



IEEE

Vol 24 No 2

June 2023

## region8news

IEEE  
Region 8

r8news.ieeeer8.org

Published quarterly and distributed to more than 80,000 IEEE members across Region 8

112

ELECTRICAL EXPERIMENTER

June, 1919

## My Inventions

By Nikola Tesla

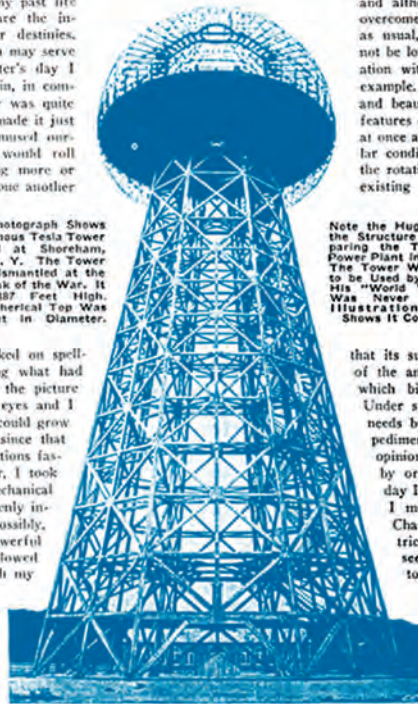
## V. The Magnifying Transmitter

**A**S I review the events of my past life I realize how subtle are the influences that shape our destinies. An incident of my youth may serve to illustrate. One winter's day I managed to climb a steep mountain, in company with other boys. The snow was quite deep and a warm southerly wind made it just suitable for our purpose. We amused ourselves by throwing laths which would roll down a certain distance, gathering more or less snow, and we tried to outdo one another in this exciting sport. Suddenly a hall was seen to go beyond the limit, swelling to enormous proportions until it became as big as a house and plunged thundering into the valley below with a force that made the ground tremble. I looked on spell-bound, incapable of understanding what had happened. For weeks afterward the picture of the avalanche was before my eyes and I wondered how anything so small could grow to such an immense size. Ever since that time the magnification of feeble actions fascinated me, and when, years later, I took up the experimental study of mechanical and electrical resonance, I was keenly interested from the very start. Possibly, had it not been for that early powerful impression, I might not have followed up the little spark I obtained with my coil and never developed my best invention, the true history of which I will tell here for the first time.

## Scraping the World's Engines.

"Lionhunters" have often asked me which of my discoveries I prize most, a few technical men, very able in their special departments, but dominated by a pedantic spirit and near-sighted, have asserted that excepting the induction motor I have given to the world little of practical use. This is a grievous mistake. A new idea must not be judged by its immediate results. My alternating system of power transmission came at a psychological moment, as a long-sought answer to pressing industrial questions,

This Photograph Shows the Famous Tesla Tower Erected at Shoreham, L. I., N. Y. The Tower Was Dismantled at the Outbreak of the War. It Was 187 Feet High. The Spherical Top Was 68 Feet in Diameter.



Note the Huge Size of the Structure by Comparing the Two-story Power Plant in the Rear. The Tower Which Was to be Used by Tesla in His "World Wireless," Was Never Finished. Illustration Opposite Shows It Completed.

and altho considerable resistance had to be overcome and opposing interests reconciled, as usual, the commercial introduction could not be long delayed. Now, compare this situation with that confronting my turbine, for example. One should think that so simple and beautiful an invention, possessing many features of an ideal motor, should be adopted at once and, undoubtedly, it would under similar conditions. But the prospective effect of the rotating field was not to render worthless existing machinery; on the contrary, it was to give it additional value. The system lent itself to new enterprise as well as to improvement of the old. My turbine is an advance of a character entirely different. It is a radical departure in the sense

that its success would mean the abandonment of the antiquated types of prime movers on which billions of dollars have been spent. Under such circumstances the progress must needs be slow and perhaps the greatest impediment is encountered in the prejudicial opinions created in the minds of experts by organized opposition. Only the other day I had a disheartening experience when I met my friend and former assistant, Charles F. Scott, now professor of Electrical Engineering at Yale. I had not seen him for a long time and was glad to have an opportunity for a little chat at my office. Our conversation naturally enough drifted on my turbine and I became heated to a high degree. "Scott," I exclaimed, carried away by the vision of a glorious future, "my turbine will scrap all the heat-engines in the world." Scott thoughtfully, as though making a mental calculation, "That will make quite a pile of scrap," he said, and left without another word!

## "Aladdin's Lamp".

These and other inventions of mine, however, were nothing more than steps forward in certain directions. In evolving them I simply followed the inborn instinct to improve the present devices without

**I**MAGINE a man a century ago, bold enough to design and actually build a huge tower with which to transmit the human voice, music, pictures, press news and even power, thru the earth to any distance whatever without wires! He probably would have been hung or burnt at the stake. So when Tesla built his famous tower on Long Island he was a hundred years ahead of his time. And foolish ridicule by our latter day arm-chair "savants," does not in the least mar Tesla's greatness.

The titanic brain of Tesla has hardly produced a more amazing wonder than this "magnifying transmitter." Contrary to popular belief his tower was not built to radiate Hertzian waves into the ether. Tesla's system sends out thousands of horsepower thru the earth—he has shown experimentally how power can be sent without wires over distances from a central point. Nor is there any mystery about it how he accomplishes the result. His historic U. S. patents and articles describe the method used. Tesla's Magnifying Transmitter is truly a modern lamp of Aladdin.

EDITOR.

followed the inborn instinct to improve the present devices without (Continued on page 148)

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Mr. Tesla's articles started in our February issue

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## Director's Column



Vincenzo Piuri,  
IEEE Region 8 Director

Dear All, dear Friends,

It is a privilege and a pleasure to write you this message and work with you to better serve our scientific and professional community in our Region, to engage people interested in our field, and to empower them to be the leaders in technology and innovation.

During the last few months all colleagues in the R8 Operation Committee and I have been working to engage all volunteers for the various committees of our Region. All

together we have defined the detailed plans for this year in order to serve all segments of our community and engage with the general public. The ultimate goal is to make Region 8 and the entire IEEE the home for everybody, understanding and valuing all diversities and the different needs, and cooperating with the national associations in our field. Nobody should be left behind.

This would have not been possible without the terrific efforts and dedication of all volunteers involved in the committees of our Region. From the bottom of my heart, thanks to all of them!

The results of this collective work have been presented to the Chairs of Sections and Subsections, representing our local communities, during the spring meeting of the IEEE Region 8, held in Bucharest, Romania, on 24-26 March 2023. This was a unique opportunity for reinforcing our network of friends and make many new ones. This was an opportunity for strengthening and reinvigorating our Region, after two years of pandemic. This was an opportunity for sharing ideas, views, and aspirations. We learned a lot from each other. We brought home the best of the best practices. We better understood the specificities of our local communities, enabling us to bring the main concepts to reality by considering the peculiarities of the community in which we live.

From my heart and my mind, thanks to all volunteers who participated to our Region Committee meeting. Thank you for this opportunity of working together and building our collective vision to guide activities in our Region. Thank you for being the conduit which brings the light of knowledge back to the local communities to promote the advancement of science and technology, to stimulate innovation, to

## IEEE region8news

Vol 24 No 2  
June 2023

IEEE Region 8 News is a quarterly newsletter, published by Region 8 Committee to keep IEEE members within the Region updated on programs, initiatives, events, and activities. The printed edition is distributed with [IEEE Spectrum](#) to IEEE members throughout the Region and the electronic version is distributed via email to IEEE Region 8 members, and downloadable from the [Region 8 News website](#) as well. IEEE Region 8 News is produced by volunteer editors with contributions from members from all over Region 8.

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### Region 8 News Team

**Editor-in-Chief**  
Maja Matijasevic  
[mmatijasevic@ieeer8.org](mailto:mmatijasevic@ieeer8.org)

**Past Editor-in-Chief**  
Vinko Lesic

**Associate Editors**  
Ahmad Taher Azar  
Margaretha Eriksson  
Basant Kumar

**Designer**  
Mohammad  
Hossein Babaee

**Cover design**  
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Hossein Babaee

### Submitting articles:

This publication is here to showcase events, achievements, and news items from across the Region. As this is produced with specific deadlines throughout the year it is an ideal medium for reporting on past events, meetings or stories, with the ability to promote future events. We welcome reports, stories and general content, including photos, which can be emailed to us to [r8news@ieeer8.org](mailto:r8news@ieeer8.org) or [editors@ieeer8.org](mailto:editors@ieeer8.org). Please find the guidelines for content submission [here](#).

**The deadline for content submission for the September 2023 issue is July 15, 2023.**



The Institute of Electrical and Electronics Engineers

IEEE Corporate Headquarters

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make our collective vision a reality for the benefit of humanity, the environment, and all living beings! And thanks to all volunteers who will work with you!

Ciao

Vincenzo Piuri, IEEE Region 8 Director, 2023-2024



Closing of the R8 Committee Meeting in Bucharest, Romania, on March 26, 2023





## Region 8 Committee

### Operating Committee (OpCom)

**Director**  
Vincenzo Piuri (Italy)  
[director@ieee8.org](mailto:director@ieee8.org)

**Director-Elect**  
Mike Hinchey (UK & Ireland)  
[director.elect@ieee8.org](mailto:director.elect@ieee8.org)

**Past-Director**  
Antonio Luque (Spain)  
[past.director@ieee8.org](mailto:past.director@ieee8.org)

**Secretary**  
Ljupco Karadzinov  
(North Macedonia)  
[secretary@ieee8.org](mailto:secretary@ieee8.org)

**Treasurer**  
Adam Jastrzebski (UK & Ireland)  
[treasurer@ieee8.org](mailto:treasurer@ieee8.org)

**Vice-Chair, Member Activities**  
Vinko Lesic (Croatia)  
[member.activities@ieee8.org](mailto:member.activities@ieee8.org)

**Vice-Chair, Student Activities**  
Abdulateef Aliyu (Nigeria)  
[student.activities@ieee8.org](mailto:student.activities@ieee8.org)

**Vice-Chair, Technical Activities**  
Marios Antoniou (Cyprus)  
[technical.activities@ieee8.org](mailto:technical.activities@ieee8.org)

**Member**  
Magdalena Salazar Palma  
(Spain)  
[opcom-corresponding@ieee8.org](mailto:opcom-corresponding@ieee8.org)

### Region 8

**Zone Representative**  
Habib Kammoun (Tunisia)  
[zone.representative@ieee8.org](mailto:zone.representative@ieee8.org)

**Africa Council**  
Adel Alimi (Tunisia)  
[africa.council.chair@ieee8.org](mailto:africa.council.chair@ieee8.org)

(Status as of April 15, 2023)

Full list of officers available at <https://ieee8.org/category/committee>

### Appointed Members – Standing Committee Chairs

**Action for Industry**  
Toni Mattila (Finland)  
[director@ieee8.org](mailto:director@ieee8.org)

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**Chapter Coordination**  
Anna Litvinenko (Latvia)

**Conference Coordination**  
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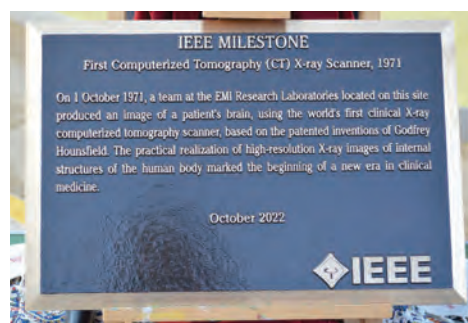
**Subsections Strategic Development**  
Sanja Lazarova-Molnar (Denmark)

our members. Furthermore, by sharing your articles, you can help to inspire and motivate other IEEE members to get involved in their local chapters or at the Region level. So, whether you have organized an IEEE related activity or event, or you have some interesting member news to share, we would like to hear from you.

Tips for prospective contributors may be found at <https://ieee8.org/category/pnc/ieee-region-8-news/>. For any queries or suggestions, feel free to contact the editorial team at [editors@ieee8.org](mailto:editors@ieee8.org).

## Celebrating the Invention of the CT X-Ray Scanner at EMI Electronics, Hayes, England by Sir Godfrey Hounsfield

Nick Wainwright, Webmaster, UK and Ireland Section



On 26th October 2022, IEEE UK and Ireland Section celebrated the IEEE Milestone Award that recognises the outstanding engineering achievement by Godfrey Hounsfield, enabling the practical realisation of high-resolution X-ray images of internal structures of the human body and marking the beginning of a new era in clinical medicine.

## Editor's Column



Maja Matijasevic,  
2023 Region 8 News Editor-in-Chief

It is a pleasure to welcome you to the June issue of Region 8 News, showcasing the programs, initiatives, events, and activities of IEEE volunteers throughout Europe, the Middle East and Africa.

In this issue, we bring you personal accounts of first-time attendees at the recent [120th Region 8 Committee Meeting](#) in Bucharest, Romania which brought together more than 160 participants from across the Region to share their accomplishments and experiences, and to collaborate and network with one another.

We have stories from all parts of the Region, as reported by IEEE members, Section officers and Region 8 committee members, including celebrations of important technological milestones, volunteer training, and workshops and conferences. We highlight the importance of industry engagement in driving technological progress through events organized by technical chapters and activities with industry partners.

Students and Young Professionals play a central role in many local, as well as international IEEE activities and we feature reports on projects, events and competitions organized by, and for those members. Additionally, we provide an overview of Life Members' organizations in Region 8 and some Women in Engineering activities in Tunisia. Lastly, we include information on upcoming Region 8 'flagship' and cosponsored conferences.

I would like to thank all those who have contributed to this issue of Region 8 News. Our common goal is to reflect the Region's ethnic and geographical diversity, as well as other aspects of life and careers of



Plaque unveiling (L-R): Charles Turner, Saifur Rahman, Izzet Kale and Mike Hinchey in front of Nipper

... Continued on page 4 ►

## Formation of Ethiopia Subsection: Insights from the First Ethiopia Subsection Chair to Attend IEEE R8 Committee Meeting

*Fetene Mulugeta Yigletu, Ethiopia Subsection Chair  
Maja Matijasevic, Editor-in-Chief, Region 8 News*

In April 2022, the Region 8 Committee approved the formation of the Ethiopia Subsection (under supervision of Region 8), with boundaries corresponding to the country of Ethiopia. The Members and Geographic Activities (MGA) Board gave final approval in June 2022. The Ethiopia Subsection Chair Fetene Mulugeta Yigletu, an Assistant Professor at the Addis Ababa Institute of Technology, was invited to participate for the first time at the 120th Region 8 Committee Meeting in Bucharest, Romania, in March 2023.

### **R8N: Please describe the process of forming the Ethiopia Subsection?**

**FMY:** The formation process of Ethiopia Subsection started at the time of AFRICON 2015, with individual or small groups' efforts. In the next years the focus was on increasing and maintaining membership numbers. We were contacting individuals, groups and societies, and started organizing small activities such as workshops. We then went on to establish a conference that was sponsored by IEEE Electronics

Packaging Society and Facebook sponsored from the industry side. Finally, we submitted the petition to form a Subsection. Actually, we tried to submit a petition earlier, but we were advised to get some momentum first – and we actually did that, we kept doing activities. So the Subsection was approved in June 2022 and the elections were held via vTools in November. I was elected as Subsection Chair and took office in January 2023.

### **R8N: How many members are there now in the Ethiopia Subsection?**

**FMY:** The Ethiopia Subsection currently has around 100 members, with more than 50 being active volunteers. They are instrumental in maintaining a healthy level of activity and working on increasing the number of members. There have been some difficulties with membership renewal related to foreign currency payment, but they are being solved.

### **R8N: How did you find participating in the R8 Committee meeting?**

**FMY:** This is the first time that the Subsection Chairs have been invited, which I think is great because this is what Subsections need. For example, just to be invited here, to have a role, adds a lot of energy to you to go back home, to do activities to fulfill your responsibility. This meeting also creates opportunities to meet people from other Sections, from close Sections as well as those far away, some highly experienced members, and all sorts of members. It is a very inspiring window into IEEE activities that will really help us plan the way forward, especially in growing to become a Section in the future. I am very happy to have been invited here. I have learned a lot and I plan to share the experience that I gained here with my volunteer colleagues back home and set the way forward.



IEEE Region 8 Director Vincenzo Piuri (left) and the Ethiopia Subsection Chair Fetene Mulugeta Yigletu (right) at the 120th Region 8 Committee Meeting in Bucharest, Romania, in March 2023

... Continued from page 3 ►

The inspiration for computed tomography (CT) came from a chance conversation that Godfrey Hounsfield had whilst on holiday, where a doctor complained that X-ray images of the brain were too grainy and only two-dimensional. At the time, Hounsfield worked at EMI in Hayes, England, best known for producing and selling Beatles records, but also developed electronic equipment.

Hounsfield proposed a project to his supervisor to develop a machine that could create three-dimensional brain images by projecting narrow beams of X-rays through a patient's head. A computer would use the resulting data to construct a series of cross-sections that together would represent the brain in 3D.

The event took place in the shadow of 'Nipper' statue close to Jupiter House, formerly the EMI Head Office, Hayes, Middlesex where the plaque will be permanently sited. Nipper was a dog who served as the model for one of the world's best-known trademarks: the dog-and-gramophone used by HMV and EMI.

Presentations from Prof Charles Turner (Past Chair, IEEE Life Member's Committee), Prof Izzet Kale (Chair, IEEE UK and Ireland Section) and Steve Welby (IEEE Chief Operating Officer) preceded the plaque unveiling, which was performed by IEEE President Professor Saifur Rahman and John Ryan, a member of the CT Scanner project team at the EMI Central Research Laboratories.

The event in Hayes was followed by a symposium celebrating the achievements of Sir Godfrey Hounsfield at the Royal Institution, London, the next day.

Both events were organised by IEEE UK and Ireland Life Members Committee.



## IEEE R8 Committee Meeting, Bucharest | A Personal Perspective

*Nick Wainwright, Chair, R8 Web Ad Hoc Committee*



*Fetene Mulugeta Yigletu, Ethiopia Subsection Chair, Nick Wainwright, R8 Web Adhoc Committee Chair, and Iryna Ivasenko, Ukraine Section Vice Chair*

In March 2023 I had the pleasure of attending my first R8 meeting; invited in my new role as R8 Web Ad Hoc Committee Chair and tasked with designing the structure of a new website for the Region.

The R8 meeting in Bucharest reflected the peak of my IEEE journey so far, an experience that extends back to the late 1980s when, as a fresh electronics graduate, I was looking for a professional home. In the UK back then, the two main options were – rather confusingly – IEE (now IET) and IEEE. A colleague described the IEE as more important for career progression since it provided a route to Chartered Engineer (CEng) status, but IEEE was practically more useful as it provided access to publications and conferences which would support my technical development. In the end I opted to join both.

For many years I was a silent member but about 10 years ago I became more active in the IEEE Electromagnetic Compatibility Society (EMC) Chapter, and then in 2015 took on the role of webmaster, editor and ExCom member for the UK and Ireland Section. As a result of my work getting noticed within R8, I now found myself in Bucharest.

Several things struck me over the next three days. Firstly, Sections region-wide face similar challenges including membership development and affordability, the increasing demands on volunteers' time and the

challenge of getting closer to industry and remaining relevant in 2023. There exists a tremendous opportunity to share ideas and best practice to help one another overcome these common issues.

Secondly there is so much going on within the Region; so many initiatives, activities, and events that we can share more widely with members, potential members, and the wider community. Showcasing the vibrancy of R8 is the best way of attracting both volunteers and new members to IEEE. It's something I'm very passionate about and one of the reasons I'm involved in the design of a new website that will allow us to do that much more effectively.

And thirdly I was struck by the energy of people who were present; all with the common aim of advancing technology for the benefit of humanity, and all with a story to tell.


On the first day, quite by chance, I found myself sat at lunch with Iryna Ivasenko, Vice Chair of the Ukraine Section, who explained that she was representing the Section on behalf of Ievgen Pichkalyov as there was a restriction on male Ukrainians leaving the country. It was inspiring to hear the great efforts that had been made to ensure that IEEE activities continued, including hosting IEEE 2nd Ukrainian Microwave Week in 2022, despite the obvious challenges. We were joined by Mariya Antyufeyeva who, prior to the war, was a Senior Scientific Researcher of Theoretical Radio Physics Department at the V.N. Karazin Kharkiv National University but was forced to leave Ukraine and now works as a visiting Research Fellow at Newcastle University in the UK – a place I am very familiar with as it's where I did my undergraduate electronics degree and where my daughter is currently studying for a degree in Law. This was the first of two amazing coincidences across the two days.

The second occurred at the spectacular gala dinner at the Palatul Bragadiru, where I found myself – again quite by chance – sat next to Fetene Mulugeta Yigletu, the first chair of the newly created Ethiopia Subsection. As we got chatting, it emerged that Fetene had completed part of his PhD at a company in a small town called Newton Aycliffe in the northeast of England. Most people in the UK wouldn't know where Newton Aycliffe was, but I do because it's not too far from Newcastle, and it's where I had my first job after graduation. What's more we both lived in the nearby small town of Darlington, albeit at different times.

So, I travel from the UK to Romania, sit next to someone I've never met before from 5000 miles away who lived and worked in the same small town as me in the UK. R8 might be a large geographical area but IEEE certainly brings people together!

If anyone reading this is wondering about getting involved in R8 activities, my advice – to quote a famous sportswear brand is – **just do it!**

## Volunteering

Brought to you by  IEEE youngprofessionals

<https://volunteer.ieee.org>

# VOLUNTEERING ON MY TERMS



## Exploring Deeper Relationships with Industry Partners through Action for Industry (Afi): Meeting in Nairobi

*Kithinji Muriungi, IEEE R8 Action for Industry Committee*

On 1st and 2nd December 2022, Action for Industry (Afi) Ambassadors from across Africa were hosted in Nairobi, Kenya for a 2-day workshop on Industry Engagement. This workshop followed in the tracks of a successful [Action for Industry meeting in 2019](#). Its primary objective was to gather the Afi ambassadors together in person for the first time, to share best practices and learn from one another. Additionally, the ambassadors engaged in meetings with a range of industry partners, including a startup, a government institution, private developers, and a multinational corporation, to explore opportunities available. Finally, the ambassadors had a collective strategy session to reflect on past successes and formulate future plans for their respective countries.

The first day was fully scheduled with meetings with four industry partners in Nairobi, arranged by the Kenya Section industry engagement team. The objective of the meetings was to engage the different industry partners, collect their feedback on various IEEE offerings and identify areas of future collaboration between IEEE and the organization.

The first meeting of the day was with [Baridi](#) - a startup that provides solar-powered cooling for East Africa's largest livestock market,

Burma, located in Nairobi's industrial area. Baridi has had a very successful pilot in Burma. The discussion with Baridi centered on how IEEE could offer entrepreneurial support to growth stage startups like Baridi through avenues like linkage to technical and market experts, funding support through grants and seed investments. Baridi was open to engaging with the local IEEE ecosystem to share best practice, offer support in projects allied to their domain of expertise while also working with our student ecosystem through mentorship and research opportunities.

The second meeting was with [Gearbox Europlacer](#), an electronics assembly and manufacturing company based in Nairobi. Gearbox works with local and international customers to provide IoT consultancy, solution design, and the manufacturing and production of finished goods. Gearbox Europlacer works to harness local talent, retain economic value within the country, and ultimately, aim to positively impact Kenyan GDP. Gearbox Europlacer is already involved in the local IEEE ecosystem through offering industry visits, internship placements



Photo credits: R8 Action for Industry Committee



Photo credits: R8 Action for Industry Committee



Photo credits: R8 Action for Industry Committee



R8 Action for Industry (Afi) ambassadors from across Africa at the Microsoft Africa Development Center (ADC) in Nairobi (Photo credits: R8 Action for Industry Committee)





Photo credits: R8 Action for Industry Committee

to student members and also having their staff as active volunteers with IEEE. Additionally, they have participated as local partners of the IoT & AI Africa Challenge in collaboration with the IEEE Africa Council.

The third meeting was with [Kenya Power & Lighting Company \(KPLC\) Training Center](#), as the central training hub for the country's single utility company, which provides end-to-end training for KPLC employees across all areas of operation. The Training Center management expressed interest in collaborating with IEEE Continuum for the training programs as well as encouraging their staff to become active contributors to IEEE through initiatives such as paper writing and publishing, and participating in the local ecosystem activities.

Finally, the ambassadors visited the [Microsoft Africa Development Center \(ADC\)](#), which serves as the technical development center for Africa-based engineering teams. The development teams build and maintain global solutions for Microsoft. Microsoft ADC does a lot of training especially for students to learn engineering skills like coding, product development, design thinking and basic IoT. The Microsoft ADC team was interested in collaborating with IEEE in the training programs where IEEE would provide support as trainers for the cohorts of young students who come into the ADC for training. In addition, they showed interest in learning about IEEE projects in other areas, such as SIGHT, and expressed their willingness to explore opportunities to collaborate on projects that are aligned with the Microsoft vision and mission. ADC also extended an offer to provide event venues for IEEE events

and activities whenever possible. During the visit, the ambassadors had an opportunity to tour the facility and engage in a practical hands-on electronics soldering workshop at [The Garage](#).

The first day ended with a gala dinner hosted by the Industry Ambassadors, with over 120 participants, which included invited industry partners and potential partners from various sectors involved in technology. During the dinner, guests were provided with a summary of Action for Industry's mission, membership, and key activities. Guests were also introduced to IEEE Kenya Section and its local industry engagement activities, along with opportunities for future collaboration. At the conclusion of the dinner, outstanding industry partners were recognized for their contributions to the local IEEE ecosystem in Kenya and the advancement of humanity through technology, in line with the IEEE mission.

On the second day of the meeting, the Afl ambassadors dedicated their time to debriefing and to strategy sessions. They engaged in reflective discussions to assess their achievements over the past year and identify areas for improvement in the service to industry partners and the IEEE industry ecosystem. The group agreed that there was still much work to be done to advance their shared goals.

Ambassadors were encouraged to increase collaboration efforts across Sections to enhance the activities being offered to members and partners as well as to foster cross-border links and growth of the ecosystem. The day ended with an outdoor trip at the Giraffe Centre (wildlife conservation park) where the team spent their afternoon enjoying the cool weather in Nairobi.



Photo credits: R8 Action for Industry Committee



Photo credits: R8 Action for Industry Committee

## News from Germany Section Electromagnetic Compatibility (EMC) Society Chapter

*Susanne Vogel, Chair, Germany Section EMC Chapter*

The annual kick-off meeting of IEEE Germany Section's Electromagnetic Compatibility (EMC) Society Chapter was held in February 2023, in Dresden, Germany. Both on-site and online members of the Executive Committee (ExCom) and volunteers participated in the meeting. During the meeting, the group planned and scheduled activities for 2023 that would be offered to the EMC Society's members and those interested in EMC. In April and May, the Chapter planned on hosting an online student contest focused on EMC and an online EMC Career Day. There is also an EMC Distinguished Lecturer event planned in June in Hamburg, featuring Karen Burnham. An international PhD Student Meeting is planned in July, also in Hamburg, and an EMC Boot Camp will be held in Wilhelmshaven. Finally, November will see the IEEE EMC Young Professionals Day in Magdeburg and the 29th Annual Member meeting in Dresden.

Among other activities since the beginning of the year, the Chapter also hosted an EMC Professional Talk by Dr. Ahmed Sayegh, a Research Fellow at the National Metrology Institute of Germany (Physikalisch-Technische Bundesanstalt – PTB) in Braunschweig. The topic of the talk was “Traceable Measurement of Passive Intermodulation with Uncertainty Budget”. Another notable activity was related to the trade fair EMV - Exhibition and Conference on Electromagnetic Compatibility, in Stuttgart in March. The EMC Chapter was proud to have their own booth at the conference, where they provided information about their activities and engaged in networking with other attendees.

The Chapter looks forward to a fruitful year of knowledge building, networking, and making new friends.

More information about future activities is available at <https://r8.ieee.org/germany-emc/>.



EMC Chapter volunteers showcase their activities at EMV in Stuttgart, March 2023 (Photo credits: Germany Section EMC Chapter)

## IEEE Aerospace and Electronic Systems Society and EMSIG University of Glasgow Workshop on Guidance and Tracking

*Julien Le Kernec, University of Glasgow, UK*

On 30th March 2023, IEEE Aerospace and Electronic Systems Society (AESS) and Electromagnetic Systems Interest Group (EMSIG) at the University of Glasgow organized a workshop on guidance and tracking. The workshop programme featured a guest speaker from AESS Switzerland Chapter Chair Heinz Wipf; an industry talk from Leonardo UK – one of the UK's leading companies specialising in aerospace, defence and security; and presentations of research work and projects at the University of Glasgow.

The first talk was given by Mr Heinz Wipf, who spoke about the Swiss GPS Jamming Trials and discussed the real-time interference effect of jamming on commercial aircraft navigation. The trials involved eight aircraft and a low power L1/CA jammer, and Wipf shared the story behind the trials.



Mr Heinz Wipf (left) and Dr Julien Le Kernec (right) in front of the painting of Lord Kelvin. Lord Kelvin pioneered important contributions to electricity, magnetism and thermodynamics which we still use today. You can find an exhibition of his inventions at the Hunterian museum at the University of Glasgow where the picture has been taken. (Photo credits: Julien Le Kernec)



The second talk was given by Dr David Greig from Leonardo (Edinburgh). His talk focused on “The Military Machine Learning Challenge” and discussed the challenges of obtaining and exploiting data in the military domain, which differs significantly from commercial and civilian purposes. The third talk was given by Dr David Anderson from the University of Glasgow. He presented “Multi-Fidelity, Multi-Agent Simulation for Synthetic Data Generation & Scientific Machine Learning”. Anderson discussed the MAVERIC simulation engine, which is designed specifically to model systems of autonomous vehicles in realistic operational scenarios.

During the workshop, three young professionals from the University of Glasgow presented their work. Jan-Hendrik Ewers presented “Data Driven Probability Map Generation for Search and Rescue Using

Agents”, which focuses on creating simulated agents that replicate the behavior of a missing person to improve the accuracy and speed of predictions for search and rescue operations. Mostafa Elsayed presented “Extended Small Targets Tracking from ISAR Images”, involving a selection of track-before-detect (TBD) algorithms. Abdullah Akaydin presented “Radar-based indoor navigation system for the visually impaired”, which discussed the requirements for the suitable type of radar sensor, as well as early results on egomotion signal pre-processing.

The workshop concluded with a panel discussion on the latest trends, focusing on the role of universities and companies in educating and training young professionals and bridging the gap between technology developments at different Technology Readiness Levels (TRLs).

## Information Technology Conference IT 2023 co-organized by Serbia and Montenegro Section

*Milutin Radonjić, IT 2023 Committee Member, Serbia and Montenegro Section*

The 27th International Scientific and Professional Conference “Information Technologies – Present and Future” (IT 2023) took place in Žabljak, Montenegro, from February 15th to 18th, 2023. The Conference was co-organized by the University of Montenegro Faculty of Electrical Engineering, University of Donja Gorica Faculty

of Information Systems and Technologies, IT Society Montenegro, University of Belgrade Faculty of Organizational Sciences, and IEEE Serbia and Montenegro Section, with the support of the Čikom company from Podgorica.

Presentations of submitted papers and sessions took place in person and online, with authors from 18 countries. Out of 61 paper submissions, 47 were accepted and presented at the conference (39 in English, and 8 in the local language). Topics from various fields were covered, including wireless sensor networks, social media user behavior, QR code encryption, as well as image processing software. Also addressed were communications issues in maritime security, navigation and tracking of a set path in autonomous underwater vehicles, optimization and approximation in various applications, as well as digital signal processing. Topics related to artificial intelligence and machine learning, as well as watermarking, electronic services and energy topics were also included.

A special session was dedicated to presentations of the EuroCC2 project – National Competence Centers for HPC, FoodHub Center of Excellence, two H2020-MSCA projects TRACEWINDU and ODDEA, H2020 projects NI4OS-Europe and DEMETER, Horizon Europe FishEUTrust, Eureka TRADE, Erasmus DigNest and IPA HPC4S3ME.

The conference participants also had the opportunity to participate in workshops, panels and training in artificial intelligence, as well as standardization in information technologies and cyber security. Various views of the recent ransomware and other internet attacks that hit many countries, including Montenegro, were presented. The current topic caused a lively exchange of opinions, highlighting many aspects of this complex issue.



IT-2023 Conference participants in the meeting room and during a break in the snow-covered Durmitor national park (Photo credits: IT 2023)



## Women in Engineering Annual Congress of Tunisia (WIE ACT) “She acts. Honoring the past, inspiring the future”

*Chayma Abdelkefi, IEEE ENIS Student Branch member  
Baya Bouchaala, Past Chair, IEEE WIE ENET'Com Student Affinity Group*

The Women in Engineering (WIE) Annual Congress of Tunisia (ACT) was held for the first time in Sousse, Tunisia, on 1st and 2nd October 2022, organized by IEEE WIE ENIS (National Engineering School of Sfax) and IEEE WIE ENET'Com (National School of Electronics and Telecommunications of Sfax) Student Affinity Groups. The Congress aimed to celebrate the achievements of successful and leading women in the STEM field and promote women's empowerment under the theme of “She acts. Honoring the past, inspiring the future.”

The Congress had several distinguished speakers, including Ms. Ilhem Kallel, the IEEE Tunisia Section Chair; Ms. Boudour Ammar, the IEEE Tunisia Section Computational Intelligence Society (CIS) Chapter Vice-Chair; Mr. Omar Nouri, a member of the humanitarian association Dar Al-Amal; Ms. Lamia Hakim, the national voice of the Children of the moon; and Ms. Hela Bouallegue, a leader at the Tunisian Space Association.

The Congress also featured workshops and competitions, including one proposed by the IEEE Tunisia CIS Chapter on AI in the healthcare sector. There were acclaimed trainers who held interesting workshops

in technical and soft skills fields, including “UI/UX” by IEEE Tunisia Section Community Manager Kayoum Jedidi, “Introduction to IOT” by the CEO of RoboCare, and one of the best entrepreneurs in Tunisia Ms. Imen Hbiri. Soft skills workshops included a communication workshop by Mr. Majdi Daoued, and a workshop entitled “How to Catch your Dreams”, by Ms. Asma Sliiti.

The IEEE Tunisia Section granted the “Outstanding Women in Engineering Technical Activities award” during the Congress, which recognized the work of all WIE Affinity Groups in the IEEE Tunisia Section. The award was presented based on the sustainability, scope and scale, and impact of the events conducted in the previous year. Two WIE Student Affinity Groups, IEEE WIE ESPRIT (Private Higher School of Engineering and Technology) and IEEE WIE ESSTHS (Higher School of Sciences and Technology of Hammam Sousse), pitched and did a 6-minute presentation about their activities for 2022, and the jury was impressed by the quality of their activities. IEEE WIE ESSTHS came first, ahead of IEEE WIE ESPRIT.

The Congress was made possible by the efforts of the WIE ACT Committee, who worked hard to overcome challenges such as securing sponsors and speakers and promoting the event to reach a wider audience. In line with the IEEE WIE's vision to promote the development of women in engineering and technology, the 125 attendees were invited to contribute donations to support women affected by breast cancer.

The Congress was a resounding success, which raised hopes that it may become an important annual event to bring together diverse women engineers in Tunisia.

More information: [WIE-ACT web page at ENET'COM](#), [WIE-ACT Facebook](#)



Winning team of the Best Women in Engineering Technical Activities Award (Photo credits: IEEE WIE ENIS & IEEE WIE ENET'Com)



The IEEE WIE ACT attendees took a picture together during the closing ceremony (Photo credits: IEEE WIE ACT Media committee)



## IEEE Region 8 Robot Championship in Malta

*Conrad Attard, Past Chair, IEEE Region 8 Professional and Education Activities*

The IEEE Region 8 Robot Championship in Malta took place on 3rd and 4th December, 2022. Organized by the IEEE Region 8 and Professional and Educational Activities (PEA) Committee, IEEE Malta Section, and IEEE Malta Section Computer Society Chapter, this event aimed to promote STEM and cultivate communication, entrepreneurship, creativity, problem-solving, and teamwork among IEEE student members. Teams from Student Branches (SBs) in Region 8 were eligible to participate, and the final event featured eight teams and 23 participants from five countries: Cyprus, Malta, Tunisia, Russia, and United Arab Emirates.

The competition consisted of four games: Time to Fall, Weight Game, Death Clock, and Hanging Hazard; and video footage was streamed through one live channel and four other channels, as well as online platforms. Videos are [available](#) via PEA web page. The three aspects of the championship included STEM activities, workshops, and industry engagement.

The STEM activities were the “heart and soul” of the championship, allowing the visitors of all ages to interact with more than 30 different types of robots and learn about technology, problem-solving, and computer logic. Awards for STEM Activities were given in 10 categories. The overall winning team included Zack Farrugia, JeanPaul Bonavia and Gabriel Giordmaina from the Malta College of Arts, Science and Technology (MCAST) SB, with the robot Alpha Beetle. They also won awards in four other categories: ‘Best Looking Robot and Branding’ - Judges’ Choice, ‘Most Effective Add on,’ ‘Best Design,’ and ‘Best Pushing Power’. The first runner-up was a team including Krishna Ajith, Ryan Fernandes, and Sherwin Dsouza from Manipal Academy of Higher Education (MAHE) Dubai SB, United Arab Emirates, with the robot AI Robotics. The ‘Best Manoeuvrability’ award was won by the Lydin Camilleri from University of Malta SB, with the robot Droid Dominion. The Cyprus Team Electro Reinvented from University of Cyprus SB won the ‘Best Teamwork’ award. Robot Flam team from the Private Polytechnic Institute of Advanced Sciences of Sfax SB from Tunisia won ‘Best Tactics’ and ‘Best Challenger’ awards.

The championship was not just limited to the event dates, as teams had to prepare months in advance, including creating a business plan and funding the robot’s costs. There were six workshops organized for team training and sections:

- 1) An introduction to building a functional and enduring robot for the IEEE R8 Robot Championship. - Dr Ing. Marvin Bugeja, Malta
- 2) Workshop on budgeting for the IEEE R8 Robot Championship. Gaining support from industry. – Rawan El Jamal, UK
- 3) Start with a good brand - Vildana Hrnjic, Bosnia and Herzegovina
- 4) Workshop on how to prepare STEM activities for Robot Championship. – Dr Conrad Attard, Malta
- 5) Managing Teams - Leading with impact (distinguished speaker program). - Sohaib Sheikh, UK
- 6) Rules and Regulations IEEE R8 Robot Championships. - Dr Conrad Attard and Lawrence Chetcuti, Malta

The workshops were also available to IEEE members who were interested in the subjects. In addition, two information sessions were held for the Tunis student branch and one organised by Student Activities Committee for student organisations.

The third aspect was industry engagement, which played a very important role in the success and the quality of the robots being designed. The student teams reached out to local industry in their respective Sections, not only for funding, but also for expertise and access to certain industrial machines and technology to be able to get the robots designed.

Overall, the IEEE Region 8 Robot Championship Malta 2022 was a remarkable event, achieved through the dedication and hard work of everyone involved.



Image credits: Conrad Attard

# Exploring the Power Plants of Bosnia and Herzegovina: A Study Trip by IEEE Student Branch at University of Sarajevo

*Vedad Bećirović, Vice Chair, Bosnia and Herzegovina Section*  
*Haris Čapelj, Secretary, Bosnia and Herzegovina Section*

IEEE Student Branch at the Faculty of Electrical Engineering, University of Sarajevo (UNSA) organized a study trip to explore different power plants in Bosnia and Herzegovina. The trip, which took place in June 2022, after the much awaited partial lifting of COVID-19 restrictions, was aimed at revitalizing the student branch and fostering communication between students. The group led by students Sarah Tutnjević, Hana Kambur, and Sara Pinjo, visited the Jablanica hydro-electric power plant (HPP), Salakovac HPP, Podveležje wind park, CHE Čapljina HPP, and Hodovo solar power plant. During the trip, the students learned how different types of power plants operate. They had the opportunity to observe the power plants' key components and gain practical experience to supplement their theoretical knowledge.

The Jablanica HPP was built in 1947, and its first stage was put into operation in 1955, making it one of the oldest HPPs in Bosnia and Herzegovina. This HPP is a derivation type, with the possibility of producing electricity through seasonal variations in the water level of

Lake Jablanica. During the tour, the students had the opportunity to learn about the generator blocks and follow the flow of energy to the transformer units.

The HPP Salakovac, located in Mostar, was built in 1977, as an impoundment type HPP. In addition to exploring the generator blocks and the control room, the students had the unique opportunity to visit its 70 meter high dam, which is one of the highest dams in Bosnia and Herzegovina.

The wind park Podveležje, situated on a mountain plateau in the vicinity of Mostar, was put into operation in 2021. This power plant significantly increased the share of electricity production from renewable sources at the state level, thus reducing the use of carbon fuels.

The CHE Čapljina, located deep in the karst of the Herzegovina mountains, was built in 1972 and put into operation in 1979. It is a pumped-storage reversible power plant. At the time of commissioning, its installed power was about 50% of the total installed power of all HPPs in Bosnia and Herzegovina. Nowadays, with 440 MW installed power in two generators, it is used for tertiary regulation.

Hodovo solar power plant, built in 2016, is located in a rural area around Stolac which has many sunny days per the year, making it an ideal location for solar power plants. In addition to the system of fixed solar panels, the students had the opportunity to learn about the tracker system.

The trip ended with a joint farewell lunch, with a view of beautiful Jablanica lake. The excursion inspired the students to continue contributing to their student branch and motivated them to focus on renewable energy.



View from the HPP Salakovac dam.  
 (credits: UNSA SB)



Wind park Podveležje. (credits: UNSA SB)



Hodovo solar power plant. (credits: UNSA SB)



credits: UNSA SB



## Türkiye Section Student Branches Workshop '23

*Tunçer Baykaş, Murat Balcı, Gökçenaz Özgel and Mehmet Atıf Kasım  
Türkiye Section*

IEEE Türkiye Student Branches Workshop '23 was a three-day event hosted by the Izmir Institute of Technology (IYTE) in February 2023.

On the first day, the opening ceremony included welcome speeches by Yusuf Baran, the Rector of IYTE and Alperen Bulut, the IEEE IYTE Student Branch Board President. The remainder of the program was filled with insightful speeches and presentations from IEEE Türkiye Section Student Representative Bekircan Ozturk and several committee representatives. The speakers included Ihsan Kupelikilinc, Computer Society (CS) Türkiye Student Activities (SAC) Coordinator; Murat Balcı, Communication Society (ComSoc) Türkiye Chapter Student Representative; Doğa Umacı, TRS Women in Engineering (WIE) Student Representative; Melek Yıldız, TRS Engineering in Medicine & Biology Society (EMBS) Student Representative; Aybüke Dikkatli, TRS Robotics and Automation Society (RAS) Student Representative; and Fatih Aytar, Sister Student Branches Project Representative. Ahmet Sabit Bulut spoke about the importance of utilizing engineering and education in the workplace, as well as professionalism, institutionalism, and entrepreneurship. The day ended with presentations from candidates for student representative positions and committees, and from Student Branches (SBs) bidding for future hosting of regional meetings.

The second day was equally informative, with presentations from Berkay Aksakal on the internal organization of Young Professionals (YP) Affinity Group, and Tuncer Baykas, the Vice President of the IEEE Türkiye Management Board on the IEEE Türkiye Section's functioning and structure.

Students took part in various icebreakers to get to know each other and form new connections with students from other SBs. The

program continued with parallel sessions to address SB problems and solutions, as well as to review and amend SB rules and regulations. Finally, Dilara Kulaksız gave a stimulating presentation on entrepreneurship, the Vestel company made a mock job interview experience for students, and the Argela company provided a technical presentation on their R&D and communication technologies and an office tour.

On the final day, participants were enlightened by presentations on IEEE SIGHT by Can Candan, the local SIGHT Group Vice-President, and the use of IEEE logo in branding, as explained in detail by Muzaffer Sevilili.

The event ended with the election of new representatives and the hosting SB for the next year's regional meeting. Overall, the Türkiye Student Branches Workshop '23 was a highly informative and productive event, with numerous presentations and activities that enriched the experience of all participants.



*Opening address by Yusuf Baran, the Rector of IYTE*



*Türkiye Section Student Branches Workshop '23 participants*

## PhD3M Competition: SSCS Tunisia Chapter Provides Platform for Young Professionals and PhD Students to Showcase Research

*Brahim Mezghani, Chair, Solid State Circuits Society Tunisia Chapter*

IEEE Solid State Circuits Society (SSCS) Tunisia Chapter held an exciting event on February 23rd, 2023 - the PhD3M competition (PhD thesis in 3 minutes). It was a unique opportunity for PhD students in the final phase of their thesis and young professionals to showcase their research work related to electrical engineering and information technology. The competition aimed to improve participants' communication skills and encourage the exchange of ideas, with the goal of convincing a diverse audience of the real-world impact of their research through relevant applications. The participants had to present their research work in a simple and concise way, using only five slides and within three minutes.

A total of 46 submissions were peer-reviewed by the Scientific Committee members based on their understanding of the research work and its importance. The 12 best submissions were selected, and the PhD students who authored them were invited to present their work in a live session. During the live session, the Scientific Committee and 83 attendees, comprising professors, PhD students, and industry representatives, collected marks. The top five submissions with the highest mark averages were declared the winners, and they received cash prizes sponsored by the contest's financial sponsors. The winners, ranked from first to fifth, were Afef Oueslati (ENICarthage), Naouel Haggi (ENIS & INSA de Rennes), Intissar Zaway (ENIS), Hana Rhim (SUP'COM), and Fathia Letaief (ENISo).



*The twelve finalists (left) and the 1st prize winner of the PhD3M competition with the representatives of financial sponsors and SSCS Tunisia Chapter (right) (Photo credits: Brahim Mezghani)*

## SYPLC '23 Drives Professional and Soft Skills Development for Lebanon's Students and Young Professionals

*Hadi Kanaan, Chair, IEEE Lebanon Section*

An initiative of IEEE Young Professionals Lebanon Affinity Group, SYPLC 2023 is the biggest IEEE event in Lebanon, gathering people from all over the country, and from various backgrounds and career levels. Held in the Holy Spirit University of Kaslik (USEK) on March 18th, 2023, in collaboration with the IEEE USEK Student Branch, this was the fifth edition of SYPLC aimed at facilitating the transition of students and young graduates from college to the workplace. The congress attracted an audience of more than 200 individuals from all across Lebanon, providing a unique opportunity to connect with peers and learn from a variety of experts.

During the event, esteemed speakers such as Eng. Christophe Zoghbi (Founder of Beirut AI and Zaka AI), Mr. Christophe Khoury (Lead Mentor and Advisor), Dr. Charbel Fares (Entrepreneur and CEO) and Dr. Hayssam Serhan (CEO of Neos Interactive Ltd.), gave talks on the skills required to break into the modern tech world, while other speakers like Eng. Tannous Iskandar and Dr. Nada Sarkis tackled the topics of creating your own story and strategically unlocking potentials, respectively. Dr. Rita El Meouchy, Founder of El Meouchy Education, Consultancy and Training, informed attendees about the importance of personal branding and how to do it. Elevating an individual's profile with AI, and modern sustainability goals and targets were also topics that were discussed.

It was very pleasing to see this large number of students and young professionals excited to work on their soft skills and networking, and we hope to see this in other IEEE events.

An engaging audience and breath-taking speakers, this is what SYPLC 2023 was all about!



*Photo credits: Elia Aoun*



## Leadership Training in Antalya Organized by Student Activities Committee

*Abdullateef Aliyu, Chair, R8 Student Activities Committee*

IEEE Region 8 Student Activities Committee (SAC) organized leadership training for the respective Section Student Representative (SSR) and Section Student Activities Chair (SSAC) in Antalya, Turkey, on February 24th – 26th, 2023.

On the first day, the delegates arrived and participated in a sightseeing tour of the beautiful city center of Antalya. Members of the SAC team used the opportunity to meet and strategize during the early hours of the day on the 2023 operation of the newly constituted Region 8 SAC team and structure.

The second day was a full day of intensive training, which covered several topics, including section student activities planning and administration, student branch reporting and data management, available tools and resources for student branches, publicity, and membership development.

The Region 8 Director, Professor Vincenzo Piuri, provided the opening address to the delegates to officially open the training. The second and

last day of the training consisted of workshops on leadership skills, conflict management, and event management.

The final part of the meeting was dedicated to an open discussion on best practices. Delegates were issued certificates for their participation after providing important feedback about the program. It is interesting to note that 100% of the participants were very satisfied with the training and are happy to be the next host of the training in their respective countries.

The training and workshops were well attended, with 25 delegates from 16 Sections, including Algeria, Bahrain, Bosnia and Herzegovina, Hungary, Jordan, Kenya, Nigeria, Oman, Poland, Qatar, Serbia and Montenegro, Sweden, Tunisia, Turkey, Uganda, and UK and Ireland sections.

One of the major objectives of the leadership training was to develop leaders in the Region to be subject matter experts on student activities in their respective countries. Participants were provided with the opportunity to understand the respective programs of student activities and how to work closely with other organizational units and collaborate. The expectation is for the delegates to cascade the lessons learned to the respective student branch leaders in their countries. The SAC team appreciates all section chairs for their support during the program. The SAC team plans to issue an open call for a proposal for the next host of this great event as soon as possible.



*Participants of the SAC Leadership Training in Antalya (Photo credits: Region 8 Student Activities Committee)*

## Region 8 Volunteer Leadership Training 2023: Strengthening Membership Development and Chapter Coordination

*Andrejs Romanovs (Latvia Section), Mike Hinchey (UK and Ireland Section), Anna Litvinenko (Latvia Section), Mariya Antyufeyeva (Ukraine Section), Izzet Kale (UK and Ireland Section) and Albert Lysko (South Africa Section)*

Annual 2023 Region 8 (R8) Volunteer Leadership Training (VLT) was jointly organised by R8 Chapter Coordination and R8 Membership Development committees and held in Glasgow, UK, on February 24th and 25th, 2023. The training was very well attended, with more than 30 participants from around 18 countries within the Region, and the post-event feedback suggested a highly positive outcome.

The R8 Membership Development Committee is focused on growing and maintaining IEEE membership within Region 8. The committee implements various initiatives to engage current members, attract new ones, and ensure a valuable experience for all, while promoting the benefits and opportunities provided by IEEE membership. The Chapter Coordination Committee is responsible for supporting and overseeing the activities of IEEE technical chapters within Region 8. The committee aims to facilitate collaboration, share best practices, and provide guidance to chapter leaders, thus ensuring the smooth functioning and continued growth of IEEE chapters in the region.

The participants were welcomed to the venue on Friday afternoon. That first day's sessions included a basic introduction to R8, volunteer leadership training, membership activities and development (MD), technical activities (TA) and chapter coordination (ChC), with a round table discussion on the value of IEEE and R8 and the host section presentation. Later the team was guided to a delightful networking dinner at a famous restaurant.



Group photo of VLT2023 attendees



VLT2023 Welcome, Team Intro and VLT2023 Agenda by Andrejs Romanovs, Chair, Chapter Coordination Committee

The second day had two parallel tracks. One track was focused on MD topics, including roles and responsibilities of the MD Chair, MD goals, retention and recruitment, MD tools, and section vitality. The other track dived into the coordination of technical chapters and student branch chapters. Both tracks included focused presentations, interactive sessions and brainstorming sessions. Everyone participated to the fullest and managed to learn from each other. Towards the end, a comprehensive joint action plan was generated, which all the respective chairs agreed to take to their sections and implement according to their own needs and customised requirements.

The synergy from uniting Membership Development and Chapter Coordination played an important role, as it brought out an excellent mix of complementary and mutually relevant expertise and was very fruitful in sharpening the attendees' skills and making the event a success.

This joint training was a wonderful and successful event that will ensure a better understanding and satisfaction of members' needs and membership growth in the Region. Many thanks to all attendees, and congratulations to the UK and Ireland Section, led by Izzet Kale, which did a great job hosting VLT 2023! More similar workshops will also be planned for future years, so please consider the opportunity to join us in the future!

## Life Members in R8 – an Overview

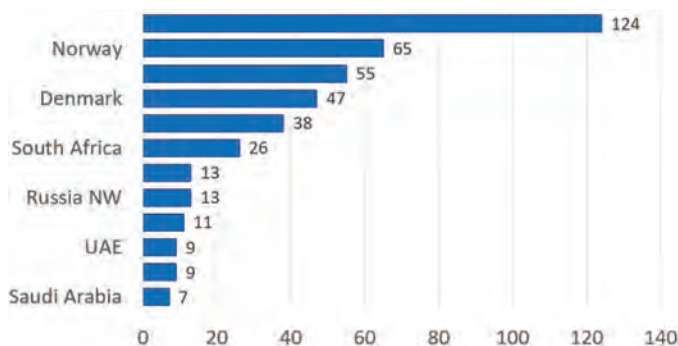
*Peter Magyar, Chair, R8 Life Members Committee*

IEEE Life Member (LM) designation is granted to an active IEEE member who is at least 65 years old and who has been a member for at least 35 years, resulting in a sum of the member's age and their years of membership of 100 years or more. The LM status thus follows natural progression from Student membership to (full) Member and, potentially, Senior Member and Fellow; culminating in Life Member and, correspondingly, Life Senior Member, and Life

Fellow membership. LMs are IEEE members for the rest of their life following the slogan *Experience Does Not Go On Retreat*. In addition to taking part in other technical and social activities, LMs can also form a non-technical sub-unit within their Section, called the Life Members Affinity Group (LMAG).

The LMAGs as organizational units are similar to Chapters, except they are not linked to technical Societies. Their role is keeping the LMs active in the IEEE community by providing a social and professional framework to continue the earlier professional activity, being mentors to Young Professionals and Chapters, as well as preserving the history of science and technology.





Potential to establish new Life Member Affinity Groups (LMAGs) in Region 8, illustrated by the number of Life Members in twelve (12) Sections that have more than the minimum six (6) Life Members required to start the petition to form a LMAG

Forming LMAGs starts with a petition process which should be endorsed by at least six LMs. Each LMAG belongs to the Section in which it is formed and its organizational 'parents' are the Region and the IEEE Life Members Committee (<https://life.ieee.org/>). Region 8 has the highest number of LMAGs among all geographical Regions, with a total of 24 LMAGs out of 142 worldwide.

As of March 2023, there are around 2950 LMs in Region 8. The majority (84%) are organized into the aforementioned 24 LMAGs, whereas a relatively small number of LMs (around 60, or 2%) belong to Sections with less than six LMs and cannot form LMAGs. For the remaining 14% of LMs, there is the potential to form LMAGs in 12 Sections which represents a remarkable opportunity to connect these members to the organized IEEE activities.

In Region 8, most of the current LMAGs (19) are located in Europe, four are in Middle East, and one is in Africa. Historically, the first R8 LMAG was formed in the Israel Section (2002), followed by the LMAGs in Sections of France (2004), Italy and UK and Ireland (2006), Croatia (2008), Switzerland and Spain (2010), Greece, Hungary, Slovenia (2011), Benelux (2016), Lebanon (2017), Egypt (2019), Romania (2020), Czechoslovakia, Germany, North Macedonia (2021), Jordan, Poland, Turkey, (2022), Bulgaria, Cyprus, Portugal, Serbia & Montenegro (2023).

The R8 LM Committee (<https://ieeer8.org/category/life-members/>) has been a part of R8 Membership Activities for close to 20 years. The Committee Chairs were Jacob Baal Schem (Israel; 2004-06, 2009-10, 2013-14), Peter Hill (UK and Ireland, 2007-08), Aleksandar Szabo (Croatia, 2011-12), Charles Turner (UK and Ireland, 2015-18), Victor Fouad Hanna (France, 2019-20), Peter Magyar (Germany, 2021-present).

Which LMAG will be the next in the series? It will be reported in the next issue of R8 News! We hope to continue this LMAG development success since, as of March 2023, four petitions are in progress.



## How IEEE Utilizes Technology to Benefit Humanity?

Lucija Brezočnik and Theodoros Chatzinikolaou  
IEEE Region 8 Humanitarian Activities Committee

The former global IEEE Humanitarian Activities Committee (HAC) was elevated to the Humanitarian Technology Board (HTB) in November 2022. The HTB oversees humanitarian activities across various IEEE groups, regions, and societies, and funds related projects and activities around the world. In Region 8, we are excited to announce the 2023 IEEE Region 8 HAC members. Our mission is to inspire and enable IEEE volunteers around Europe, Africa, and Middle East to carry out and support impactful humanitarian technologies and sustainable development activities at the local level.

As part of our mission, we defined new programs and initiatives to raise awareness, award active SIGHT (Special Interest Group on Humanitarian Technology) groups, and encourage creation of new ones. To name a few, the **Community Support Program** provides funding to organize SIGHT projects to solve local community needs; the **SIGHT Groups Accelerator Program** offers additional funding for active SIGHT groups; the **R8 Humanitarian Technologies Hackathon** provides funding to hackathon winners to implement their proposed tech solutions; the **SIGHT Groups Coordination Workshop** focuses on specific needs of SIGHT groups to help them on their operations and management; the **Connecting Humanitarian Experts** provides a series of webinars aiming to communicate the impact of technology on selected United Nation's Sustainable Development Goals (SDGs); and the **R8 Humanitarian Activities Congress** provides space for networking and best practices sharing for SIGHT groups across our Region. To see which other initiatives our committee is conducting and how applications for funding can be made, please check our webpage [huac.ieeer8.org](http://huac.ieeer8.org).

We welcome all members to spread the word about our committee and SIGHT across their Sections. Please, remember to join us by adding a SIGHT [membership](#) (free of charge) and/or form a local SIGHT group.

We look forward to working with you to make a positive difference in our communities!

Reach out to us via [humanitarian@ieeer8.org](mailto:humanitarian@ieeer8.org).

### IEEE Region 8 Humanitarian Activities Committee 2023



Image credit: IEEE R8 Humanitarian Activities Committee

## IEEE Smart Village Electrification Project in Voundou Community, Cameroon

*Ed Rezek, Senior Vice President with IEEE Smart Village*

Back in 2021, a collaboration between IEEE Smart Village and Renewable Energy Innovators Cameroon (REIC) marked the beginning of a project aimed at providing solar energy-based clean power and education access to a community in Cameroon. The project objective was to improve the living standards and opportunity for enterprise for the community. The project was funded as a pilot program, with the intention of expanding to multiple villages in the area.

As of the first quarter of 2023, the project's progress has been satisfactory. The pilot has been producing an average of 90 kWh of

energy daily since October 2022, and it is the first of 134 sites to be installed by 2025. The project has provided valuable 'lessons learned' data for improving the implementation plan for future sites. With output of 80 kWp and 182 kWh of storage, the pilot supports 1000 connections to homes, businesses, and institutions. (Note: abbreviation 'kWp' stands for 'kilowatt-peak' and denotes the peak power output of a photovoltaic device measured under standard test conditions.) Funding covers design, hardware procurement and installation, and associated training and start-up programs on facility operation. The United States Trade and Development Agency (USTDA) provides support to REIC through consultants from United States companies.

REIC built foundations for solar panels with adjustable angles and successfully mounted the panels. A Smart Village Sunblazer, which is a mobile solar base station with batteries and portable battery kits developed by Smart Village, was provided to REIC, and installed in a secure housing at Voundou.



Left: Solar Panel Grid; middle: Sunblazer Control System; right: Sunblazer Housing (Photo credits: IEEE Smart Village)

## IEEE Xplore Digital Library Training and Open Access in Region 8

*Rachel Berrington, Director, IEEE Client Services*



You probably know that IEEE offers subscriptions and open access programs to suit any size organization, from large universities to small companies, but did you know that IEEE has a global team of librarians and information professionals who run workshops and organize trainings for our institutional customers at no additional cost? We are called Client Services Managers, or CSMs, and we support both creators and consumers of IEEE content, encouraging use of the IEEE Xplore digital library and other products, educating users and authors on the value of IEEE content. IEEE supports organizations geographically and we have 3 CSMs supporting Region 8 countries.

In 2022, CSMs held events in Region 8 from Germany to Uganda, and attendees spanned 39 countries and attracted over 6,000



The three Client Services Managers serving Region 8 Countries: Eszter Lukács, Ranbir Sedhey, and Marcia Ferreira

attendees in total! We held IEEE Xplore search strategy sessions, authorship workshops, open access (OA) awareness events, and IEEE DiscoveryPoint for Communications demonstrations. When live events aren't convenient, CSMs also produce concise training videos for IEEE platforms viewable on [YouTube](#). We customize every presentation to the user's needs, and with a team of professionals based in Europe, North America, and Asia, we provide outreach to researchers around the world.

IEEE now has Open Access agreements in over 25 countries with more than 300 institutions around the world. To find out if your institution has an open access agreement with IEEE, please go to [IEEE Open](#). For more information about our team, check out our [site](#) or [email](#) us.



## IEEE REACH Engaging Educators in Region 8: Free Open Education Resources for Pre-University Teachers

*Kelly McKenna, Sr. REACH Program Manager*

The IEEE REACH Program (<http://reach.ieee.org>), managed by the [IEEE History Center](#) provides pre-university teachers with **free open education resources** (OER) that place engineering and technology in their historical perspectives. With a focus on the social relevance of technology, students understand how technology shapes society and how society shapes it. Research has shown, when students understand the social relevance of science and technology, they are more likely to pursue STEM, especially female students!

The program includes inquiry-designed lesson plans with performance tasks, content material for contextualization, and a “taking an informed action”, which makes the material relevant to students’ lives today. Primary sources, hands-on activities, and engaging student videos are also included. All resources are downloadable for remote learning and for classrooms with connectivity issues.

An exciting REACH partnership that continues to expand is one with UNESCO. Developed under the IEEE/UNESCO MOU, and in association with the IEEE Africa Council and Uganda Section, a REACH/UNESCO partnership began with a co-branded pilot program. Two Uganda NGOs adapted the REACH resources to meet the country’s curriculum standards and was delivered to students, predominately girls, both in the classroom and by way of a traveling classroom trailer, reaching underserved communities. Upon completion more than 70 teachers and 1,000 students were impacted. The pilot’s success led to a REACH STEM teachers workshop held by the Uganda National Commission for UNESCO with participation by the Uganda Ministry of Education and Sports (UMES). UMES is currently scaling the program in a top-down teacher approach and UNESCO is interested in expanding the program. Rovani Sigamoney, Education Program Specialist with UNESCO has shared, “the REACH program offers real-world learning opportunities that provide inclusive applications and effective learning outcomes.... the program has taken innovation, science, engineering, and technology to rural areas with a focus on young women – replication and adaption in other countries is now our (UNESCO’s) goal.”

In December 2022, REACH exhibited at the World Science Forum in South Africa, which garnered additional interest from pre-university education centers located in Kenya and South Africa, each with connections to their respective Ministries of Education. As things progress the REACH team anticipates opportunities for participation from IEEE sections in the regions and continued engagement with the IEEE Africa Council.

REACH is also the recipient of the British Society for the History of Science and Medicine’s Ayrton Prize and the Open Education Global’s



REACH UNESCO students during hands-on work



UNESCO STEM teachers's workshop



UNESCO STEM teachers' Workshop



REACH UNESCO Pilot Program

UNESCO OER Implementation Award for Excellence. On average 12,000 users visit REACH each year, with 15% from Region 8. An IEEE Foundation priority program, REACH is supported by donor funds and is part of IEEE’s public imperative providing a new STEM education pathway and instilling a pipeline of students to preserve the profession.

For more information about the program please contact Kelly McKenna, Sr. REACH Program Manager – [k.mckenna@ieee.org](mailto:k.mckenna@ieee.org).

## Advancing Technology in Africa: Join the Conversation at IEEE AFRICON 2023 Conference!

Lavender Ndunya, Kenya Section Treasurer



Are you interested in the latest technological advancements and how they can propel Africa towards greater status on the global stage? Look no further than the [IEEE AFRICON 2023](https://2023.ieee-africon.org/) conference!

Taking place from **September 20<sup>th</sup> to 22<sup>nd</sup>** at the Kenya School of Monetary Studies in Nairobi, the **IEEE AFRICON 2023** conference will be a platform for academia and industry professionals from all over the world to come together, share ideas, and present their latest research. The conference is set to cover a wide range of topics, including artificial intelligence, cloud computing, communications systems, industrial development, control & automation, and power and energy systems.

The theme of the conference, "Advancing Technology in Africa Towards Presence on the Global Stage," is aimed at highlighting the importance of technology in Africa and how it can be leveraged to achieve global competitiveness. The conference is expected to attract senior-level representatives from IEEE Headquarters and IEEE Industry Ambassadors, as well as representatives from governments, eminent researchers, practitioners, and the private sector. International participants including high-level ministry officials, leaders of industries, international organizations, embassies, NGOs, and UN agencies are also expected to attend.

The technical program of the conference is designed to provide attendees with practical, solution-oriented topics through exhibitions, tutorials, special sessions, workshops, keynote/plenary speeches, poster, and oral presentations. The program is meant to create action plans and follow-up actions on the outcome of the conference and reinforce partnerships.

The expected outcomes of the conference are impressive, including an analytical summary capturing best practices and lessons learned that will be submitted and circulated at the local and regional level. The conference will also provide an opportunity for key policymakers to develop new partnerships and act on solutions to issues discussed. Deliberations will lead to actionable suggestions and follow-up actions for the relevant stakeholders in the African countries in the overall context of resilience, sustainability, and growth.

Don't miss out on this exciting opportunity to learn and network with like-minded professionals! Register today for the IEEE AFRICON 2023 conference and be part of the movement to advance technology in Africa towards a greater global presence.

IEEE AFRICON is one of the flagship conferences of IEEE Region 8. More information about the conference is available at <https://2023.ieee-africon.org/>.

## IEEE COMCAS 2023 in Tel Aviv, Israel

Shmuel Auster, Chair, Israel Section



The 13 International Conference on Microwaves, Communications, Antennas, Biomedical Engineering & Electronic Systems (**IEEE COMCAS**), taking place in the "Non-Stop City" of Tel Aviv from **6 to 8 November 2023** is an advanced multidisciplinary forum for the exchange of ideas, research results, and industry experience in a range of key ideas.

The biennial event features:

- A 3-Day International Event
- World-renowned keynote speakers and invited speakers
- Workshops, Short Courses, and Special Sessions
- The 2-day IEEE COMCAS Exhibition
- Exhibitor Workshops and Seminars

The IEEE COMCAS conference is the greatest event of its kind in Israel, providing ample opportunities for networking and interaction with both local and international experts in a wide variety of specialties, attracting delegates of all backgrounds in the field. The list of topics includes microwaves, communications and sensors, antennas, biomedical engineering, RF and microwave devices and circuits, thermal management and electronic packaging, signal processing and imaging, as well as radar, acoustics, and microwave system engineering.

We take this opportunity to welcome you to the sunshine of the eastern Mediterranean - Tel Aviv, a cosmopolitan city of infinite innovation.

IEEE COMCAS 2023 is technically cosponsored by IEEE Region 8. Detailed information is available at the Conference Website: <https://www.comcas.org/>.



Should you have questions, please contact the Conference Secretariat at [comcas@ortra.com](mailto:comcas@ortra.com).