

Slovenia Section

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Section Vitality

Please provide information about the date of last Section elections, date of next elections, and do you have the practice of Vice-Chair becoming the next Section Chair. Section ExCom meetings (list them and provide brief summary if appropriate). List the activities carried out to retain and recruit members and the results obtained.

The last Section elections have been carried out on November 29th through December 13th, 2021, for the term 2022-2023. The next elections will be organized by the end of the year 2023. The chair candidates are nominated by the member petition. The ExCom meetings are held two times per year, usually in the beginning of each year when the yearly section assembly is held and in fall (September) as part of the IEEE International Electrotechnical and Computer Science Conference - ERK¹.



In the year 2022, the Slovenia Section has organized and reported 73 various events.

In order to recruit members and retain the current ones we actively promote various activities:

- Encourage and support chapters and affinity groups
- Encourage student members and young professionals
- Encourage membership development and support the senior member and the fellow elevation
- Organize technical and professional workshops, promotion events (e.g. IEEE Day, IEEE activities presentations as part of academic curricula)
- Encourage cooperation with the academia, invited lectures with distinguished lecturers (e.g. IEEE Fellows)
- Encourage cooperation with the industry (e.g. student competitions, hackatons)
- Promote science and engineering to elementary and high school students (e.g. Bober computer&informatics competition)
- Organize and promote IEEE at co-sponsored conferences and events (e.g. the 31th IEEE International Electrotechnical and Computer Science Conference, Mechatronic Contribution to the Green and Digital Agendas in Agriculture, International Summer School on Industrial IoT and Blockchain Technology with Examples, SloChip conference², joint IEEE+ACM round table on “The benefit of the profession for the digital society”, National Research Programme ARRS P2-0425, European Energy Market 2022, Special Session on Remote Sensing at IWSSIP 2022,
- Active contribution and attendance at IEEE conferences and other events (e.g. IEEE ISGT PES 2022, ENLIT 2022, IEEE PES GM 2022, IEEEExtreme challenge 16.0, International ceepus and erasmus workshop on microwave technologies, radars, remote sensing and communications, Nvidia workshop)
- Recognize the commitment of volunteers by awarding them and recognizing their valuable contributions
- Organize stands dedicated to membership during sponsored conferences

Currently, the Slovenia Section counts 247 active members. The membership retention is very high. We are especially proud of the awarded “Certificate of Recognition for outstanding achievement in member recruitment for the Slovenia Section during the 2022 membership year”.

¹ ERK, <https://erk.fe.uni-lj.si/index.html>

² SloChip conference, <https://slo-chip.fe.uni-lj.si>



Students

List of Student Branches (SB) in your Section, the newly formed or dissolved SBs, if any since the last meeting reporting (Oct 2020). List the student meetings held and Section activities addressed to Students and Young Professionals.

There are two Student Branches (Ljubljana and Maribor). The number of groups remains unchanged. All groups hold regular meetings and organize technical, professional and promotional events. All groups are very active and involved in IEEE promotion and membership development activities. The membership and the number of events has increased compared to the last year. We are especially proud of enriched cooperation between both student branches as well between other chapters and affinity groups (YP, WIE, GRSS, etc.).

Most notable events in 2022 were:

Student Branch Ljubljana:

- Students' professional excursion to Belgrade (visit to Nordeus company, BG Faculty of Electrical Engineering, Av-ala telecommunication tower, May 2022)
- IEEE Student paper competition (ERK, September 2022)
- IEEE day (together with SB Maribor, October 2022)
- "Through the wall" - invited lecture by prof. Miklavčič (December 2022)
- Visit to the XR laboratory at the Technology park Ljubljana (December 2022)
- Technical&scientific paper contributions at the IEEE International Electrotechnical and Computer Science Conference, IEEE promotion and volunteering
- Regular meetings/elections

Student Branch Maribor:

- NVIDIA workshop: Deep Learning Tutorial/Workshop
- NVIDIA workshop: Basics of accelerated computing with cuda c/c++
- IEEE day (together with SB Ljubljana, October 2022)
- Workshop: Computer and informatics basics for seniors

- Workshop: Linux basics
- IEEEExtreme 16.0 competition, excellent Slovenia team achievement, achieved 33th place in R8 and 82th place worldwide
- Technical&scientific paper contributions at the IEEE International Electrotechnical and Computer Science Conference, IEEE promotion and volunteering
- Regular meetings/elections

Affinity Groups

List of Affinity Groups (YP, LM, WiE, SIGHT, etc.), list of SB AGs, newly formed or dissolved AGs/SB AGs, if any since the last meeting reporting. List the activities intended to support affinity groups.

There are WIE, YP and LM active affinity groups. The number of groups remains unchanged. All groups hold regular meetings and organize technical, professional and promotional events. There is a strong cooperation with younger members, students and student branches. All groups are very active and involved in IEEE promotion and membership development activities.

Most notable events in 2022 were:

WIE:

- Workshop: Programming for women
- WIE science/engineering promotion at high schools
- Active cooperation on the event Female engineer of the year 2022
- Technical&scientific paper contributions at the IEEE International Electrotechnical and Computer Science Conference, IEEE promotion and volunteering
- Regular meetings/elections

YP:

- NVIDIA workshop: Basics of accelerated computing with cuda c/c++
- NVIDIA workshop: Deep Learning Tutorial/Workshop
- Round table: The future and development of artificial intelligence in Slovenia
- IEEEExtreme 16.0 competition
- Student paper competition contributions
- Technical&scientific paper contributions at the IEEE International Electrotechnical and Computer Science Conference, IEEE promotion and volunteering
- Regular meetings/elections

In 2022 we achieved 5th place at the student paper competition at the Melecon 2022 conference.

Chapters

List of Chapters and SB Chapters in your Section, the newly formed or dissolved Chapters, if any since the last meeting reporting. Indicate how many have reported on time and received rebate. Highlight some of the activities.

The section has 9 active chapters: Industrial Electronics / Industrial Applications, Signal Proc. (SP-01)/Circ. and Syst. (CAS-23), Computer (C-16), Communications (COM-19), Education (E-25), Power Engineering (PE-031), Computational Intelligence, Geoscience and Remote Sensing. As of February 2022 there has been established and approved a completely new chapter, the Biometrics Council Chapter, enriching the total number of active chapters.

All chapters are active and are organizing technical, professional, promotional events and workshops. They are cooperating with the academia, industry and other interested parties. In 2022 there have been 73 different events reported according to the VTOOLS, compared to the 64 events reported in 2021. This signifies an increase of 14% in events activity. In 2023 the number of events reported so far is 7.

We are especially proud of the following events:

- IES/IAS chapter
 - Mechatronic Contribution to the Green and Digital Agendas in Agriculture
 - International Summer School on Industrial IoT and Blockchain Technology with Examples
- SP/CAS chapter
 - First Slovenian international conference on chips – Slo-Čip 2023, <https://slo-chip.fe.uni-lj.si>
 - Workshops: FPGA cameras, Programmable circuits in electrical engineering
 - Cooperation with the industry – Red Pitaya
- Computer chapter
 - joint IEEE+ACM round table on “The benefit of the profession for the digital society”
 - Competition of computer science for elementary and high school level - BOBER
- Communications chapter
 - A new national research programme established - Decentralized solutions for digitization of industry and smart cities and communities, Research Program, ARRS P2-0425
 - A new ERK thematic section established - Decentralised technologies and internet of things
- Education chapter
 - ERK thematic section – Didactics
 - Invited lectures (Smart home communications)
- PES chapter
 - International conference European Energy Market 2022 organization, <https://www.eem22.eu>
 - Invited lectures
- Computational intelligence chapter
 - ERK thematic section – CIS
 - Invited lecture (Low Autocorrelation Binary Sequences)
- Geoscience and Remote Sensing chapter
 - Special Session on Remote Sensing at IWSSIP 2022
 - International CEEPUS and Erasmus workshop on microwave technologies, radars, remote sensing and communications, COBCOM 2022
 - ERK thematic section – Remote sensing and electronic in space
- Biometrics council chapter
 - Invited lectures (Human centered vision, Face presentation attack detection)

Industry

List the activities carried out to foster relations with Industry and the results obtained.

The role of IEEE, as the interlink between the industry and academia, is important in IEEE Slovenia section, and is evident from numerous various activities:

- The yearly IEEE International Electrotechnical and Computer Science Conference
- International conference European Energy Market 2022 organization, <https://www.eem22.eu>
- First international Slovenian conference on chips – Slo-Čip 2023, <https://slo-chip.fe.uni-lj.si>
- Seminar on Optical Communications technical conference, 2022 and 2023
- SIKOM VITEL conference, 2022
- IEEE competition and industry cooperation - Red Pitaya company
- Professional NVIDIA workshops
- Project cooperation, e.g. Impact of the Erasmus+ project “BENEFIT” on the ICT engineers education

In 2023 we plan to further strengthen the cooperation with the industry.

Diversity, Equity and Inclusion

Highlight any diversity metrics (gender, age, religion, geographical, employment, etc.), new initiatives, best practices and progress around diversity and inclusion happening in your Section. Link to IEEE DEI statement.

The values of Diversity, Equity and Inclusion are highly important and included in planning future activities as well as carrying out current activities of the Slovenia Section. This is evident from the active WIE section as well as from activities from other chapters and student branches. The IEEE Slovenia section tightly cooperates with the academia, especially with the Universities, where these values have been recognized and are formalized by specific formal documents, e.g. the Gender Equality Plan Of The University Of Ljubljana, 2022-2027 (<https://kakovost.uni-lj.si/wp-content/uploads/2022/04/Gender->

[Equality-plan-of-the-University-of-Ljubljana-2022-2027.pdf](#)) and the Ethical codex (https://www.uni-lj.si/raziskovalno_in_razvojno_delo/etika_in_integriteta_v_raziskovanju/).

Some events actively promote the inclusion of female colleagues, e.g. Workshop: Programming for women, WIE science/engineering promotion at high schools, Active cooperation on the national event Female engineer of the year 2022.

Activities since the last report

Highlight some of the activities in your Section, with special attention to the things that work well, and things that don't, so that your acquired know-how can be used by other Sections.

Due to the lingering Covid-19 crisis, the possible activities in 2022 were still somewhat limited. However, compared to the 2021, the activities and events reported have increased significantly. We are especially proud of organizing the yearly IEEE International Electrotechnical and Computer Science Conference, which was held on-site, as well as many other notable events.

Some of the most notable activities and achievements in 2022 were:

- Full on-site and online organization of the yearly 31th IEEE International Electrotechnical and Computer Science Conference, which is the premium such professional conference in Slovenia
- The founding of a new Biometrics Council Chapter
- MELECON 2022 student competition for the best paper nomination: “Optimization of cold rolling process recipes based on historical data” has been selected as one of the best five papers in the first part of the IEEE R8 Student Paper Contest – SPC 2022
- First Slovenian international conference on chips – Slo-Čip 2023
- International conference European Energy Market 2022 organization
- Seminar on Optical Communications technical conference 2023
- joint IEEE+ACM round table on “The benefit of the profession for the digital society”
- WIE science/engineering promotion: at high schools, event Female engineer of the year 2022, workshop: programming for women
- IEEEExtreme 16.0 competition, achieved 33th place in R8 and 82th place worldwide
- Onsite IEEE Slovenia Section yearly assembly (with keynote, award ceremony and discussion on future IEEE SI activities)

Planned activities

Highlight some of the future activities and initiatives in your Section.

In 2023 we plan to further strengthen the academia and industry cooperation, as well as promotion of IEEE, science and engineering to students and younger colleagues.

We plan the following activities:

- The organization of the 32th IEEE International Electrotechnical and Computer Science Conference
- Further promote IEEE to academia and industry
- Apply for the IEEE technical milestone – the electrification of the Postojna cave
- On-site IEEE assembly technical/professional event organization
- Organization of workshops, invited lectures and promotion events

We are proud of the forthcoming 32th IEEE International Electrotechnical and Computer Science Conference 2023, which is the premier conference in Slovenia for the field. This year the conference will be additionally enriched by the accompanying events, such as distinguished keynotes, industry panels, student paper competition and practical workshops. The cooperation between IEEE, Academia and the Industry is further strengthened by our invited lecturers and guests from the industry, as well as the cooperation between the IEEE and ACM.

We are especially proud of the past ERK 2022 activities:

- Keynote: Battery Monitoring and Energy Management (industry: Robotina d.o.o.)

- Keynote: Using the Red Pitaya STEMLab Board in Education: Practical Experience and Use-Cases (academia: Budapest University of Technology and Economics, Hungary)
- Panel: The Benefit of the Profession for a Digital Society (ACM and IEEE)
- Panel: The future and development of artificial intelligence in Slovenia
- Workshop: On supercomputers and HPC
- Student paper competition (IEEE SB)

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

List any challenges your Section is facing and what support is required from the Region 8. Please, also, give us your suggestions for agenda items that you want to be discussed during the R8 Committee meeting.

The Covid-19 crisis is past, however the effects are still somewhat felt. We plan to further enrich the IEEE Slovenia activities with new events, onsite conferences and experience exchange with on-site and in-person communication as well as technical, professional and promotion events organization. We especially wish to further extend our activities to the younger colleagues and to strengthen the industrial cooperation.

It would be of great benefit to our section if R8 could offer more funding initiatives. We would welcome both:

- hardware funding initiatives that would allow researchers and/or students to purchase measuring instrumentation or kits for the development of products that benefit humanity; and
- promotional funding initiatives that would increase awareness of IEEE among engineers, students, and consumers, either by providing extensive promotional materials (pencils, USB pens, sheets of paper, etc.) or by funding promotional activities (visits to industry partners, activities at high schools, etc.).

These days, it seems difficult to explain to potential members what the benefits of being a member of IEEE are, other than simply being part of the society. At least in our part of Europe, an engineer usually needs some tangible evidence or foreseeable benefits to hold on in order to actively participate in society. In this regard we could also benefit from sharing best practise stories or advice from other sections/regions.

It is still challenging to establish contacts with industry partners. Relations with industry are even more difficult because the section is largely composed of academic members, and the officer position of "Industry Relations Coordinator" is currently vacant, although significant effort has been spent in this area. It would be appreciated if the R8 could expand its support by establishing and maintaining contacts with industry partners throughout the whole region, not limited to section borders.

Any other issues of interest