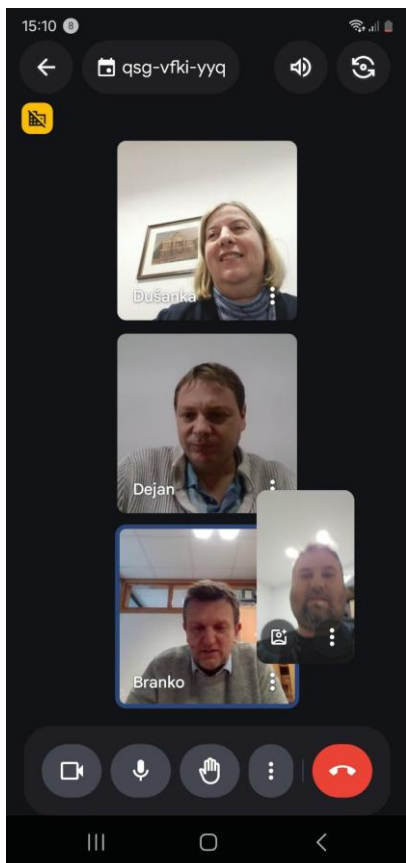
28/10/2024 (5 p.m -6:15 p.m.).

Ex Com Members from ExCom of IEEE Bosnia and Herzegovina Section participated in the IEEE Region 8 Committee Meeting, held in Bordeaux. The meeting was organized and held online. At the meeting, few topics regarding past meetings, activities to get new IEEE members, organize events, discuss about ongoing request and activities, and work on networking with the Region 8 were discussed. Also, reporting from the 123rd IEEE Region 8 Committee Meeting was given to the other ExCom members.



29/11/2024 (2 p.m -3:30 p.m.)

ExCom Meeting was held online. At the meeting, few topics regarding past meetings, activities to get new IEEE members, organize events, discuss about ongoing request and activities. Also, reports for closing the year were planned.



20/01/2025 (2:00 p.m-4:00 p.m.)

IEEE Bosnia and Herzegovina ExCom held a meeting to discuss the plan in the new year . The following agenda was proposed and discussed about:

- 1.Report on the implementation of the section's activities after the last ExCom meeting;
2. Election process in the section and proposal for filling the following positions:
Secretary
Educational Activities
Professional Activities
Membership Development
Webmaster
VTools Coordinator
3. Reporting on the implemented activities in 2024 and plans for 2025 Treasurer, SBs and Chapters;
4. Improving the work of the Section, animating membership and increasing the number of activities;
4. IEEE BH Section Website;
5. Infoteh Jahorina participation and presentation of the section;
6. Celebrating 20 years of the IEEE BH Section;
7. Current issues.



Through various manifestations in which the IEEE B&H Section is involved, presenting the basic idea, significance, mission and vision of IEEE as the world largest technical professional organization we strive to get new IEEE members both from the academic community and the industry.

Students

List of Student Branches

1. SB Faculty of Electrical Engineering – University of Sarajevo
2. SB Faculty of Electrical Engineering – University of Banja Luka
3. SB University Burch
4. SB Faculty of Electrical Engineering – University of East Sarajevo
5. SB Faculty of Electrical Engineering – University of Tuzla

We do not have newly formed or dissolved Student Branches

Section activities addressed to Students and Young Professionals.

During the INDEL conference in the organization of IEEE B&H Section and SB University of Banja Luka, the tutorial and workshop for students and young professional was organized on 7/11/2024 (2:45 p.m -7:00 p.m) :

The Design of Digital ASICs with Open-Source EDA Tools

-From Theory to Practice-

The presenter and workshop leader was Aleksandar Pajkanovic. Dr. Aleksandar Pajkanović is an Assistant Professor with 15 years of extensive experience spanning both academia and industry. His research interests encompass analog/RF and digital IC design, CMOS technology, open source EDA tools and the democratization of silicon. Dr. Pajkanovic is renowned for pioneering the development of the first-ever chip designed in Bosnia and Herzegovina and leading students to win gold and bronze medals at the Microelectronics Olympiad 2023. He is the founder of IKS, the first IC design company

in the country. This tutorial and workshop attended students from universities all over Bosnia and Herzegovina, University of Banja Luka, University of Sarajevo, University of Tuzla and University of East Sarajevo.



During the INDEL conference in the organization of IEEE B&H Section and SB University of Banja Luka, the tutorial for students and young professional was organized on 6/11/2024 (12:30 p.m : 2:30 p.m):

IoT Device Development

-From Idea to Product-

The presenter was Amar Mahmutbegović. He is is an experienced embedded systems engineer and co-founder of Semblic Company, where he serves as the Head of Engineering. This tutorial attended students from universities all over Bosnia and Herzegovina, University of Banja Luka, University of Sarajevo, University of Tuzla and University of East Sarajevo.



Affinity Groups

We don't have newly formed or dissolved AGs/SB AGs, since the last meeting reporting. At the ExCom, we defined priority activities intended to support affinity groups.

Chapters

We have next active chapters

1. IEEE B&H PES Chapter
2. IEEE B&H PEL/IAS/IE Joint Chapter

We don't have the newly formed or dissolved Chapters since the last meeting. The activities of the chapter were in cooperation with SB and YP in the organization of presentations and trainings.

In the organization of Bosnia and Herzegovina Jt. Chapter PELS/IAS/IES tutorial for professionals in the field of power electronic and graduate students was held on 6/11/2024 (9:00 – 11:30):

Current Source PWM Converters – from Theory to Practice –

Prof. Petar Grbović, University of Innsbruck, Austria

In this tutorial, the CSCs will be analyzed in details. The tutorial will start with a short introduction and comparison of Voltage and Current Source Converters. Then, One-Quadrant (1Q) and Multi-Quadrant (2Q &4Q) CSCs will be presented and analyzed in the 2nd and 3rd chapter. Detailed analysis of CSC cell and design guideline will be given in the 4th chapter of the tutorial. Three-phase single-cell and multi-cell interleaved CSCs will be intensively discussed in the 5th and 6th chapter. Power semiconductor switches with Bi-Directional voltage blocking capability, in particular Monolithic Bi-Directional GaN switch will be addressed in the 7th chapter. Finally, the tutorial will be concluded with several real-life case studies and design examples.

This tutorial is aimed at power electronics engineers, professionals and graduate students who want to improve their knowledge and understanding of advanced concepts of power conversion, such as PWM Current Source Converters and their applications.



IEEE B&H PELS/IAS/IES Joint Chapter supported INDEL Symposium. In the period from 6-8.11. In 2024, the XV International Symposium on Industrial Electronics and Application - INDEL 2024 was held in Banja Luka, Bosnia and Herzegovina.

Within the framework of the symposium, 6 professional sessions, 3 tutorials, 3 keynote speakers, as well as a presentation of companies from the area were held. The authors of the papers were from Europe, Asia, North and South America, so the Symposium had a fully international character and significance.

The organization of the symposium was supported by the IEEE B&H Section, and the technically co-sponsored by 3 IEEE societies, IEEE PELS, IEEE IAS and IEEE IES.

During International Symposium INDEL, IEEE Bosnia and Herzegovina Section Chair greeted all participants and guests and had a short introduction of IEEE B&H Section activities and goals.



In the organization of IEEE B&H PES Chapter, IEEE PES expert Edvina Uzunović held a presentation at the Faculty of Electrical Engineering - University of Sarajevo.

The electric power industry is highly regulated and one of the most capital-intensive sectors. Utilities design grids to efficiently meet electricity demand for homes and businesses. However, the rapid expansion of AI-driven data centers is expected to drive a tenfold increase in electricity demand by the end of the decade. This presentation will examine the challenges posed by this surge and explore how the industry is adapting to maintain reliable, affordable, and sustainable energy while supporting global economic growth.



IEEE Bosnia and Herzegovina Section and IEEE Bosnia and Herzegovina PES/IAS/IES Joint Chapter were technically sponsored of International Symposium INFOTEH Jahorina 2025.

The International Scientific-Professional Symposium INFOTEH Jahorina 2025 was opened on Wednesday, March 19th, at the "Rajska dolina" hotel on Jahorina. For this year's INFOTEH 2025, 291 papers from 31 countries were submitted. 200 papers were accepted (including student papers), and 91 papers did not pass the review process. Presentation of accepted papers were organized in 14 oral s and 7 virtual sessions. IEEE Bosnia and Herzegovina Section Chair welcomed the attendees and emphasized the importance and mission of IEEE.



Industry

We had a meeting with representatives of industry at INDEL and INFOTEH-Jahorina Symposiums and we discussed how to strengthen relations our Section with the industry.

Diversity, Equity and Inclusion

In the next period, we plan to define priority indicators related to monitoring diversity, equality and inclusion.

Activities since the last report

Coordination and cooperation in ExCom is good. Cooperation with program committees of IEEE conferences held on the territory of Bosnia and Herzegovina and promotion of the IEEE Section at conferences is also good. The work and reports of active chapters are good. Certain activities aimed at SB and YP are well done. We promote and place our activities on web site of IEEE B&H Section: <https://iee.ba/>

Through various manifestations in which the IEEE B&H Section is involved, presenting the basic idea, significance, mission and vision of IEEE as the largest technical professional association, we strive to get new IEEE members both from the academic community and the industry.

Weaknesses refer to the insufficient activity of most SBs and insufficient cooperation with the industry. Also, we did not have activities related to the monitoring of diversity, equity and inclusion indicators. More activities are needed to promote the place and role of IEEE in terms of professional development and opportunities.

Planned activities

Defining priority activities intended to support affinity groups.

New projects related to the engagement of student chapters and young professionals.

Fostering and strengthening cooperation with the industry.

Starting with the new CS/CIS Jt. Chapter.

Celebrating 20 years of IEEE in Bosnia and Herzegovina.

IEEE B&H Section is engaged in organization of ICAT 2025 (September 2025) Conference which is technically co-sponsored by IEEE B&H Section and IEEE IES.

How Region 8 can be of help to your Section, members, and activities

We would like to hear examples of good practice from the Region related to monitoring diversity, equity and inclusion.

Any other issues of interest

Not in this report