

**ANNUAL REPORT FOR YEAR 2021 IEEE MTT SOCIETY Chapter Name:
AP03/AES10/MTT17 Joint Chapter, IEEE
R80033 Poland Section**

1. BASIC INFORMATION

- A. Section Name: **IEEE R8 0033 Poland Section**
- B. IEEE Region Number: **8**
- C. Societies that your chapter is joint with, if any: **AP03** and **MTT17**
- D. Chapter Web address, if any: <http://sites.ieee.org/poland-apaemtt/>

Exemplary view of the chapter website:

IEEE.org | IEEE Xplore Digital Library | IEEE Standards | IEEE Spectrum | More Sites

IEEE POLAND AP/AE/MTT JOINT CHAPTER

HOME ABOUT JOINT CHAPTER CHAPTER HISTORY MANAGEMENT COMMITTEE SOCIETIES

DML Webinar – Silicon-based Millimeter-wave Phased Arrays for 5G: Fundamentals to Future Trends

The Joint Chapter AP/MTT/AES, IEEE Poland would like to invite you to participate in the webinar „Silicon-based Millimeter-wave Phased Arrays for 5G: Fundamentals to Future Trends” by dr Bodhisatwa Sadhu (Distinguished Microwave Lecturer) from IBM T. J. Watson Research Center that will take place on **15.03.2021, 16:00 (CET)**. Meeting link - <https://ieeemeetings.webex.com/meet/bsadhu>.

More details - <https://events.vtools.ieee.org/m/264834>.

Registration Open for the April Series of the IEEE AESS Virtual Distinguished Lecturer Webinar Series

The IEEE AESS Virtual Distinguished Lecturer Webinar Series initiative allows us to continue providing AESS members with our respected and reputable Distinguished

The web page design provide consistent formatting and improved flexibility to add and update the contents.

E. Chapter Members in January **2021** and November **2021** (last check in 2021)

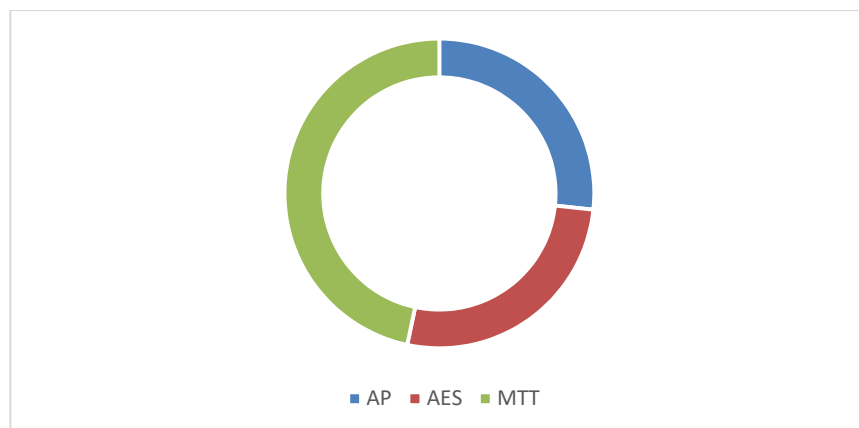
	Jan 2021	Nov 2021
Affiliate	1	1
Fellow	2	2
Life Fellow	2	2
Life Senior	2	2
Member	37	43
Senior Member	17	20
Student Member	1	1
Graduate Student	7	7
Total	69	80

F. Chapter Members versus Societies

Societies	January 2021			November 2021		
	AES	AP	MTT	AES	AP	MTT
Affiliate	1	-	-	1	-	-
Fellow	-	1	2	-	1	2
Life Fellow	-	1	2	-	1	2
Life Senior	-	1	2	-	1	2
Member/Life Member	16	12	20	18	14	25
Senior Member	6	8	8	7	10	11
Student Member	-	-	1	-	-	1
Graduate Student	4	2	1	2	1	6
Total	27	25	36	28	28	49

In the past year the overall number of members **increased by 11**. The most significant growth was for MTT-S (from 36 to 49)

G. **2021** Distribution of Chapter Members between IEEE Societies



J. Chapter Officers for the term **2020-21**:

	Chair	Vice Chair	Secretary
Name	Prof. Krzysztof Nyka	Prof. Piotr Samczyński	Mateusz Rzymowski, MSc
Address	Gdansk University of Technology, Faculty of Electronic, Telecommunication and Informatics, Department of Microwave and Antenna Engineering Gdansk, Poland	Warsaw University of Technology Faculty of Electronics and Information Technology, Institute of Electronic Systems, Warszawa, Poland	Gdansk University of Technology, Faculty of Electronic, Telecommunication and Informatics, Department of Microwave and Antenna Engineering Gdansk, Poland
Phone	+48 58 3471659	+48 22 2345588	+48 58 3486157
Email	krznyka@pg.edu.pl	psamczyn@elka.pw.edu.pl	mateusz.rzymowski@pg.edu.pl

2. FINANCIAL INFORMATION

A. Chapter funds (US \$) on 1 January 2021: **16 000.46 US \$**
 Chapter funds (PLN) on 1 January 2021 **385,73 PLN** (Polish currency)

B. Income* (US \$) during **2021**:

1. IEEE MTT-S Chapter founding	500.00
2. Annual Support from IEEE Societies AP-S:	650.00
3. AES Society Chapter Funding:	500.00
4. Rebate from IEEE Poland Section	295.00
TOTAL US \$ INCOME	1945.00 US \$
Income* (PLN) during 2021 :	0.00 PLN

* Include annual support, special-project support, travel grant support, Best Chapter Award support, and any other support from MTT-S.

C. Expenditures (US \$) during 2021
 1. chapter share in Poland Section costs **119.49 US \$**
 Expenditure (PLN) during 2021 **0.00 PLN**

D. End of year balance (US \$) as of 31 December 2021: **17 825,97 US \$**
 E. End of year balance (PLN) as of 31 December 2021: **385,73 PLN**

3. CHAPTER ACITVITIES DESCRIPTION

3.1 Summary Information for 2021

A. Number of technical meetings (in which a technical presentation is made)

- | | |
|--|----------|
| 1. Presentations from student members of your chapter: | 3 |
| 2. Presentations from non-student members of your chapter: | 0 |
| 3. Presentations from outside speakers: | 8 |

TOTAL numbers of technical meetings:	11
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B. Average attendance at all of the technical meetings during the year **39.3**

C. Number of non-technical (organizational) meetings held: **0**

D. Number of workshops or conferences co-organized by joint chapter: **1**

3.2 Technical Meeting Information for 2021 (use additional pages if necessary)

Note: For “Category”, please use the following:

S: speaker is a student member of the chapter

M: speaker is a non-student member of the chapter (but do not include IEEE Distinguished Lecturers)

O: speaker is from outside the chapter (but do not include IEEE Distinguished Lecturers)

D: speaker is an IEEE Distinguished Lecturer.

	Title of Presentation/Name of Speaker	Attendance			Category
		IEEE	Other	Total	
1	On the Synthesis of Coupled Resonator Microwave Filters - Selected Methods of Finding Physical Dimensions of the Filter / Maciej Jasinski / 18 Jan 2021	18	9	27	S
2	RF challenges in the design of electronic steerable antennas for 5G and SatCom / Marta Martínez-Vázquez / 28 Jan 2021	15	20	35	O
3	The microwave filters design - synthesis of filters with frequency-dependent couplings / Martyna Mul / 22 Feb 2021	6	8	14	O
4	Antennas on Wearables: Materials, Designs, and Innovative Features / Ping Jack Soh / 23 Feb 2021	9	11	20	O
5	Advances in Antenna Systems for Future Wireless Terminals / Mohammad S. Sharawi / 44270	11	12	23	O
6	Silicon-based Millimeter-wave Phased Arrays for 5G: Fundamentals to Future Trends / Bodhisatwa Sadhu / 44270	10	235	245	D

7	Antenna Science and Technology: from Microwave to Terahertz to Optical Frequency / Truong Khang Nguyen / 08 Apr 2021	7	10	17	O
8	Bayesian Optimization and Gaussian Process Regression / Michal Baranowski / 19 Apr 2021	6	4	10	S
9	Lens antennas: Fundamentals and present applications / Oscar Quevedo-Teruel / 12 May 2021	5	11	16	O
10	Chip-Scale Wave-Matter Interactions at RF-to-Light Frequencies: Circuits, Systems and Applications / Ruonan Han / 28 Jun 2021	6	8	14	D
11	Root finding algorithms for studying the properties of waveguides and resonators applicable in microwave and terahertz technology / Sebastian Dziedziewicz / 13 Sep 2021	3	8	11	S

Five of the above meetings were held within a chapter initiative: **2021 Webinar Series on Antennas & Propagation**

2021 Webinar Series on Antennas & Propagation
IEEE Polish Joint Chapter AP/MTT/AES

AP/AES/MTT JOINT CHAPTER
FOUNDED 1990
AES
MTT
POLAND SECTION IEEE

IEEE

Marta Martinez Vázquez
IMST GmbH, Germany
RF challenges in the design of electronic steerable antennas for 5G and SatCom
28th January 2021, 2 pm (CET - Polish time)
<https://events.vtools.ieee.org/m/255460>

Ping Jack Soh
University Malaysia Perlis, Malaysia
Antennas on Wearables: Materials, Designs and Innovative Features
23rd February 2021, 2 pm (CET - Polish time)
<https://events.vtools.ieee.org/m/256196>

Mohammad S. Sharawi
Polytechnique Montréal, Canada
Advances in Antenna Systems for Future Wireless Terminals
15th March 2021, 3 pm (CET - Polish time)
<https://events.vtools.ieee.org/m/256348>

Truong Khang Nguyen
Ton Duc Thang University, Vietnam
Antenna Science and Technology: from Microwave to Terahertz to Optical Frequency
8th April 2021, 10 am (CEST - Polish time)
<https://events.vtools.ieee.org/m/256353>

Oscar Quevedo-Teruel
KTH Royal Institute of Technology, Sweden
Lens antennas: Fundamentals and present applications
12th May 2021, 12 pm (CEST - Polish time)
<https://events.vtools.ieee.org/m/256328>

GDAŃSK UNIVERSITY OF TECHNOLOGY | **Wrocław University of Science and Technology**

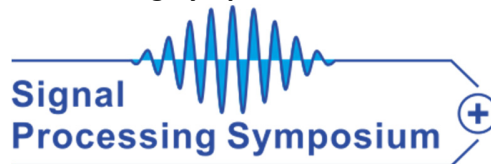
3.3 Summary of Workshops, Short Courses, and Conferences for 2021

Include below a list of each workshop, short course, or conference that was organized or co-organized by your chapter. Include the title of the event, the dates of the event, a description of the event, and an indication of the level of involvement of your chapter. Please be specific about the role of your chapter in the event.

Many Technical Meetings organized by the Chapter collected people from different areas of technical activities: the Academia, the Industry as well as many young researchers and students. Collaboration with other IEEE societies and chapters. We are the JOINT Chapter of three Societies, namely: Antennas and Propagation Society, Aerospace Electronic Systems Society and Microwave Theory and Techniques Society, our activities are spreads all over these communities.

A. Symposium Co-Sponsored by the Chapter and other Institutions

- **SPSympo-2021, XI Signal Processing Symposium, 2021-09-21 to 23, City: Łódź, Country: Poland**



The conference is organized under a Honorary Patronage of Polish Space Agency, and under the patronage of the Polish Academy of Sciences, Electronics and Telecommunications Committee, Section of Microwaves and Radiolocation.

The conference was organized by: Lodz University of Technology, Institute of Electronics; Warsaw University of Technology; Institute of Electronic Systems; Foundation of Microwaves and Radiolocation “MIKON”; Foundation for Development of Radiocommunication and Multimedia Techniques; Radiolocation and Digital Signal Processing Students Research Group, Foundation for Development of Radiocommunications and Multimedia Technologies

The conference is organized with Technical Co-Sponsors:

IEEE Poland Section; IEEE Aerospace and Electronic Systems Society; IEEE Signal Processing Chapter; **IEEE Antennas and Propagation, Aerospace and Electronic System and Microwave Theory and Technics Joint Chapter**; Baltic International Union of Radio Science Symposium

Description: The Signal Processing Symposium is a biannual international conference that brings together students, researchers and scientists representing a broad spectrum of computer science and radio-electronics disciplines, to present their latest findings and new trends shaping future research directions in science and technology. The first SPSympo has been organized in 2003 and after 18 years it is well established and excellent forum for active participation in workshops, lectures, and scientific discussions in technical and evening sessions. A main focus of SPSympo-2021 will be smart sensing systems that incorporate Information and Communications Technologies (ICT) for signal and image acquisition, transmission, processing and analysis in a broad range of applications covering remote sensing systems (radars, sonars, imaging, sensor networks), IoT, telemedicine, medical diagnosis, treatment and rehabilitation, robotics, human-system interaction, environment monitoring and space technologies.



ECI Lodz – City of Culture, a former power plant

TOPICS OF INTEREST

The SPSympo-2021 is a premier forum for presenting new advances and research results in the field of signal processing algorithms, related technologies and applications. Topics of in-terest for submission include, but are not limited to:

- Audio Signal Processing and Voice Recognition
- Algorithms for Real-Time Processing
- Cognitive Functions
- Compression Techniques
- Fuzzy Logic
- Human Factor in Signal Processing
- Image Processing and Recognition
- Localization and Tracking
- Man Machine Interface
- Radar and Sonar Imaging
- Radar Signal Processing
- RF and Radar Technology
- Security Applications
- Geoscience and Remote Sensing
- Signal Processing Components
- Signal and Image Processing for Medical Applications
- Space Technology
- Tele-Informatics and Communication
- Tomography and Medical Image Reconstruction
- Waveform Design Techniques



Signal Processing Symposium

THE CONFERENCE IS ORGANIZED BY:

- Lodz University of Technology, Institute of Electronics
- Warsaw University of Technology, Institute of Electronic Systems
- "Mikon" Microwave and Radiolocation Foundation
- Radiolocation and Digital Signal Processing Students' Research Group
- Foundation for Development of Radiocommunications and Multimedia Technologies



Lodz University of Technology
Institute of Electronics



Warsaw University of Technology



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Fundacja Wspierania Rozwoju Radiokomunikacji i Techniki Multimedialnych



MIKON

HONORARY PATRONAGE OF POLISH SPACE AGENCY



POISH SPACE AGENCY

MEDIA PARTNERSHIP



sensors
an Open Access Journal by MDPI

CO-SPONSORS IEEE



AESS



IEEE POLAND SECTION



IEEE Poland Section
Digital Processing Group



IEEE



The conference materials are available here: <https://spsympo.p.lodz.pl/index.php/programme>

B. Chapter Members Activity

- 10th MICROWAVE & RADAR WEEK 2022 – preparations
<https://mrw2022.org/>



The following chapter members began preparation for the conference as the committee members/chairs: Józef Modelski (MRW-2022 Chair), Rafał Lech (MRW-2022 ORG. COMM. CO-CHAIR), Jerzy Michalski (Exhibition Chair), Michal Mrozowski and Krzysztof Nyka (MIKON-2022 CO-CHAIRS), Adam Lamecki (MIKON-2022 TPC CO-CHAIR), Artur Rydosz (MIKON-2022 PUBLICATION CO-CHAIR), Peter Knott and Krzysztof Kulpa (IRS-2022 CO-CHAIRS), Jacek Misiurewicz (IRS-2022 TPC

CHAIR), Piotr Samczynski (IRS-2022 International Liaison), Konrad Jedrzejewski (IRS-2022 PUBLICATION CHAIR)

10th MICROWAVE & RADAR WEEK is the continuation of the series of very successful conferences in Warsaw (2004), Krakow (2006), Wroclaw (2008), Vilnius (2010), Warsaw (2012), Gdansk (2014), Krakow (2016), Warsaw (2020) and in Poznan (2018).

The 9th Microwave and Radar Week MRW-2022 comes to Gdańsk, Poland.

This time the event will comprise two parallel conferences:

- **MIKON 2022**
MIKON is a traditional conference of the Polish microwave community organized since 1969, which turned into the biannual international event in 1994. The conference is held under the auspices the Polish Academy of Sciences and the Institute of Electrical and Electronics Engineers IEEE. In 1994, thanks to the IEEE Microwave Theory and Techniques Society support, MIKON received the international conference status.
- **IRS 2022**
MIKON Foundation and German Institute of Navigation invite you to the International Radar Symposium 2022 (IRS 2022), continuing a very successful sequence of Radar Symposia, which started in 1998 in Munich, Germany. Due to the rapid development of technologies, radar technique is still an expanding technical and economical segment with practical applications both in civil and military areas. The worldwide family of radar researchers and experts is quite small and everyone from the radar family is cordially invited to attend the International Radar Symposium 2022.

All conferences will be organized under auspices of: Polish Academy of Sciences and Lithuanian Academy of Sciences.

The leading organizer is the Gdańsk University of Technology. The co-organizer and financial sponsor is MIKON Foundation of Microwaves and Radiolocation.

The conferences were co-sponsored by Warsaw University of Technology,; IEEE Aerospace and Electronic Systems Society; IEEE Signal Processing Chapter; IEEE Antennas and Propagation, Aerospace and Electronic System and Microwave Theory and Techniques Joint Chapter

Apart from the number of technical meeting, workshops and conferences, the Chapter Members were very active with respect to different international and national initiatives:

- Chapter members have been for many years active reviewers in IEEE journals sponsored by MTT/APS/AES society and also participants in Technical Committees, TPC, as Reviewers of many International Conferences, in Europe as well as worldwide
- Krzysztof Nyka (Chairman) has been participating in two virtual MTT-S chapter chair meetings and two IEEE Poland Section Board Meetings

3.4 Special Projects

Give a description of any special projects that your chapter participated in during the year, and indicate any funding that was obtained from IEEE or other sources. If possible, indicate how your chapter was improved as a result of the special project.

4. DESCRIPTION OF OTHER ACTIVITIES

(This information is used in the selection of the Best Chapter Award)

List of innovative membership development programs/activities / results of the Chapter

4.2 Were there any unique or innovative activities within your chapter?

- We have current collaboration with IEEE Poland Signal Processing Chapter (organizing and co-sponsorship of the SPSympo 2021:



4.3. Miscellaneous information, elaboration on any of the above topics, or special factors to be considered.

5. SUGGESTIONS FOR Society

Please use this space to describe any suggestions you have regarding how the Society can better serve your Chapter (or all Chapters).

6. May this report be posted on the Chapters web page or disseminated by other means (Yes/No)? **YES**

7. Verification I verify the correctness of all data of this completed Form.

Name / Sign of Chapter Chair: Krzysztof Nyka

A handwritten signature in blue ink that reads "Krzysztof Nyka".

March 15, 2022

Date of Submitting: