UKRCON and IEEE in Ukraine Welcoming word to UKRCON 2021

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Abstract—**This paper is a written version of the welcoming word to UKRCON 2021 from the Chairman of the Conference and IEEE Ukraine Section chair. It contains a brief history of the IEEE in Ukraine as well as the origin of the UKRCON conference. Also, features of current UKRCON 2021 are discussed and the statistics is provided.**

Keywords—IEEE, IEEE Ukraine Section, UKRCON, EUROCON, IEEE Milestone, Zenit

I. INTRODUCTION

On behalf of the IEEE Ukraine Section Committee and UKRCON 2021 Organizers I would like to welcoming the participants of the 2021 IEEE 3rd Ukrainian Conference on Electrical and Computer Engineering (UKRCON). In this introductory word I am going to explain briefly the origin of UKRCON, IEEE in Ukraine, and the features of this particular Conference held in 2021 in Lviv, Ukraine.

II. THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

The IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. IEEE has more than 420,000 members in more than 160 countries.

Qualifications of IEEE Membership include several grades: Student member, Graduate Student member, Member, Senior member, and Fellow. Currently we have members of all mentioned grades in Ukraine. From the IEEE point of view our Earth world is currently divided on ten regions depending on the number of IEEE members in different parts of the Earth. The greatest number of IEEE Members today is registered in USA today. That is why there are six regions in the USA. The rest of the world is divided on four regions as is shown in Fig. 1.
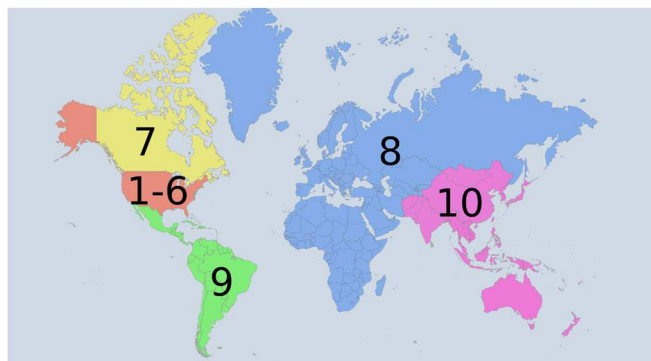

Fig. 1. IEEE Regions

Ukraine belongs to the Region 8, which is the largest region. Today discussions on dividing this region are held, and perhaps in the future there may be more regions than we have now.

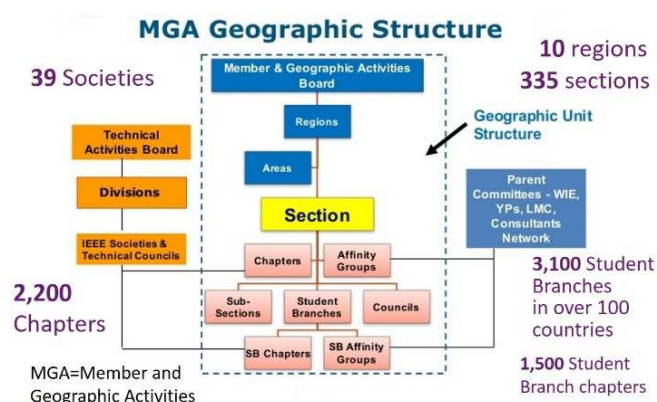The simplified structure of the IEEE is shown in Fig.2.

Fig. 2. IEEE Simplified Structure

Geographically, there are 335 sections in ten regions, and one of them is Ukraine Section.

Professional (Application Area) Divisions include 39 IEEE Societies and some Technical Councils. The most popular in Ukraine for today are following societies: IEEE Aerospace and Electronic Systems (AES), IEEE Antennas and Propagation, IEEE Communications, IEEE Computer, IEEE Control Systems, IEEE Electromagnetic Compatibility, IEEE Electron Devices, IEEE Geoscience & Remote Sensing, IEEE Industrial Electronics, IEEE Industry Applications, IEEE Microwave Theory and Techniques, IEEE Photonics, IEEE Power Electronics, EEE Signal Processing, and IEEE Information Theory. We have corresponding chapters or joint chapters of these societies in Ukraine Section. Of course, new chapters associated to different societies can be created in the future.

IEEE publishes huge number of high quality professional and popular journals, organizes numerous IEEE Conferences every year, and develops IEEE standards, which provide the needs of all global electronics, including the Internet.

IEEE Future Direction Committee focuses on those important directions which lead to innovations and creation of new technologies.

III. History glimpse of IEEE in Ukraine

There were no IEEE members in the former Soviet Union, though we could order some IEEE journals in the library. When the empire collapsed and independent Ukraine was created, the Ukrainian scientific community in Canada sponsored IEEE membership of the first 50 members in 1991. The IEEE Ukraine Section was established in 2 months after the declaration of Ukraine Independence.

The first IEEE members in Ukraine were scientists and teachers of the Kyiv Polytechnic Institute.

Official IEEE confirmation concerning the creation of the Section was received in late December, 1991. Starting from 1992, Prof. Petro Talanchuk became the first IEEE Ukraine Section Chair as he was the then Minister of Education of Ukraine, who was also the then Rector of Kyiv Polytechnic Institute.

Such creation of the IEEE Section (from the top) was an important first step. However real active IEEE life in Ukraine could started from mass individual membership and creating professional chapters associated with IEEE Societies.

Personally, me knew nothing about IEEE Ukraine section in that time, but I jointed IEEE as a member and Antennas and Propagation society in 1994. In 1995 I was one of the petition signers on creation IEEE Chapter in Ukraine. The first IEEE chapters of IEEE Ukraine section were created in Lviv and Kharkiv:

− IEEE Ukraine (West) AP/ED/MTT/CPMT/SSC Societies Joint Chapter (1995) with Prof. Nikolay Voitovich as organizer (Lviv);

− IEEE Ukraine (East) AP/MTT/ED/AES/GRS/NPS Societies Joint Chapter (1995) with Prof. Alexander Nosich as organizer (Kharkiv).

The Lviv (West) chapter was created with support of Polish IEEE Section and personally Prof. Josef Modelski.

Currently, IEEE Ukraine Section Committee (2016 – 2021) consists of Prof. Felix Yanovsky (Chairperson), Mr. Ievgen Pichkalov (Vice-Chair), Dr. Michael Balaban (Secretary), and Dr. Iryna Ivasenko (treasurer). In addition the Committee includes all chapter chairs and some persons responsible for separate activities like conferences, awards, affinity groups, etc. In Fig. 3, the photograph of a Committee Meeting is shown.

Fig. 3.   IEEE Ukraine Section Committee Meeting

Today the IEEE Ukraine Section counts around 450 members, 14 technical chapters of IEEE Societies, 2 affinity groups (Young Professionals and Women in Engineering), and some student branches and chapters.

IEEE Ukraine unities organize and support local events, have liaisons with professional societies, local professionals and much more.

IV. IEEE Ukrainian Conference on Electrical and Computer Engineering (UKRCON)

IEEE UKRCON has been established and approved at the Meeting of IEEE Ukraine Section (all Chapters and other units were represented) on August 27, 2016, Kyiv. It was planned to be a flagship IEEE Conference in Ukraine. The Conference was planned to be traveling.

The first IEEE UKRCON-2017 was dedicated to the 25th Anniversary of IEEE in Ukraine. It was held in Kyiv, on the base of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute". A picture from this Conference is shown in Fig. 4.

Fig. 4.   General picture after the opening ceremony of UKRCON-2017

During UKRCON-2017 the honored ceremony was held dedicated to the IEEE Milestone awarded to Ukraine for the 'Zenit' parabolic reflector L-band pulsed radar, which was created in Ukrainian Physics and Technics Institute (UFTI), Kharkiv, 1938 [1], [2], [3]. Figures 5 – 7 illustrate this event.

Fig. 5.   Costas Stasopulos, IEEE R8 Director hands the Milestone bronze plaquet to the IEEE Ukraine Section Chair
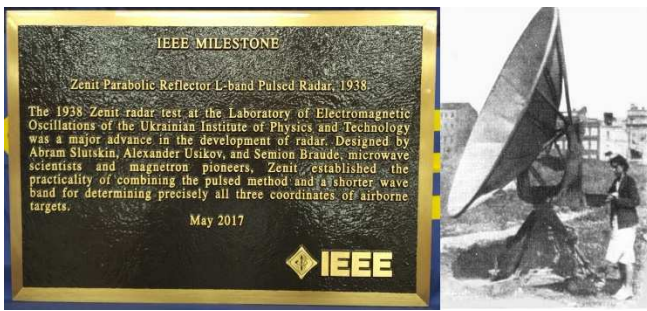
Fig. 6. Milestone bronze plaquet and the picture of Zenit atnenna, 1938 [4]

Fig. 7. Presentation on Radar development in Ukraine during the Milestone ceremony [5]

The second IEEE UKRCON-2019 was held in Lviv, in Premier Hotel "Dnister" and Ivan Franko Lviv National University.

The third IEEE UKRCON-2021 is now (August 26-27, 2021) conducted formally again in Lviv, Ukraine, but in on-line regime.

V. FEATURES OF CURRENT UKRCON-2021

An obvious feature of this year is still continuing COVID-19 pandemic situation which force us to conduct conferences in online format. However additional difficulty of UKRCON-2021 is related with EUROCON-2021, the IEEE Region 8 traditional Conference, which this year also was held in Lviv, Ukraine a month earlier (July 6 – 8, 2021). Of course, EUROCON-2021 was organized also in virtual format. That was a kind of honor for Ukraine section to conduct EUROCON, the Conference of Region status, however UKRCON was forced to compete with EUROCON because of the same place and very close time. EUROCON was more expensive, registration fee was too high for common Ukrainian participants. As the result, many EUROCON papers were from abroad and this has led to decreasing number of papers from other countries at UKRCON – 2021.

Anyhow, UKRCON – 2021 is our Section flagship conference, which is opening today.

Let us consider some statistics of EUROCON-2021.

The number of submitted papers is 152. After reviewing and selection by TPC, 121 papers were accepted. Acceptance rate is 80%. On average, 3 reviews were provided per paper.

In the Program, the papers from Ukraine consist about 90%. For comparison, in EUROCON – 2021 only 35% of accepted papers were from Ukraine and 65% from abroad.

The UKRCON – 2021 has six Tracks: 1) Microwave techniques, antennas and radar systems; 2) Industrial and power electronics & energy systems; 3) System analysis, reliability, computer science and communications; 4) Nanotechnologies, photonics, electron devices & magnetics; 5) Engineering education & history; 6) Industry Applications, Automation & Industry 4.0. Number of Submissions by Track is shown in Fig. 8. From this diagram one can see that the most popular was Microwave techniques, antennas and radar systems track.
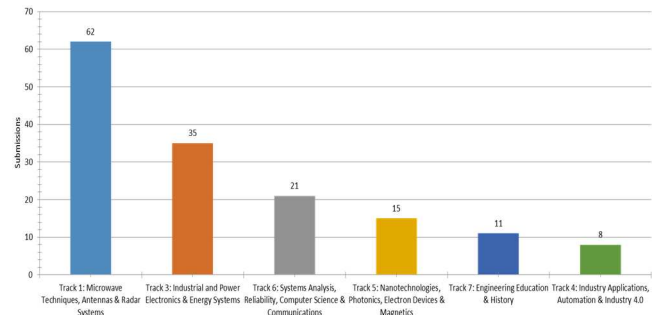

Fig. 8. Number of Submissions by Track

In spite of difficulties mentioned above, IEEE UKRCON 2021 has submissions from 17 countries: Ukraine, Russia, Canada, Iraq, Turkey, China, India, Poland, Cameroon, Czech Republic, Iran, Latvia, Germany, Kazakhstan, Slovakia, South Korea, and Viet Nam.

Interesting statistics is the number of new submissions by date, which is provided in Fig. 9. As usually, majority of submissions were made in the day of the deadline announced. Later, when the deadline was postponed, one can see some additional submissions.
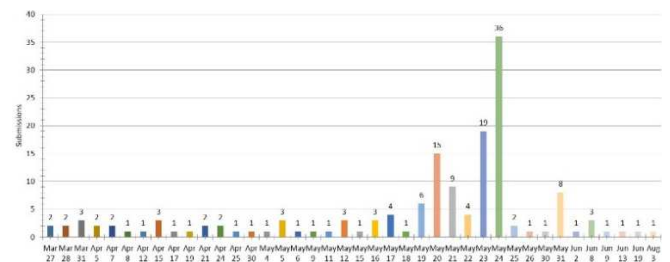

Fig. 9. Number of New Submissions by Date

Finally, in Fig 10, the team of organizers and contributors is listed.

Fig. 10. Organizers and contributors to the UKRCON - 2021

I would like to thank sincerely all organizers, reviewers, and of course the authors without whom any Conference is impossible at all.

Very welcome to the IEEE UKRCON 2021!

Great success to the Conference!

REFERENCES

[1] A.A. Kostenko, A.I. Nosich, and I.A. Tishchenko, "Development of the first Soviet 3-coordinate L-band pulsed radar in Kharkov before WWII," IEEE Antennas Propag. Mag., vol. 44, no. 3, pp. 28–49, 2001. doi:10.1109/74.934901.

[2] A.I. Nosich, Y.M. Poplavko, D. M. Vavriv, F.J. Yanovsky, "Microwaves in Ukraine," IEEE Microwave Magazine, December, 2002, pp. 82-90. DOI: 10.1109/MMW.2002.1145680.

[3] F. Yanovsky, O. Drobakhin, A. Nosich, N. Cherpak, O. Shramkova, Yu. Averyanova, K. Arkhypova, and D. Vavriv, "Microwave Activities in Ukraine," Proceedings of European Microwave Conference in Central Europe (EuMCE 2019), Prague, Czech Republic, May 13-15, 2019, pp. 233-238. Corpus ID: 204821248

[4] Kateryna Arkhypova, Jan Macháč, and Daryna Pesina, "The First IEEE Milestone in Ukraine Celebrates 'Zenit Parabolic Reflector L-band Pulsed Radar, 1938' in Kharkiv," IEEE Microwave Magazine, August, 2020, pp. 98-101. DOI: 10.1109/MMM.2020.2993485.

[5] F.J. Yanovsky, "Glimpses of Early Radar Developments in Ukraine and Former Soviet Union," Radio Science Bulletin No 358, September 2016, pp. 35-68. DOI: 10.23919/URSIRSB.2016.7909881.