



IEEE

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# region8news

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REG-8 says:  
"Turn to  
page 6"



Unveiling the plaque: IEEE President-elect José Moura (right) with chair of UK and Ireland Section Mike Hinchey and vice-chair Mona Ghassemin

## Milestone celebrates the invention of TFT flat panel displays at Dundee University

EVERY time you use a smartphone, glance at your smart watch, fire up a computer, watch TV or endure a PowerPoint presentation, you experience a little bit of Dundee (UK and Ireland Section). The flat panel technology we use in modern devices wasn't invented by megacorporates in Japan or Silicon Valley but by a pair of academics in Scotland's fourth-largest city.

Region 8's latest History Milestone bronze plaque was dedicated on 5 April to celebrate their invention – amorphous silicon thin film field-effect transistor switches for liquid crystal displays (better known as TFT-LCD) – which has stood the test of time at 40 years and counting.

Even locals seem blissfully unaware of the achievements of Walter Spear and Peter LeComber at the University of Dundee during the 1970s and 1980s. The IEEE Milestone should go some way to rectifying this unfortunate lack of public appreciation of their work.

Physics lecturer Spear and PhD research student LeComber initially crossed paths at the University of Leicester but

joined forces on the teaching staff in Dundee at the end of the 1960s. What they achieved over the following decade was, in the words of Iain Stewart, the University's current dean of Science and Engineering, "absolutely astounding".

Their lab experiments with amorphous silicon led them to a realisation that they could use it to create very simple transistors that could work as switches applied across a thin film. Encouraged by British tech legend Cyril Hilsum, then working with the UK's Ministry of Defence, Spear and LeComber developed TFT for use as a method of controlling a flat panel liquid crystal display.

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## Everything we do should bring people together

Region 8 Director  
Margaretha Ericsson



IEEE is about connecting people – engineers, scientists and likeminded people – to "advance technology for humanity". So have you ever reflected on how much of the communication technologies we take for granted in our society is related to members of IEEE?

Past and present members have created the scientific basis for many of technical wonders we enjoy today. Transistors by Professor Kilby, for example: an essential part of any electronic gadget. Or antennas for communication, image processing algorithms and many more, all found in smartphones and Wi-Fi equipment.

While sitting on the porch of my countryside house near Stockholm in Sweden, I'm enjoying the late spring sun, chirping birds and wireless Wi-Fi. In my home of

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## Africa Council proposal wins R8 support while meeting attendees get closer at poster sessions



ATHENS provided the warmest of welcomes when it played host to Region 8's spring Committee Meeting on 10-11 March. The six-monthly event brought together Section chairs, Executive Committee officers and representatives of sub-committees and affinity groups from across the whole Region for a weekend of discussion, presentations and networking.

It also provided a chance for members of key sub-committees, who normally work together in a virtual fashion across great distances, to meet up in person, report on progress and hammer out policy and direction for the coming months. Much of this work was conducted in a great many meeting rooms within the venue's conference centre on Friday 9 March while some

55 Section chairs were making their way to Athens, prior to the evening's formal welcome dinner and awards ceremony.

Dinner was preceded by a presentation from the event hosts, Greece Section, followed by a keynote talk by Vassilios Makios of Corallia on building success through business incubators.

The main event began early on

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# Data privacy? Soon they will sell your eyeballs

FROM my somewhat jaded viewpoint in science and technology journalism, I do not share the surprise of the general public about the apparent laxity with which Facebook allowed the personal data of millions of its users to be mishandled. You give Facebook your data; they sell it to other businesses. That was always the deal. It was hardly a secret.

And if you thought it was bad enough that these services are tracking and listening to you even when they're switched off, just you wait until virtual, augmented and mixed reality truly kick off in the domestic scene. VR/AR/MR devices will track not just your footfall but the movement of your eyeballs. They will keep note of what you touch, recognize the unique audio-print of your voice, learn the layout of your home and record your physical reaction to a variety of stimuli. And then they'll sell it.

Thank goodness there is an independent international organization on the case, investigating the impact of emerging technology on humanity and drawing up ethical development standards. Which organization is that? Well, it's funny you should ask: you're already a member of it.

Alistair Dabbs



## Everything we do should bring people together

► continued from page 1...

fice I'm working with clients globally. Even on the one-hour bus ride to the office, I'm still connected to free Wi-Fi and a part of a global world, sending Facebook likes to IEEE friends all over Region 8. My global colleagues are only a Skype call away and I can see them live on the mobile screen.

There is a personal history behind this. Sweden and the Nordic countries were pioneers in mobile communication with the Nordic Mobile Telephony system in 1981. As a student I was lucky to meet Östen Mäkitalo, one of the passionate technical leaders for mobile communication networks. He was a most inspiring and forward-thinking engineer and researcher, and I wonder: what would he say if he could see how the smartphone has changed the world?

The smartphone of today can be used by anyone almost anywhere, even to control and monitor technical equipment, as well as entertain young kids and adults in many ways. Many of us may even feel incomplete leaving home without the smartphone.

You may be worried about your digital footprint in the wake of Cambridge Analytica and other big data crunchers. Are you concerned over the digital traces you have left behind and how they can be used or abused in the connected world?

To me, it seems that our world has become a small village again, where I can Google any name and learn about everything from facts to gossip. But will that stop us from sharing our life stories because of the risk of abuse? We are still social beings who like to meet and chat. Maybe we will become a bit more conscious about what we say and share in public and some Facebook users will withdraw for privacy reasons. It is a personal choice. For the rest of us, we want to remain part of the global crowd in social media on internet.

It is almost 15 years since the foundation of Facebook by Mark Zuckerberg and his friends at Harvard in the US. What will a social network look like 15 years ahead? Just more brands and platforms, or something completely different? We will learn in time...

## IEEE region 8 news

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### Submitting articles

We welcome news, event reports, articles and letters from any member of IEEE. You can email these to the editor at [r8news@ieeer8.org](mailto:r8news@ieeer8.org), either putting your text directly in the body of the email or in an attached document, as you wish. We gratefully accept any photos or graphics accompanying your articles but please make sure they are undistorted high-resolution image files. You can read our full guide to writing and submitting articles at <https://goo.gl/hitTjp>

### Deadlines for upcoming issues

September 2018 issue.....deadline: 15 July 2018

December 2018 issue.....deadline: 15 October 2018



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*Clockwise, from top: the Harris Building at the University of Dundee, showing the entrance where the Milestone plaque will be permanently installed; organizers, speakers and special guests assemble before the afternoon symposium; star keynote speaker Cyril Hilsum CBE; Ian Underwood from the University of Edinburgh*



## Milestone celebrates the invention of TFT flat panel displays

▶ continued from page 1...

Their key paper was published in March 1979. Although they were unsuccessful in registering the patent, their invention sits at the heart of just about every flat panel display in use even now, for everything from TVs and laptops to projectors and smartphones, including OLED devices.

IEEE President-elect José Moura was at the University of Dundee to of-

ficially draw back the curtain to reveal the Milestone plaque at a ceremony attended by representatives from UK and Ireland Section, History Activities, Life Member Affinity Group and members of the press. Other speakers at the dedication event included Cyril Hilsum himself (now aged 92 but showing little sign of it), David Keeble (head of Physics at Dundee) and Charles Turner (chair of IEEE Life Member Committee).

Also in attendance were Peter LeComber's widow and family.

A fascinating and thoroughly accessible technical symposium about the invention was held in the afternoon, featuring detailed talks by Hilsum and Professor Ian Underwood from the University of Edinburgh, which helped support the event.

■ Forthcoming History Milestones in Region 8 currently in the final stages of

approval include those for Antonio Pacinotti's First Studies on Ring Armature for Direct-Current Dynamos 1860-63 (Italy Section) and Jan Czochralski's Method of Crystal Growth 1916 (Poland and Germany Sections). We will bring you updates on these in future issues of *IEEE Region 8 News*. You can learn more about IEEE Milestones at the Engineering and Technology History Wiki: <https://tinyurl.com/ieeemilestones>

**RUNNING** a successful Section involves encouraging technical, professional, nontechnical, administrative and social activities in the Section and its sub-units. It also demands timely reporting (officers, meetings, financials) in order for the Section to receive its rebate, retaining and recruiting members, training new volunteers and holding elections on time.

### Section reporting

Activity is measured through timely reporting for the calendar year – of officers, meetings and financials. Reporting is the condition to receive the yearly rebate, paid to the Section. The funds provided are intended for the support of not only the Section's activities, but also those of its Sub-Sections, Chapters, Affinity Groups and Student Branches.

### Elected positions

Democratic elections should be conducted by all organizational units (Section, Subsection, Chapters and Affinity Groups) using v-Tools for electronic voting to ensure all eligible members can vote. Names of officers must be submitted via vTools within 20 days of elections or appointments. Section officers can serve for one



## REGION VITALITY

### Could your Section do with a refresh?

Region Vitality Coordinator **Aleksandar Szabo** outlines what makes a well-run Section

or two years, most commonly the latter. The consecutive period of service in any one office should not exceed four years. Officers should not serve in any one position, in any single organizational unit, for more than six years.

A Section's local operating procedures may define that a vice-chair automatically becomes chair at the conclusion of his/her term, in which case other officers are elected taking this into account. Any vacancy arising during the year shall be filled by majority vote of the Section ExCom and reported to IEEE and the Region. Region 8 officers start their terms on 1 January so we ask Section ExComs and their organizational units to begin their terms of office on that date too.

It is important for the Region to have an updated list of Section officers before the beginning of the calendar year, so please ensure elections finish well before the new officers' start date. This will also give new officers time to settle in.

### Checklist: how to revitalize your Section

- ☐ All Section officers should do their job with pleasure and on time. Be informed and efficient
- ☐ Prepare a program of activities for the calendar year and start new initiatives
- ☐ Increase membership and member engagement; recruit and train volunteers and look for successors and volunteers ready to take responsibility; spend sufficient time to do the job and serve members
- ☐ Contact members and obtain member feedback; fulfill membership needs
- ☐ Organize meetings (professional, technical, nontechnical, administrative and social) by Section, Chapters, Affinity Groups and Student Branches
- ☐ Have a Section Chapter and Affinity Group coordinator and keep a vigilant eye on the activity of Chapters and Affinity Groups during the year; encourage cooperation and joint events of Section units (Chapters, Affinity Groups, Student Branches); form new Chapters and Affinity Groups
- ☐ Get closer to industry (involve practicing engineers) and involve Young Professionals
- ☐ Organize educational (pre-university, lifelong) and professional (leadership, management) activities
- ☐ Have an active Student Activities Officer and a Student Representative in your Section: during the year they should take care of the activity and vitality of all Student Branches in the Section and involve students in Section and Chapter activities
- ☐ Annual Section awards for member/volunteer recognition, member grade elevation, Senior Member initiatives
- ☐ Organize an annual Section social event
- ☐ Keep your Section website up to date

# Africa Council proposal wins R8 support [Region 8 Committee Meeting, Athens]

► continued from page 1...

the Saturday morning with an address by Region 8 Director Margaretha Eriksson, who raised the issue of misperceptions about Africa, the benefits of volunteering and the opportunity of promoting IEEE beyond its existing membership by leveraging the organisation's most public successes such as Wi-Fi standards.

Also addressing the open meeting were IEEE President Jim Jefferies, who elected to answer questions from the floor, and President-elect José Moura.

The question-answer format was maintained during the subsequent reports from Region 8 Committee vice-chairs and their sub-committees. Questions had been invited from the Sections in advance and these were answered on the day from the podium.

## Regional but global

The afternoon presentations were even more focused, including Vera Sharoff from IEEE HQ's Member and Geographic Activities unit going into considerable detail on how to comply with GDPR, the general data protection regulation being introduced within the European Union but having a global effect on the way we do business.

Paul Cunningham, chair of IEEE's Humanitarian Activities, gave a no-nonsense and practical outline of how members can get involved in the group's long-term projects. Clara Neppel from the IEEE Vienna office explained how her team engaged with policy working groups, technical award schemes and the establishment of industrial and ethical standards.

Poster sessions punctuated the day's talks, giving attendees the chance to stretch their legs outside the main auditorium and pose questions face-to-face with sub-committee representatives, affinity group organizers and fellow Section chairs.

Also participating in special poster sessions were Region 8 Director-elect candidates Antonio Luque and Rafal Sliz, and the three candidates for IEEE President-elect, Vincenzo Pier, Jacek Zuradan and Toshio Fukuda.

Saturday's evening schedule comprised a guided tour of Athens' famous Acropolis Museum followed by an informal dinner with a view of the Acropolis itself.

## Heated debate

Sunday began with presentations by three Directors from other IEEE Regions: Kathleen Cramer from Region 6, Kukjin Shun from Region 10 and Bernie Sander from Region 4.

Various motions were then introduced and debated from the floor of the meeting. These ranged from the relatively uncontro-

versial – such as the formation of a new Russia Far Eastern Sub-Section and the updating of official Region 8 terminology to accommodate 'Action for Industry' and 'Young Professionals' in place of their old titles – to others that provoked some heated debate.

A motion to remove the requirement of Fellow grade for the chair of the Awards and Recognitions sub-committee was passed, as was a motion upgrading Women in Engineering and Humanitarian Activities from ad hoc to Standing Committee status.

Not so successful was a motion to reduce the term of office of Region 8 Secretary and Treasurer roles to a single year.

## Africa in motion

A proposal to form an Africa Council, permitted in principle since IEEE's rules allow for specific regional 'councils' to be formed by contiguous Sections if they pay for it themselves, was given general support after frank and lively discussion between some of the Sections chairs concerned. Localised objections having been noted, the consensus among those at the meeting however was that an Africa Council could be beneficial when engaging with governments and corporate partners across the massive African continent.

The proposal, now it has been given official Region 8 support, will be escalated to IEEE's Member and Geographical Activities board for approval.

After a comprehensive presentation for the forthcoming SYP Congress set for 24-29 July in Porto, Portugal, the three IEEE President-elect candidates took to the floor for a live question-and-answer session.

Then followed the Treasurer's report and some new business regarding questions about technical co-sponsorship of conferences, answered by Region 8 Director-elect Magdalena Salazar. Closing remarks from Clara Neppel, Jim Jefferies, José Moura and Margaretha Eriksson finally brought proceedings to an end.

The next Region 8 Committee Meeting is set to take place in October in Belgrade, Serbia.



## Photo gallery: greetings from



Region 8 Director Margaretha Eriksson and Past-Director Costas Stasopoulos



The main event: Region 8 representatives meet in session



Formal dinner on the first night



Kukjin Shun  
Region 10 Director



Bernie Sander  
Region 4 Director



Kathleen Cramer  
Region 6 Director



Nectarios Koziris  
Greece Section chair





Left: Section chairs and committee representatives set their sights high in the Greek capital

# Region 8's Athens



Sub-committee meetings



Pre-dinner cocktails



How many award-winners can you fit onto a stage at once?



Jan Verveckken  
Region 8 Secretary



Antonio Luque  
VC Member Activities



Clara Neppel  
IEEE Vienna Office



Christopher James  
VC Technical Activities



Jim Jefferies  
IEEE President



Efthymia Arvaniti  
Student Activities Committee



Vincenzo Piuri  
IEEE President candidate



Jacek Zurada  
IEEE President candidate



Vassilios Makios  
Corallia



Jose Moura  
IEEE President-elect



Toshio Fukada  
IEEE President candidate



Rafal Sliz  
Region 8 Director candidate

## SECTION VITALITY

### Getting help with financial reporting

**Adam Jastrzebski, Region 8 Section Vitality Coordinator, writes:**

WHEN I was asked at the beginning of March 2015 to help Region 8 Sections with financial reporting, I knew it would be a difficult challenge. We had 74 so-called 'GEO units' in the Region and by the end of February fewer than half had submitted their reports.

This was despite a potential reward of an extra 10 per cent in annual rebate (financial allowance) for Sections that reported by the earlier deadline. Those also missed the final deadline at the end of March were penalized with a minimum 10 per cent reduction in their rebates. Yet 17 GEO units – almost a quarter of all those in Region 8 – failed to submit on time.

It was only while helping various Sections and Chapters with their problems that I learnt why this happens.

The main culprit was lack of skill and training amongst many Section treasurers in using the new transactional reporting software system called NetSuite, introduced by IEEE two years earlier. NetSuite is essentially a tool for professional accountants, and entering transactions into it is quite a tedious process. Moreover, NetSuite was originally set up for a single currency only, while many Sections in Region 8 operate across multiple currencies.

Many treasurers complained, so IEEE Finance developed a fix: a spreadsheet with macros called Bank Upload Template (BUT). A treasurer can simply copy and paste the transactions from the bank statement into BUT, which would then be automatically imported by the IEEE Finance staff into NetSuite. Multicurrency problems were not addressed but in other respects the fix worked. Since then, I have been systematically working with Section treasurers and promoting the usage of BUTs where appropriate. Throughout, IEEE Finance have been very responsive and helpful.

The results speak for themselves. In the last two years, we have seen a 100 per cent return, even despite a shortening of deadlines by one month. This year, twice as many Sections will qualify for their 10 per cent rebate bonus compared with those in 2015.

So, problem solved? Not completely. Many Sections need to comply with local legal requirements, including annual reports and audits, so Section treasurers use various accounting software tools tailored to their local needs. Ideally, those local multilingual and multicurrency systems should link with IEEE's corporate finance system. This would substantially reduce volunteer effort and provide IEEE Finance with sufficient financial information. Any ideas? Let me know: [a.k.jastrzebski@ieee.org](mailto:a.k.jastrzebski@ieee.org)



# How can you make sure AI does *not* destroy humanity?

**WIN this book in our FREE PRIZE DRAW!**



REG-8 says:  
"Read this book  
before I take over the planet!"

"THE Singularity is the idea that there will come a time, possibly in the not too distant future, when artificial intelligence will outstrip human intelligence, thereby putting humanity at risk of extinction" ... or so it says on the front cover of this book of thoughtful and provocative essays on the possible paths ahead for AI.

Set aside the headline-grabbing soundbites from media faces and read what the real experts think. This serious volume collates contributions from physicists, AI researchers, neuroscientists and philosophers such as Ray Kurzweil, Nick Bostrom, David Chalmers, Daniel Dennett, Ben Goertzel, Susan Greenfield and Frank Tipler.

Can we leak-proof the Singularity? When will we understand how the brain works at a neuronal level so that it can be replicated in silicon? Can we upload our minds to a sufficiently complex computer? Could artificial intelligence out-think us, and would we want it to?

These questions and others are tackled analytically across 400+ pages, complete with footnotes and references. If you work in AI, you might want to add this ethical tome on your bookshelf – our very future existence might depend upon it!

To have a chance of winning a free copy of *The Singularity*, send us an email at [r8news@ieee.org](mailto:r8news@ieee.org) with the subject line *The Singularity*, giving your name and IEEE Section – nothing else! The final date for receipt of entries will be **20 July**. If you are the lucky winner, we will contact you directly to request your postal address so we can send you the prize.

**■ RULES:** This is a free prize draw. No purchase is necessary. Names and email addresses of entrants will be stored securely for the purpose of this prize draw only and removed from our system as soon as the prize has been accepted by the winner. Contact details will not be used for any other purpose or shared within IEEE or with any other organization.

CONGRATULATIONS to Michele Iarossi (Italy Section) who won last issue's free prize draw and is now the proud and hopefully soon-to-be increasingly wealthy owner of a copy of *Blockchain for Dummies*.



This year's MDW, held in Cape Town, South Africa, involved plenty of interactive sessions and brainstorming

## Annual Membership Development Workshop forms Africa action plan

TO promote collaboration and encourage the exchange of Membership Development-related training and techniques within Region 8, the Membership Development (MD) Sub-committee organizes teleconferences, workshops and volunteer meetings, both face-to-face and virtual.

Following the tradition of previous Region 8 Membership Development Workshops (MDWs), the team recently held a workshop in Cape Town, South Africa, on 23-24 March. It was mainly targeted at Africa IEEE Units, and addressed traditional MD topics through the prism of the specific needs of the African Units. This MDW was organized in close collaboration with the event host, South Africa Section, led by Albert

Lysko and IEEE Ad Hoc Committee on Africa Activities (AHCAA), itself led by Vincent Kaabunga. The workshop was well attended with 27 participants, 16 of them representing IEEE Africa units and the post event feedback suggested an extremely positive outcome.

Participants were welcomed to the venue on Friday afternoon for initial sessions such as a basic introduction to Region 8 and Membership Development, membership benefits, the role of MD officers, and a presentation by the host Section. Later, the team was guided to an exquisite networking dinner.

The second day was filled with presentations, interactive sessions and brainstorming sessions, delivered by the MD team and Antonio

Luque and Adeel Sultan, previous chairs and great supporters of the Sub-committee. The typical MDW structure was expanded by topics, related to Action for Industry and Units Vitality. Towards the conclusion, a comprehensive joint action plan was generated for Africa units on a special session that was perfectly led by Seyi Olokede, MD officer for South Africa Section.

This MDW was an amazing and a fruitful event that will enhance IEEE structures and membership in the Region. MD Sub-committee expresses its gratitude and warmest wishes to South Africa Section, AHCAA, Region 8 Operating Committee, Section chairs, and all MD officers and volunteers.

**Andrejs Romanovs**

### MEMBERSHIP DEVELOPMENT

## Looking back over a successful and eventful



Tallinn 2006

MEMBERS are the most important asset that IEEE has. We are a membership organization of more than 400,000 people, of which around 80,000 live in Region 8. For that reason, volunteers working in Membership Development (MD) are so crucial, since their task is to focus on the individual member, make sure that they are happy and get what they want from their membership,



Leuven 2012

and to inspire, enable, engage and empower them.

MD volunteers are most effective at the local level, and we can have MD chairs at Chapters, Sections and Student Branches, among other units. It is important for them to know their members, and this is the reason that they are always learning how to effectively serve their membership and understand



London 2013

their needs. From the Region we focus on training all MD volunteers in many ways, and one of the most effective has proven to be MD workshops organized in different parts of the Region, where MD officers can meet and discuss, debate and exchange ideas and best practices.

The very first MD workshops were organized in 2006 in Tallinn, Estonia, and Zagreb, Croatia, by

## VIENNA CALLING!

# From policy to standards: a holistic view

IEEE set up a European Technology Centre in Vienna, Austria, last September. So what does it do?  
Senior director **Clara Neppel** explains



PUT simply, the Vienna office provides collaboration support for the technical community across academia, industry and governmental institutions. To this end, our two focus areas at the moment are public policy and standardisation.

## Input into EU public policy

Until this year, IEEE ran a European Public Policy Initiative; now we have a full European Public Policy Committee, chaired by Marko Delimar with the active involvement of Region 8 leaders, which reports to IEEE's Board of Directors with support from the Vienna Office.

This operates two working groups – ICT and Energy – to which all members from the EU and EFTA countries can apply. In the last call we received more than 200 applications. The groups meet virtually and in person to develop public policy, documents and white papers, and have the opportunity of engaging with policy makers. Secretarial and program support is handled by Vienna and IEEE corporate staff.

Members in Europe probably know they can engage in public policy already but you don't achieve the same visibility or impact that you would have through an international organisation such as IEEE. Sections and Chapters are encouraged to provide input for public policy statements, a recent example being one on artificial intelligence, which was very well received and provided plenty of opportunity to engage with policy makers.

We also participate in the MEP Awards, organised by the *The Parliament Magazine*, a magazine for EU

policy makers, and therefore recognised by Members of the European Parliament. We even contribute a supplement to the magazine once a year on technology policy.

Information about the European Public Policy Committee, both working groups, position statements, news publications and more can be read online at [ieee.org/about/ieee-europe](http://ieee.org/about/ieee-europe)



■ IEEE took to the stage at Mobile World Congress held in Barcelona, Spain, from 26 February to 1 March, participating in the session entitled 'AI Everywhere: Ethics and Responsibility'. The photo above shows Clara Neppel with Aurélie Pols, a volunteer from Spain engaged in the IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems, discussing aspects of the initiative as well as the related P7000 standard series. About 230 people attended the panel session.

## Promoting ethical standards

This is all about engaging with industry, SMEs and startups. It's about exploring new standards and standardisation opportunities, and engaging with other standardization organisations such as ETSI, ISO, ITU and other bodies. We contribute to EU standardisation policies and initiatives.

IEEE standards cover so many technical areas that they can be used like a toolbox. We provide base standards, such as for Wi-Fi and LAN, that can be used across industries, and also a lot of specific standards, such as in healthcare, automotive and so on, drawn up in collaboration with Societies.

Unique to IEEE, though, is that we propose not just technical but ethical standards. Our initiative on Ethically Aligned Design which started two years ago, for example, is about the *context* of technology. IEEE was pioneering in that sense and now we have input from all over the world. Already 13 standards have been approved that deal with related issues such as incorporating ethical values in system design and how to measure the impact of technology beyond its economic value.

Almost half of participants in these initiatives are women, with a lot of participation from Africa as well as Europe. It opens doors as it involves a lot of collaboration with a lot of other players.

Incidentally, last December, Region 8 was the first to initiate a standard through the Vienna office, relating to medical device metrology (see page 8).

## Single contact for all of IEEE

Our mission is to provide a holistic view of IEEE which covers both research and commercialisation in many technical fields as well as the related societal and economic challenges.

We organise and participate in a wide variety of events such as debates in the EU Parliament and Mobile World Congress. The Vienna office can facilitate and establish long-term relationships with institutions and corporations by representing IEEE as a single contact. We can work across operating units on a given topic – cybersecurity, for example – bringing together people from different organisational areas within IEEE as needed. We also work with MGA leadership to see how we can provide local support that Sections have asked for.

## Between east and west

Why set up an office in Vienna and not Brussels? Geographically, it puts us in the middle of the Region between east and west, and is easily accessible. Also, Austria as a neutral country fits very well to IEEE being a neutral organization.

Not least, the city is the seat of numerous international organisations. It might be a traditional city but it's also a modern one with a lot of innovation going on.

# decade of MD training in the Region...



Dubai 2013



Tunisia 2016



Bratislava 2017

Aleksandar Szabo. After this, the program switched to a different form: MD booths at various technical conferences held in Region 8. MD workshops returned in 2012 when MD chairs from the Region met in Leuven, Belgium, for a meeting organized by Dirk Van Hertem.

In 2013 and 2014 Antonio Luque organized workshops in London, UK, and Dubai, UAE. Adeel Sultan

organized a workshop in Tunis, Tunisia, in 2016. The most recent workshops have been organized by Andrejs Romanovs – last year in Bratislava, Slovakia, and in March this year in Cape Town, South Africa (full report on page 6).

We are aware that Region 8 is very culturally, geographically and financially diverse, but it is also true that members and volunteers

in Africa, Middle East and Europe share many common interests, behaviours and challenges. This is the reason why the exchange of experiences is so important in order to better serve members, IEEE and humanity. Whenever you need help or support related to membership, be reassured that MD officers are the right volunteers to ask.

**Antonio Luque**





## Food tech startup wins IEEE N3XT Stars award in Brussels

ENTREPRENEURSHIP is an important feature of a healthy economy, and it can be fuelled by innovation and engineering. Through its 'N3XT' brand ([entrepreneurship.ieee.org](http://entrepreneurship.ieee.org)), IEEE supports the technology startup scene and the efforts these new businesses invest in fresh ideas.

So when Knowledge4Innovation ([knowledge4innovation.eu](http://knowledge4innovation.eu)) organized the 9th European Innovation Summit Week in Brussels from 27 November to 1 December last year, IEEE Standards Association and Corporate based at the Vienna Office sponsored the event, in collaboration with Region 8's Action for Industry initiative and the N3XT entrepreneurship program.

From several hundred of the most innovative startups in Europe, the best 50 were selected to pitch their ventures to European leaders in business, finance and politics in the Hemicycle of the European Parliament. After an opening keynote from Bertrand Piccard, founder of the Solar Impulse Foundation, entrepreneurs ranging from environmental to educational, with approaches from digital to healthcare, were given the opportunity to pitch their solution in front of the audience.

IEEE's N3XT Stars Award is given to the single effort resonating most with the organization's motto 'Advancing Technology for Humanity'. The jury awarded the prize to SOLHO, a young Dutch horticulture company working on off-grid units to fulfil the requirements for greenhouse-based farming projects, even in remote areas.



Growing populations will raise demand for food production two-fold by 2050, while fewer resources are available and environmental damage needs to be avoided. The SOLHO team is leveraging diverse technology to reach this goal with thermal energy storage and solar power.

*Andreas Neumeier*

*Adriano Desideri and Adam Head of SOLHO accept the N3XT Stars Award, flanked by team members from the IEEE Vienna Office, co-sponsors of the event*

## Vienna Office promotes defibrillator standards

LAST December there was a meeting in the IEEE Vienna Office to discuss standardisation opportunities in medical device metrology facilitated by the Region 8 standards coordinator. The result of this meeting was a plan to develop IEEE standards for Conformity Assessment Testing of various medical devices with measuring functions.

The first standards project, authorised on 8 March this year by the IEEE-SA Standards Board, is titled 'Standard for General Vocabulary for Conformity Assessment of Medical Devices with Measuring Function'. The standard will define commonly used terms in the conformity assessment of such devices for legal metrology purposes, providing the framework for nomenclature in the field and establishing consistency in the use of the terms.

Legal metrology has the role of providing adequate foundation for trade, security, environmental and health protection through the process of conformity assessment. This standard will provide the basis for development and support of other standards that apply to specific medical devices with measuring functions.

A second standards project, also authorised on 8 March, is titled 'Standard for Conformity Assess-

ment Testing of Cardiac Defibrillators for Legal Metrology Purposes'. The standard will define test protocols and procedures, establishing procedures and methods when conformity assessment testing external cardiac defibrillators to verify their metrological characteristics. The standard will cover Manual External Defibrillators as well as Automated External Defibrillators (AEDs). An AED can be characterized as semi-automated or as a fully automatic defibrillator.

All healthcare institutions (public or private), airports, bus stations, universities, police, public places and so on should be equipped with defibrillators, a life-saving device against life-threatening ventricular arrhythmias which can lead to sudden cardiac arrest. It is important that every defibrillator in use works properly and accurately. This IEEE standard will define necessary steps to help establish this.

IEEE Engineering in Medicine and Biology Society/Standards Committee (EMB/StdCom) is the sponsor and committee on both projects.

Do you have a proposal for an IEEE standard? Contact the Region 8 Standards coordinator at: [standards.coordinator@ieee8.org](mailto:standards.coordinator@ieee8.org)

*Almir Badnjevic*

## Tom Brazil 1952-2018

MICROWAVE Theory and Techniques Society (MTT-S) President Tom Brazil passed away unexpectedly on 13 April. MTT-S President-elect Dominique Schreurs remembers him as "a great mentor, an excellent leader, a gentle soul, and a friend."

Tom received a BE degree in Electrical Engineering with First Class Honours from University College Dublin in 1973, and achieved his PhD in 1977 with the National University of Ireland. He subsequently worked on microwave sub-system development at Plessey Research (Caswell) UK from 1977 to 1979.

After a year lecturing in the Department of Electronic Engineering at the University of Birmingham, UK, he returned to University College Dublin in 1980, where he served as professor and

Head of Electronic Engineering. Tom was an elected representative of the professors of the University on its Governing Authority and worked in several areas of science policy, both nationally and on behalf of the European Union.

Tom was elected a Member of the Royal Irish Academy (RIA) in 2004 – Ireland's highest academic honour. He served as secretary of the RIA from 2009 to 2013 and was a member of the RIA Council.

He was elected a Fellow of the IEEE in 2003. He was IEEE Microwave Theory and Techniques Society (MTT-S) Worldwide Distinguished Lecturer in Microwave CAD 1999-2003. He acted as chair of the European Microwave Conference in the UK in 2006 and was chair of the European Microwave Integrated Circuits



Conference held in London in 2016. Following election by worldwide ballot in August 2010, he became a serving member of Administrative Committee of the IEEE MTT-S. In October 2016, Tom was elected President of the MTT-S, his tenure beginning in January in 2018.

The Memorials Committee plans to recognize Tom and his contributions to the Society at IMS 2018.



## Basil Osborne 1925-2018

BASIL Osborne, who served as Region 8 Director 1985-86, passed away on 9 February at the age of 92. Professionally, he was renowned for his key contributions to the understanding of particular layers of the atmosphere and how these affect radio transmissions. Tony Davies, who interviewed Basil in 2012 for the IEEE History Center's oral history project, adds: "His contribution to IEEE Region 8 was magnificent."

### Professional life

Born in 1925 in Buenos Aires, Argentina, Basil was educated back in England before joining the Telecommunications Research Establishment in Malvern. Upon achieving a BSc in Physics in 1947, he was employed by the Radio Division of the National Physical Laboratory in Teddington, working on the electron content of the ionosphere and establishing an out-station at Singapore the following year.

He continued ionospheric research from 1952 to 1954 as a lecturer in Physics at the University of Malaya. In 1954 he joined Ultra Electric, and published papers on colour television chrominance circuits, and later worked with JH Owen Harries in Bermuda on colour television projection displays.

From 1958 to 1968, with Rediffusion Research at Kingston-on-Thames, he was involved in coaxial and multi-pair cable development, the applications of waveform testing to cable television, UHF radio propagation studies, and television circuit design. From 1968 to 1970, with the Telemet Division of Geotel, Inc Amityville, New York, he was primarily engaged on the design of demodulators.

Basil is probably best known, however, as head of Technical Developments at Rediffusion Engineering, also based in Kingston-on-Thames, where he remained until retirement.

### IEEE volunteer

He joined IEEE in 1968 while working in the US and remained a member after his return to the

UK, principally to meet others working in his profession. He eventually became chair of the Professional Communications

Chapter and, subsequently, chair of UK & Republic of Ireland Section. He remembered the Section as being somewhat disorganised at the time and described himself as being a "passenger" at the first few Region 8 Meetings that he attended in that role.

After some reluctance, Basil was persuaded to stand for election as Region 8 Director, a position he won at the second attempt. During his tenure 1985-86, he dramatically reformed the composition of Region 8 Committee Meetings by slashing the number of appointed members and promoting the active participation of elected Section and Chapter chairs.

As one of the last Directors of the Cold War era, he went out of his way to visit and assist Sections being set up in Eastern Europe where sometimes even holding meetings between Section officers was a challenge. He personally visited Romania twice during his tenure as Director, at a time when the country was still ruled by Nicolae Ceauşescu.

### After Directorship

In his subsequent role as past-Director, Basil championed the candidature of potential Directors from Scandinavian countries and encouraged the founding of more Sections in the Middle East. His reputation for getting things done was such that he was persuaded to remain on Region 8 Committee for several more years, serving as Secretary.

In addition to being a senior member of IEEE, Basil had been a Fellow of the Institute of Physics, a Chartered Engineer, a Fellow of the Institution of Electronic and Radio Engineers (later merged into IEE, nowadays IET), a Member of the Royal Television Society and a Fellow of the Society of Cable Television Engineers.

You can read the 2012 transcript of Basil's oral history interview at: [tinyurl.com/basil-osborne](http://tinyurl.com/basil-osborne)



## AAU hosts satellite comms workshop

AALBORG University in Denmark hosted the first AAU Workshop on Future Topics in Satellite Communication on 20 March. This one-day workshop brought together engineers and researchers to share their views on the evolution of satellite communications and encourage cooperation between industrial and academic peers.

Over recent decades, satellite technology has been extensively used in telecommunication systems – such as television broadcasting, mobile telephony and radio localization—and its use is expected to become even more widespread over the coming years. Denmark and, in particular, the Nordjylland area have been at the forefront of research and development in the area, thanks to the complementary contributions made by Aalborg University and the many technological companies operating there. The combination of academic and industrial expertise provides the region with a unique set of skills and experience to address the future challenges in satellite communications.

The workshop also welcomed electrical engineering students with an interest in the topic and was supported by the Denmark Chapter of the IEEE Signal Processing Society and by the Danish Society of Engineers (IDA). The workshop was organized by Elisabeth de Carvalho, Carles Navarro Manchon, Troels Pedersen and Alex Sabin Bana from AAU Student Branch.

**Ana I Pérez-Neira**

SPS Regional Director-at-Large (R8)

## Forum in Algiers is among Section plans



ALGERIA Section's meeting for members on 17 February at the Faculty of Electronics and Computer Science, University of Science and Technology Houari Boumediene, Algiers, provided an opportunity to report on last year's successes and discuss forthcoming events for 2018.

Fatma zohra Chelali presented a positive update on Section vitality, covering membership, Chapters, Affinity Groups and sponsored conferences. Members congratulated the efforts of Souissi Boularbah in establishing a new Geoscience and Remote Sensing (GRSS) Chapter. The Section is also keen to encourage the creation of an Education Chapter to focus on the theory and practice of education and educational technology in Algerian universities.

The Section outlined its plans to organize a forum in Algiers with a number of industrial companies active in the electrical engineering field. This key event was due to take place on 12 May after *IEEE Region 8 News* went to press – we hope to bring you a report in our next issue.

**Abdelouhab Mekhaldi**, Algeria Section chair

## EUROCON 2019

**8-10 July 2019**

**18th IEEE International Conference on Smart Technologies**

EUROCON is one of Region 8's flagship events, held every two years in a different country with participants from all over the world.

It provides a major international forum for the exchange of ideas, theory basics, design methodologies, techniques and experimental results between academia, research institutions and practitioners from industry.

[eurocon2019.org](http://eurocon2019.org)

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**Novi Sad, Serbia**

## { IN BRIEF }



■ Baldomir Zajc, Region 8 Director 2005-2006, has been made an honorary member of the Slovenian Chamber of Engineers to reward his work in developing engineering intelligence at all organizations he has led, for his contribution to raising the reputation and position of engineers in society, and for promoting cooperation between Slovenia's Association of Engineering Societies, for which he served as president for a long period, and the Slovenian Chamber of Engineers.



■ Signal Processing Society (SPS) regional director-at-large (R8) Ana Pérez-Neira (centre) is shown here with Raed Shubair, professor and senior advisor for higher education at the UAE Ministry of Education, and Dr Sara AlMaeni during a visit to the Mohammed Bin Rashid Space Centre on 21 February to speak about spectral efficient techniques for satellite communications and engage its scientists in SPS activities.

■ Dubai Business Events (DBE), a division of Dubai Corporation for Tourism (DCTCM) and Commerce Marketing, signed six Memoranda of Understanding last year with educational, scientific and government bodies, including IEEE, the Society of Engineers, the Mohammed bin Rashid Space Centre and the British University in Dubai. DCTCM CEO Issam Kazim said: "These agreements provide wide scope for cooperation, forming an important part of DBE's strategic frameworks, as well as reflecting the strong public-private partnerships that exist across Dubai."

# Tunisia TISP project uses robotics to build social peace and strengthen democracy

REGIONAL disparities around Tunisia reflect how certain areas have lacked an equal share in the country's development progress over recent decades. In the educational system, a big gap is evident in the use of technologies and engineering. The answer could lie in robotics.

Robotics is already used as an educational support in private schools and some limited public schools, but the majority of pupils in rural regions have no access to such technologies. Reducing this gap is a key challenge in building on social peace in Tunisia and strengthening the young democratic process established in 2011.

As a community, the Tunisia Chapter of IEEE's Robotics and Automation Society (RAS) has been trying to impact the educational system by organizing several robot-themed activities since 2016. These have involved organizing several Teachers in Service Program (TISP) sessions for educators and Try-Engineering sessions for pupils. Feedback from the educators and their students indicated a big desire for robotics activities – and this is how the Robotics for Democracy program, R4D, was born.

R4D is financially supported

*Teachers are familiarized with the details of the project*



by RAS and locally developed with the Tunisia Informatics' Association (ITA), while the main task force of the project comprises RAS volunteers.

The project trains educators at rural and under-developed schools in robotics using a low-cost robotics platform and open hardware electronics. They learn to operate and program robots – essentially a simple differential drive wheeled robot using scratch and blocks tools – and are offered a robot with which to run the activities with their pupils in their own classrooms. Benefits to the children include not just simple robotics but in developing their skills across multiple disciplines such as

mathematics, engineering, information technology and science in general.

R4D also encourages educators to lead their pupils towards a Robotics Challenge at the end of this year.

The workshops are spread across Tunisia, with those in the north running in Nabeul, centre regions in Sousse, and southern workshops in Gabes-Mednine. The launch meeting and first workshops were held at CREFOC Nabeul on 23-24 March, the R4D team being led by Ikram Twir, Mehdi Melli, Wael Jaballah and Najoua Selmi.

**Nizar Rokbani**, SM, RAS TN chair  
**Ikram Twir**, RAS Student Representative, R4D chair



*R4D participants at the March workshop at CREFOC*

## December workshop shows the way for involving school teachers in promoting engineering



*Getting the hang of it: educators show off their work and offer valuable feedback*

AS part of its technical activities, Robotics and Automation Society (RAS) Tunisia Chapter has been involved in arranging several Teachers in Service Program (TISP) sessions based on IEEE educational activities resources. A particularly successful session took place on 3 December last year, co-organized with the Centre Régional de l'Education et de la Formation Continue Nabeul (CREFOC) and Tunisia Informatics Association (ITA).

CREFOC is a public entity dedicated to continue education and training activities for public schools teachers in the

Nabeul region of Tunisia. It is also open to private accredited schools educators.

This workshop gathered more than 30 educators from primary schools, colleges and secondary schools in the Nabeul region. It comprised a presentation of IEEE educational activities and an explanation of the Try-Engineering platforms, its lessons and its potential use as classroom material. The session was arranged by TISP Champion and RAS Tunisia chair Nizar Rokbani, and co-coached by Tunisia education inspector and ITA chair Dor-saf Benna, English teacher Hamdi Nsir

and informatics teacher Nizar Abdellatif. A couple of activities were conducted with the educators: the popular 'Build Your Own Robot Arm', which appealed most to primary schools teachers, and the 'Arduino Blink Challenge', which has more impact on college and secondary schools educators.

The workshop was also an opportunity to gather feedback about the Try-Engineering platform and teachers' needs. Educators agreed that Try-Engineering provides good entry-level material and expressed a desire for real robot-based activities that might interest pupils further.

**Nizar Rokbani**, RAS Tunisia Chapter chair  
<http://sites.ieee.org/tunisia-ras/>





From left: Samarth Deo (Sweden Section chair), Christofer Sylfvenius (treasurer), Bjorn Sonerud (board member), Arnold Pears (board member), Bengt Lennartsson (IEEE Fellow), Mats Edvinsson (past-chair), Harold 'Bud' Lawson (IEEE Fellow), Alberto Lorente Leal (YP chair)

## Turn tweets into high-level knowledge, says IEEE Fellow at Sweden Section AGM lecture

MECHANICAL and software design should be developed together in a more integrated fashion: this was one key conclusion to be learnt from IEEE Fellow Bengt Lennartsson's technical lecture at Sweden Section's Annual General Meeting on 14 March.

Held at the main campus of KTH Royal Institute of Technology, Stockholm, the AGM-and-lecture event saw Prof Lennartsson – head of the Division of Systems and Control at the Department of Electrical Engineering and chair of Automation at Chalmers University of Technology, Gothenburg – delivering an interactive talk on Industry 4.0 and digitalization, with a focus on industrial implementations.

His starting point was 'the Tweeting Factory', a flexible online and event-

based information architecture in which simple messages (tweets) from all kinds of equipment are combined into high-level knowledge. This avoids hard-coded communication and dedicated solutions with ad hoc integrations. Chalmers developed the platform with Volvo Cars, Scania, KTH and LTH.

Another 4.0 topic was the industrial challenge of integrated product, production and automation design. Lennartsson illustrated approaches to develop both mechanical and software design in a more integrated way, addressing operations both from a product view and a resource view.

Noting that industrial robots could be used much more efficiently, he illustrated some negative consequences of today's robot patterns (often optimized

on time) and presented approaches for better usage and energy consumption. Evaluations on industrial robots have recently shown that it is possible to obtain energy reduction up to 30 per cent and peak power reduction up to 60 per cent.

In this context, he emphasized, one should be aware of conflicts between energy usage, system robustness and system stability.

The AGM also introduced the Section's fresh committee line-up including the new chair Samarth Deo, vice-chair Viacheslav Izosimov and treasurer Christofer Sylfvenius, along with committee members with specific responsibilities Viacheslav Izosimov (industrial relations), Arnold Pears (membership development) and Celestine Iwendt (newsletter and information).

## Let's ensure education will lead to employment

HOW effective are engineering curricula in improving employability? That was the main question under discussion at the IEEE Symposium of Engineering Education (ISEE) on the theme 'Graduates and Future Employment', co-organized on 13 March by Oman Section, Sultan Qaboos University and the Military Technical College, Muscat-Oman, which hosted the event.

Held under the patronage of Mona Al-Jardania from the Ministry of Manpower, the full-day symposium attracted more than 100 participants from 13 institutes around the Sultanate of Oman. The full program included a panel session and an exhibition by local organizations.

The main symposium comprised a series of lectures by distinguished speakers, including 'Preparing graduates for employment' by Duncan Priestly, general director of Institutional Effectiveness at Nazarbayev University, Astana-Kazakhstan; and a talk by Mike Murphy, director of Digital Campus & Learning Transformation at the Dublin Institute of Technology, Ireland, on developing critical thinking skills and self-knowledge through teaching non-engineering subjects.

Further lectures included 'Building industrial/academic curriculum' presented by Andre Van Der Westhuizen and Phil Verrill from Curriculum Quality and Enhancement at the University of Portsmouth, UK; and a talk by Joseph Jervase of the Department of Electrical and Computer Engineering at Sultan Qaboos University, Oman, on developing self-directed lifelong learners.

The day concluded with an open audience discussion. The organizers noted a number of recommendations established during the day:

- Curricula must give emphasis on soft skills.
- Problem-based learning should be mandatory to enhance critical thinking.
- There must be an emphasis on interactive learning.
- Continuous professional development is essential.

**Ahmed Al Maashri**

## Uganda hosts Distinguished Lecture on latest updates in IoT



UGANDA Subsection was among three Sections in East Africa to host a Distinguished Lecture tour by Rose Hu from Utah State University earlier this year. Organized in collaboration with the Communications Society and Uganda Institution of Professional Engineers (UIPE), the one-day public lecture on 'The Internet of Things (IoT)' took place on 24 January at Resilient Africa Network (RAN), Makerere School of Public Health.

Hu's focus was that IoT is one of the most exciting technological developments in the world today and the global technical community is coalescing around the

thought-leading content, resources and collaborative opportunities provided by IEEE's IoT Initiative.

The event provided an opportunity for established and upcoming engineers, technologists and entrepreneurs in Uganda to explore the D2D, MU-MIMO, NOMA and mmWave based schemes and their related performance study in 5G/IoT settings.

It was also an opportunity for participants to sharpen their knowledge and skills as well as practices in the area of IoT in delivering smart solutions to local challenges. The event was oversubscribed but a lucky 150

participants were able to attend.

By the end, all participants agreed to commit themselves to coming up with practical solutions based on the IoT collaborative model, utilizing such solutions to address real-life challenges in society and, readily being available, to actively participate in progressively enabled technology training in the near future.

The success of the talk has encouraged Section members to request more of the same. For her part, Prof Hu said she would be open to returning to Uganda to lead another session.

**Vincent Olema**

*Rose Hu: "IoT is one of the most exciting tech developments in the world today"*



AIEEE 2017 conference in Riga

# Latvia Section celebrates 10 years of events and membership growth

LATVIA Section has come a long way since it was founded more than a decade ago. Initial discussions about setting up a Section here actually began in 2004 when Lithuania Section officers visited Riga Technical University. However, it was only in 2007, during the meeting of European Nordic and Baltic countries Section officers held in Riga, that IEEE members from Latvia finally put forward a petition to create their own Section.

Latvia Section was officially founded on 16 February 2008, the first elected chair being Leonids Ribickis. Later in the role of honorary chair, Ribickis initiated a system for training new generations of IEEE Latvia leaders, establishing a core group and setting out a strategy for the future development of the Section and rapidly increasing its membership.



Honorary chair Leonids Ribickis with Ilja Galkins (chair of the Joint Latvia Chapter of Power Electronic, Industrial Electronic and Industrial Application Society), Latvia Section chair Nadezhda Kupicina, and Section members Oksana Nikiforova, Larisa Survilo and Agris Nikitenko

A key method for achieving sustainable membership development has been to work with educational institutions to attract PhD students. The education of future generations is a priority for Latvia Section, and to this end its student representatives have been involved in several recent Students and Young Professionals (SYP) meetings at Regional level, including Region 8 Nordic SYP Congress 2015 (Stockholm) and 2017 (Vilnius); and Region 8 SYP Congress 2016 (Regensburg).

At national level, Latvia Section's student conference continues to be held annually.



The presentation of best papers by Edgars Lielmanis at the students' conference



Computer Society Latvia Chapter chair Alla Anohina-Naumeca hands out the awards to winning students

Since 2012, Latvia Section has organized the annual RTUCON, an increasingly renowned international scientific conference, whose general chair is Ilja Galkins. Also, AIEEE (Workshop on Advances in Information, Electronic and Electrical Engineering) has been held regularly since 2013, and RTUWO (International Conference on Advances in Wireless and Optical Communications) has been running since 2015, the general chair of both being Andrejs Romanovs, himself a past-chair of the Section.

The first AIEEE was organized based on cross-border collaboration between Latvia, Lithuania and Estonia Sections, and then extended to neighbouring areas.

Lectures organized by Section members are valuable and well attended, and attract a good deal of interest from industry.



IEEE member Gundars Asmanis reads an open lecture in EMC compatibility

Collaboration with industry and the expertise of IEEE members in solving industrial challenges provide a solid background for

continuous growth of recognition at national and international levels.



Ugis Sirmelis and Maris Gureckis together during a visit to national power supply company Latvenergo division TEC-2

The involvement of students as volunteers in conference organization and research activities ensures their success and promotes the number of publications in IEEE Xplore. Latvia Section's former vice-chair Oskars Krievs began as an IEEE student volunteer.



I Steiks, director of RTU Cesis affiliation branch, A Sokolovs and the dean of the Faculty of Electrical engineering O Krievs during his PhD studies implement experimental work on hydrogen fuel cells

Latvia Section's Women in Engineering Affinity Group arranges activities to attract young women into electrical and electronics engineering studies.

The Section has most recently been working on arrangements for the 7th International Doctoral School of Electrical Energy Conversion and Saving Technologies, and annual event to be held this time at the students' sports centre Ronishi at Riga Technical University in May. We hope to bring you a report in our next issue.

**Nadezhda Kupicina**  
Latvia Section chair

## WOMEN IN ENGINEERING

# Highlight on R8's WIE initiatives...

■ Four IEEE WIE International Leadership Summits (ILS) will be taking place in Region 8 this year:

- Tunisia, 10-12 August ([wieils.ieee.tn](http://wieils.ieee.tn))
- Jordan, 22-23 September ([www.facebook.com/wieilsjo](http://www.facebook.com/wieilsjo))
- Morocco, 24 October
- UK (TBD)

Don't miss your chance to participate and widen your horizons and network, and to sharpen your technical and professional skills!

■ Four new awards have been unveiled for Region 8 WIE volunteers in 2018:

- IEEE R8 WIE Section Affinity Group of the Year
- IEEE R8 WIE Student Affinity Group of the Year
- IEEE R8 WIE Outstanding Section Volunteer
- IEEE R8 WIE Outstanding Student Volunteer

Region 8's WIE Committee has received some great applications and nominations from amazing volunteers. Results will be announced during the award ceremony at the WIE ILS in Tunisia. Stay tuned, and get ready to apply or nominate next year!

■ Ana Katalinic Mucalo (right) is the winner of the 2018 Clementina Saduwa Award.

Ana was born in 1980 in Sarajevo, Bosnia and Herzegovina. In 1999 she started her studies at the



Faculty of Electrical Engineering and Computing at the University of Zagreb, Croatia, where she graduated in 2005 and obtained her PhD degree in 2013.

Since graduation, she has been with the Radio-communications Department at the Croatian Regulatory Authority for Network Industries (HAKOM) as a senior Expert for Microwave and Satellite Networks, dealing mostly with frequency planning and interference analysis of fixed point-to-point and satellite links, as well as with cross-border coordination for fixed networks. She has published 30 scientific and technical papers in journals and conference proceedings. Ana has also participated as a researcher in the European Union-funded project for wireless communications COST2100 and IC1004.

She is an active IEEE member and has served in several volunteering positions: Region 8 Professional Activities Subcommittee Chair 2015-16, Region 8 Young Professionals Subcommittee member 2013-14, Croatia Section GLOB Affinity Group chair 2010-12, and Croatia Section secretary 2013-16. She currently serves as the Croatia Section vice-chair.

**Younma El Bitar**



ON International Women's Day, Women In Engineering Portugal (WIE-PT) organized a meeting with project managers from a variety of companies including Critical Manufacturing, Bosch Car Multimedia, Efaced, EDP, eSPap, VESTAS and Portuguese Engineers Order. This meeting was co-organized with APOGEP (Portuguese Association of Project Management), TECMINHO and Critical Manufacturing itself.

WIE-PT chair Celina Pinto Leão and Paulo Sousa from APOGEP were the event hosts, presenting the speakers and moderating the debate throughout the day.

Gabriela Fernandes, professor and researcher at the University of Minho, began by outlining her work on the implementation of project management culture in organizations. She was followed by Ana Fialho from eSPap, who demystified the existing shadows in project teams, highlighting the relevance of knowing and managing these shadows to build and

## Industry day focuses on women in management

successfully manage these teams.

EDP (Energy of Portugal) was represented by Marisia Giorgi, HR corporate deputy director, who drew on an international report on gender inequality, concluding that women tend to be promoted by results but men by potential, so women need to make themselves appear more proactive when faced with new challenges.

Maria Giesteira from EFACEC shared her experience as project manager in international projects,



notably in India, comparing the cultural differences between countries and the importance of communication, empathy and female resilience. Sofia Martins, project manager at Bosch Car Multimedia, spoke about the very short time to market that companies have to deal with nowadays.

VESTAS was represented by business process developer Carla Lopes with a talk on the important roles developed by women in this growing company. Critical Manufacturing operations director Teresa Carreiro explained her vision of software development and how agile practices were adopted by her teams and the relevance of developing soft skills.

The afternoon session began with a roundtable of the morning speakers and Rosa Costa from



Engineers National Order, Pedro Engrácia from Project Management Normalization Organism, Manuel João Santos PMO from Salvador Caetano Group, Isabel Ramos from EQUAL-IST project, and others. This was followed by an industrial tour of Critical Manufacturing's facilities.

With increasing empowerment, WIE-PT believes it is possible to break through the glass ceiling and increase female representation in leadership positions.

*Networking over lunch during the event on International Women's Day*

## Start a business, market yourself and show how you've 'evolved'



WIE ENIM (National Engineering School of Monastir, Tunisia) Student Affinity Group organized a new event called 'Yes She Evolves!' on 11 April, focusing on the development of women over the years – how they manage both career and household, how they could integrate in industrial or commercial or professional activities, and how inspirational Arab women are making a difference in the world.

This event was dedicated specifically for women in engineering, challenging issues such as the lack of soft skills, showing how to start a business, and so on. Workshops were held on digital marketing and



how to become a 'startuper', along with sessions entitled 'Undertake or Wait' by Chema Gargouri and 'The Woman and the Idea: from the personality towards the project' by Oussema Oertani.

**Mayssa Mannai**  
WIE ENIM SB chair



## WIE ENIM learns lessons from generations of women

IN order to celebrate International Women's Day, WIE ENIM Student Affinity Group exhibited a stand at the engineering school to showcase for all students the importance and history of this great day.

We also visited the Generations' Club in Monastir, a meeting place for retired women. It was a very interesting opportunity to meet them and to discuss issues such as gender inequality in previous generations affecting the integration of working women.

We heard about racism, in-

equality and much more. A common theme was that women were not allowed to finish their studies because they were expected to get married instead. Another was that it was too easy to drop out just because the college or school was a distance away from home.

Despite this, there were women who pursued opportunities to achieve interesting positions, succeeding at being a mother and a working woman.

**Mayssa Mannai**  
WIE ENIM SB chair





Women in Microwaves, from left: Milica Petković, Nataša Males-Ilić, Zlatica Marinković, Vera Marković, Branka Jokanović, Marija Milijić, Tijana Dimitrijević and Biljana Stojić

## Serbia & Montenegro WIE looks back – and ahead

THE IEEE Women in Engineering Affinity Group of Serbia and Montenegro Section was established in January 2007 to acknowledge the number of women involved in engineering and to increase their participation within the profession.

At the Faculty of Electronic Engineering at the University of Niš, there is a lot of discussion on how to encourage young women to go into STEM and specifically IT areas of higher education. But then our Microwave/Wireless Technology Research group is hardly gender-balanced: there are more women than men.

The members of the Women's Engineering Society, inspiring women as engineers, scientists and leaders, are people working in the fields of engineering, science and technology, at all levels and with any type of

qualifications, students on engineering and related courses, companies and others who share our aims. They get together for technical visits and social events. WIE group activities in recent years take the form of technical presentations and professional networking and social events.

Last year marked the WIE Affinity Group's tenth anniversary and the group was very active throughout 2017. Members outlined Faculty courses to young women and men at high schools, promoted telecommunication courses to students, organized international conferences, and hosted a student conference at the Faculty itself. In addition, WIE Affinity Group members take principal roles within the Section as volunteers in many Societies.

**Biljana Stojić**

WIE Affinity Group chair

## Turkey YP launches itself into workshops and mentor program

HAVING built a team of young professionals enhanced with student members, Turkey YP Affinity Group began active work last September. The Affinity Group is split into units for corporate activities, communication, a mentor-mentee program, technology projects and activities, marketing and design, webinar and workshops, and podcasting in learning.

We took part in the IEEE Turkey Workshop held at Eskişehir on 1-4 February by organizing two sessions. For the first, Ayhan Epik from Turkey YP ran a workshop about personal innovation to help participants understand their learning journey, find their goals and develop an action plan for the future. In the second session, Eşref Öztürk, co-founder of the award-winning startup DriveBuddy, shared his story of creating a business that aims to help people by detecting and reporting accidents.

In addition to these sessions, one of our team members, Onur Karmış, gave a presentation entitled 'Story of a Young Professional', which was published in *IEEE Engineering Management Review* magazine.

The start of our mentor-mentee program has been announced by its leaders, Kadir Taş and Asım Köroğlu, aiming to connect young professionals and students in Turkey where they can share their experiences in different areas of expertise. The program is now active and driven by the mentorink platform ([mentorink.com](http://mentorink.com)).

For any further information please visit our website and follow our social media channels:

- [ieeeypturkey.org](http://ieeeypturkey.org)
- [linkedin.com/company/18403940](https://www.linkedin.com/company/18403940)
- [facebook.com/ieeeypturkey](https://www.facebook.com/ieeeypturkey)
- [instagram.com/ieeeypturkey](https://www.instagram.com/ieeeypturkey)

**Ayhan Epik**, Turkey YP AG Team



## SYP CONGRESS 2018



Porto, Portugal

25-29 July 2018

IEEE Region 8 Students and Young Professionals Congress

Held every two years, SYP Congress is the largest student event in Region 8, gathering IEEE Student and Young Professional Members from all Sections throughout the Region. Its primary goal is to enhance and foster the engineering sense and capabilities through different activities, exchanging experience and knowledge, and encouraging international networking through lively social activities.

[syp.ieee-pt.org](http://syp.ieee-pt.org)

## Israel launches YPs into space before anyone else

YOUNG Professionals Israel began in 2016 when Aleksey Dyskin, a PhD student in the Technion – Israel Institute of Technology, established a YP Affinity Group within Israel Section. He now serves as its chair and his vision is to bring young professionals together with academia and industry.

Besides local activities, organized and managed by the Affinity Group, YP Israel has started a tradition of organizing the annual IEEE Israel Students and Young Professionals Conference. Speakers at this event has included the likes of the CEO of Apple Israel, the vice-president for research and development at Google Israel, and a senior VP from Intel Israel. Each



Aleksey Dyskin and Quentin Bonds about to start the Young Professionals in Space Event

year the conference is hosted by one of the six Israeli universities. YP Israel has also set up a series of bi-annual 'Entrepreneurship in Semiconductors' workshops for Young Professional Entrepreneurs.

YP Israel joined the MTTs initiative Young Professionals in Space and organized the first YPIS event, held in parallel to IEEE COMCAS 2017 and was a great success.

## Your very last chance to see Virgin star in Barcelona

AS you read this issue of *IEEE Region 8 News*, there may still be time to book your place on the next five-day conference on space technology and engineering, Young Professionals in Space (YPS), to be held on 17-21 July at Universitat Politècnica de Catalunya in Barcelona, Spain.

In addition to a program of sessions and workshops, including a keynote by Virgin Orbit vice-president Stephen Eisele, there are plans afoot to launch an actual satellite rocket. You have been warned!

Visit the website at [ypinspace.com](http://ypinspace.com) or join the Facebook discussion at [facebook.com/YPinSpace](https://www.facebook.com/YPinSpace)





**INSAT (National Institute of Applied Sciences and Technology), Tunis, Tunisia**

## When it comes to renewable energy, you can count on INSAT to Rec it Up

POWER and Energy (PES) INSAT Student Chapter organized a 24-hour renewable energies challenge – REC it Up – on 17-18 February. Over a working weekend of testing entrepreneurship, participants attended both technical and soft-skills workshops to help them pitch their project's ideas.

They were divided into teams and challenged to conceive projects related to renewable energies. At the end of the challenge, the jury nominated the winning team based on innovation, feasibility and business plan. This challenge was open to all the IEEE members from all Student Branches in Tunisia.

For another event, in partnership with the Hult Prize at Carthage campus, an information session about that word-class competition for social entrepreneurship was held at our institute to encourage members to take part. In the end, a team composed of four IEEE INSAT student members won the on-campus qualifications and made it to the regional finals in Toronto, Canada.

Our main project for this year is 'Youth For a Change', aimed at introducing concepts of renewable energy to school students in different regions. To date, we have reached three preparatory schools in Beja, Grombelia and Tunis. At

each school, we organized four workshops about different forms of renewable energy and how they are used. Team challenges were devised and the finals were held at our institute on 24 March where all winning teams and their parents were present to discover more about the topic.

One last event to mention: a PES meeting to honour IEEE PES president Frank Lambert at the International Conference on Advanced Systems and Electrical Technologies. It was also a great opportunity to meet with our fellow Tunisia PES Student Chapters and to share our experiences.

*Moez Zouaoui*

INDUSTRY Applications Society (IAS) INSAT Student Branch organized its first industrial forum on renewable energy on 7 April. The main goal was to promote the sector in Tunisia and encourage students to work in this field.

IAS INSAT SB has also been arranging on-site visits to provide members with a glimpse into what it's like to work in industry. We paid a visit to SEA Latelec, a Tunisian subsidiary of aeronautical equipment



company Groupe Latécoère, and visited Karmex Grombelia.

In addition, we have run several certified training sessions in LABView, quality management systems and lean manufacturing and

management. Workshops have been well-received too, including those on problem-solving; one on biomass, photovoltaic panels and storage and piezoelectric led by Miladi Mansour and Saidi Rafika; and finally a workshop on supply chain conducted by Ouséma Azouzi.

Warm thanks go to all the trainers for their support, and all members who contribute to our Student Branch, for their efforts, motivation and determination.

**Caledonian College of Engineering, Oman**

## Define project goals and win IEEE grants

'IEEE-MIN-GRANT for students and staff' was the title of a presentation delivered on 5 December last year by Dr Dharmasa, Branch counselor, Senior Member and IEEE Awardee of the College, invited by Madras University in India. Dr Dharmasa was introduced by the head of the Library of Madras University, Ms Selvi Panneerselvam.

The speaker spoke about IEEE's latest steps to support both staff and students towards development of projects based on standards. He elaborated the need of such project for the society and explained the roles

and steps that both students and their mentors need to undertake in achieving a project goal, including a declaration of intention to submit an application paper for publication by IEEE upon completion of the project. More information can be found at [innovate.ieee.org/subscription-options/standards](http://innovate.ieee.org/subscription-options/standards)

Nano-technology, analytical chemistry, physics, geology and bio-informatics expert Dr Jayalaxmi C gave a vote of thanks and stated these kind of events are helpful in directing staff and students towards application-oriented research.

## ISSAT Sousse, Tunisia Inspiring leaders of tomorrow

ISSAT Sousse Student Branch organised a Tomorrow's Leaders event at the institute in Tunisia on 9 December.

Eighty primary school pupils were invited to our university where several professionals and experts spoke about their success in order to inspire and motivate our young future leaders. Especially important for us was to encourage the young leaders to share their stories of how they might succeed despite their ages and share their vision.

The main idea of this event is to boost the potential of primary school students and provide them with a vision for the future.



**ENET'Com (National School of Electronics and Telecommunications), Sfax, Tunisia**

## Student Branch triples its membership

ENET'COM Student Branch has increased its membership from 32 to more than 100 over the course of the last year. The Branch has run a membership development campaign, resulting in forming two new branches, both in the city of Sfax: Polytechnique and IIT Student Branch.

A 'Let's Make the Change' event took place at ENET'Com on 28 February, featuring guest speakers Hassene Mnif, Mohamed Ben Slima and Sahar Slimi, who shared their experiences of IEEE and what it means to them. The event was also used to announce the IAS and PES Chapters.

On 10 March, we had the pleasure to welcome a distinguished lecturer, M Javier Gozalvez Sempere, to lead two workshops: '5G and beyond: from infrastructure-centric to device-centric wireless networks' and 'Connected vehicles: status, challenges and V2X communications'.

We were also honoured to attend IREC'2018, the 9th International Renewable Energy Congress held in Hammamet on 20-22 March. We are very thankful for the invitation from the congress chairman Maher Chaabane, and for the chance to meet, amongst others, Frank Lambert, IEEE PES President-elect from Virginia Tech, USA.

## { IN BRIEF }

■ University of Dubai in collaboration with UAE Education Chapter organized a Digital Imaging Student Competition on 22 January. The aim was to provide UAE's high school students an opportunity to develop and demonstrate their digital photography skills. Seventy individuals from ten schools participated in the event. A panel of digital imaging experts assessed the entries and the top three won prizes at an awards ceremony. The competition was sponsored by the University of Dubai.

■ The National Engineering School of Gabes (ENIG) and the National Engineering School of Sfax (ENIS) in collaboration with IEEE Tunisia Section are organizing the first Industry and Energy Congress (IEC) for 13-15 October in Sousse, Tunisia, under the slogan 'Energy Without Borders'. IEC 2018 is an international event where more than 200 young engineers and professionals from Tunisia and all over the world get together to develop their expertise in the field. The congress will include conferences and workshops introducing the latest technologies in power and energy.



■ In collaboration with IAS and PES ENIG Student Branch Chapters, ENIG Student Branch organized an oil industry conference on 28 February, led by international expert and engineer Hamed Elmatry (above). The conference aimed to present updates in the oil and gas sector in Tunisia, as well as bring together students, engineers, doctors and experts. It was a very good opportunity for all 48 attendees to share ideas and broaden their knowledge in this huge and important industry.



Faculty of Electrical Engineering and Computing,  
University of Zagreb, Croatia

## Wind farms and energy efficiency in Zagreb

ZAGREB Energy Congress (ZEC, or 'rabbit' in Croatian) is an international meeting of students, teachers and industry experts in the field of power systems, electrical engineering and automation, hosted by Student Branch Zagreb. ZEC is initiated as an annual event where the students primarily share their experiences, learn about trends in the field of power systems, make new friendships and acquaintances, and establish the foundation for future projects and cooperation, which they carry on far beyond their student days.

After two successful organizations of ZEC in 2015 and 2016, the latest Congress was held on 13-16 December last year, hosting about 60 student members from Sections

in Bosnia and Herzegovina, Serbia, Slovenia and Czechoslovakia, as well as the Croatian cities of Rijeka and Osijek. The event focused on industry and academia content and lectures with emphasis on possible collaboration topics in the area of wind farms, energy efficiency of industrial plants and climate preservation challenges. The topics were followed by company visits to local R&D centres and test sites for new technologies in energy efficiency.

The technical aspects were complemented by social activities of opening ceremony, gala dinner, city sightseeing of Zagreb winter attractions and, of course, our signature event - a technology quiz night in the local pub.

Vinko Lešić

## Bordeaux University, France

## Make a BEE line to learn about IEEE

BEE Branch organized BEE Week, six half-days filled with scientific interactions at the historical cloister of the Domaine du Haut-Carré at University of Bordeaux, on 15-17 November last year.

Founded in January 2014 by the PhD students at IMS Research Center, BEE Branch aims to show to students of electronic engineering how they can benefit from IEEE. Each day of BEE Week had a different IEEE Chapter theme, presented through lectures, workshops and poster sessions.

This event gathered nearly 100 participants, more than 50 of whom were IEEE members. BEE Week was supported by MTT-S, APS, IEEE CAS, SSCS, IEEE Instrumentation Measurement Society and EMB.



## Tanta University, Egypt

## The return of Tanta's Mid Year Training

THE seventh edition of Mid Year Training was held from 28 January to 1 February, aiming to deliver, once again, a high-quality technical training for students, including in-hand experience with a goal to help them take the first steps in their future professional life.

Mid Year Training began in 2008, focused on soft skills, but the main focus in the last three years has been on technical training and workshops in different engineering topics, such as embedded systems, problem solving and so on.

The training was held in Delta Research and Development Centre, with whom we have a partnership, and sponsored by Skills Castle Training Center and Engineering Arcade Training Center.

## Students and YPs are the driving forces in Serbia

THE vast majority of new members in Serbia and Montenegro Section are students and young professionals.

Our International Student's Projects Conference IEEEESTEC was held for the tenth time on 23 November last year at the Faculty of Electronic Engineering, University of Niš, Serbia. Supported by Electron Devices/Solid-State Circuits and Microwave Theory and Techniques Chapters, the conference comprised 75 papers covering a wide range



of topics. The full-day event ended with special awards for best projects chosen by all authors. The conference was very well received by the attendees including about 350 high school and academic students.

Serbia and Montenegro YP held its first meeting at the Power Electronics conference in October last year and is doing its best to continue the momentum through 2018, reaching out to other Young Professionals groups within Region 8 and beyond. The plan is to reach full capacity at EUROCON 2019 in Novi Sad, set to be European Youth Capital that year.

Vera Markovic

Serbia and Montenegro Section Chair