

## Newsletter | August 2022

### Editor's Note

Welcome to the August 2022 issue of the Nanotechnology Council newsletter. This issue brings you the latest updates and activities in the IEEE-NTC community. We hope you enjoy it and do let us know if there is any topic you'd like to see covered in the future. All future content submissions to the newsletter should be sent to the new editors: [Yijun Cui](#) and [Ke Chen](#).



**Yijun Cui**

Nanjing University of  
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## BREAKING NEWS

### IEEE Nanotechnology Council Elects 2022 Officers

The IEEE Nanotechnology Council (NTC) elected new officers at its Annual Administrative Committee Meeting held in Mallorca, Spain, on 5 July 2022. Representatives of the twenty-two IEEE Societies who are Council members gather annually to conduct Council business and elect officers. This year saw the introduction of Vice-president-elects and Members-at-Large. For detailed information about the election result and the introduction of the new elected officers, please visit the [webpage](#).

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**Jin-Woo Kim**  
University of Arkansas

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**President-elect  
2023**  
(President 2024-  
25)

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<b>Kremena Makasheva</b> French National Center for Scientific Research (CNRS), Laboratory on Plasma and Conversion of Energy (LAPLACE), Toulouse, France	<b>VP for Conferences</b> (2023-24)
<b>Malgorzata Chrzanowska-Jeske</b> Portland State University, Oregon	<b>VP for Finances</b> (2023-24)
<b>Luca Pierantoni</b> Università Politecnica delle Marche (UnivPM), Ancona, Italy	<b>VP-elect for Educational Activities</b> (Elect 2023; VP 2024-2025)
<b>Georgios Ch. Sirakoulis</b> Democritus University of Thrace (DUTH), Greece	<b>VP-elect for Publications</b> (Elect 2023; VP 2024-2025)
<b>Weiqliang Liu</b> Nanjing University of Aeronautics and Astronautics (NUAA), Nanjing, China	<b>VP-elect for Technical Activities</b> (Elect 2023; VP 2024-2025)
<b>Antonio di Bartolomeo</b> University of Salerno, Italy	<b>Members-at - Large</b> (2023-24)
<b>Brajesh Kumar Kaushik</b> Indian Institute of Technology, Roorkee	<b>Members-at - Large</b> (2023-24)
<b>Jie Han</b> University of Alberta, Canada	<b>Members-at - Large</b> (2023-24)

## The Impact Factor (IF) of IEEE TNANO Surges

We are pleased to announce that according to the Journal Citation Report (JCR), IEEE Transactions on Nanotechnology's (TNANO) 2021 Impact Factor increased from 2.57 in 2020 to 2.967, an increase of 15% in one year. Congratulations to our TNANO team, and we would like to express the greatest appreciation to all the editors, reviewers, and authors.

The 2021 JCR IF can be found [here](#).

## IEEE Journal on Exploratory Solid-State Computational Devices and Circuits - Special Topic on Spintronic Devices for Energy Efficient Computing

A call for papers is now open for the *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits* special topic on "Spintronic Devices for Energy Efficient Computing."

### Topics of Interest include but are not limited to:

1. Spintronic physics and theory for energy-efficient operation
2. Design, synthesis, and characterization of spintronic materials for energy-efficient operation
3. Design, modeling, fabrication and testing of energy-efficient spintronic devices
4. Design, benchmarking, building-up and testing of energy-efficient spintronic circuits
5. Design, benchmarking, integration and testing of energy-efficient spintronic systems
6. Architecture-level design for energy-efficient spintronic devices and systems
7. New applications of energy-efficient spintronic devices and systems
8. Algorithms and hardware co-design for energy-efficient spintronic systems

### Important Dates

Open for Submission: 7 July 2022  
Submission Deadline: 5 September 2022  
First Notification: 19 September 2022  
Revision Submission: 17 October 2022  
Final Decision: 14 November 2022  
Publication Online: 1 December 2022

### Guest Editor

Jian-Ping Wang, University of Minnesota, [jpwang@umn.edu](mailto:jpwang@umn.edu)

### Editor-in-Chief

Azad Naeemi, Georgia Institute of Technology, [azad@ece.gatech.edu](mailto:azad@ece.gatech.edu)

For detailed information about these Special topics, please visit the [website](#).

## 2022 Nanotechnology Awards Ceremony

The IEEE Nanotechnology Council announces its 2022 Award Winners. Awards were presented at its 22st IEEE International Conference on Nanotechnology (NANO 2022) held in Mallorca on 6-8 July 2022.

### PIONEER AWARD IN NANOTECHNOLOGY

The NTC Pioneer Award in nanotechnology is to recognize individuals who by virtue of initiating new areas of research, development or engineering have had a significant impact on the field of nanotechnology. The award is intended for people who are in the mid or late portions of their careers, i.e., at least 10 years beyond his or her highest earned academic degree on the nomination deadline date.

#### 2022 Pioneer Award Recipient

**Xiuling Li**, The University of Texas, Austin



"For innovative contributions to nanoscale device growth, fabrication, and demonstration especially nanowire epitaxy, metal-assisted chemical etching, and self-rolled-up nanomembrane technology."

Xiuling Li is a Temple Foundation Endowed Professor in the Department of Electrical and Computer Engineering and Microelectronics Research Center at The University of Texas at Austin. Her research focuses on nanostructured semiconductor materials and devices. She has published >160 journal papers and holds >20+ patents, delivered > 120 invited lectures worldwide. Her research opens new avenues by using innovative

epitaxial growth and nanofabrication approaches including metalorganic chemical vapor deposition (MOCVD) of III-N and Ga<sub>2</sub>O<sub>3</sub>, metal-assisted chemical vapor deposition (MacEtch), and strain-induced self-rolled-up membranes (S-RuM), to address the ever-present needs to reduce the size, weight, power, and cost (SWAP-C) of microelectronic devices, among other applications.

She has been honored with the NSF CAREER award, DARPA Young Faculty Award, and ONR Young Investigator Award. She is a Fellow of the IEEE, the American Physics Society (APS), the Optical Society (OSA), and the National Academy of Inventors (NAI).

### EARLY CAREER AWARD IN NANOTECHNOLOGY

The Nanotechnology Council has established an Early Career Award to recognize individuals who have made contributions with major impact on the field of nanotechnology. Up to two awards may be given per year. There may be one award for academics (persons employed by colleges or universities) and one for persons employed by industry or government organizations.

#### 2022 Early Career Award Recipient

**Deblina Sarkar**, Massachusetts Institute of Technology



"For innovative work in development of energy-efficient next-generation computing technology and fusion of nanotechnology with biology towards understanding the brain."

Deblina Sarkar, Ph.D. is an Assistant Professor at Massachusetts Institute of Technology and AT&T Career Development Chair Professor at MIT Media Lab. She is Founder and Director of Nano-Cybernetic Biotrek research group. She is a trans-disciplinary innovator, initially trained in electrical engineering and physics

and then, has traversed the realm of biology, driven by curiosity and belief that truly disruptive technologies can emerge at the interface of diverse research arenas.

Her group carries out trans-disciplinary research fusing engineering, applied physics, and biology, aiming to bridge the gap between nanotechnology and synthetic biology to develop disruptive technologies for nanoelectronic devices and create new paradigms for life-machine symbiosis.

### CHAPTER OF THE YEAR AWARD

The IEEE Nanotechnology Council (NTC) Chapter of the Year Award is intended to encourage a successful and effective overall performance of the Chapter in terms of its activities.

The winner of the 2021 Chapter of the Year Award ([read more](#)) is the **IEEE Nanotechnology Student Branch Chapter IIT Indore**.

"For creating an interactive platform to incorporate design, and development of nanotechnology and its scientific, engineering, and industrial applications."

### TNANO BEST PAPER AWARD

At the beginning of each year, T-NANO selects a paper that appeared in the Transactions during the previous calendar year for its Best Paper Award. Candidate papers are nominated by members of the Editorial Board. Evaluation is done by members of the Senior Editors Panel, with criteria including technical merit, originality, potential impact on the field, clarity of presentation, and practical significance for applications.

### TNANO 2021 Best Paper Award Recipients

Yuan-Chun Luo, Jae Hur and Shimeng Yu, Department of Electrical and Computer Engineering, Georgia Institute of Technology, Atlanta, GA, USA, for the paper "[Ferroelectric Tunnel Junction Based Crossbar Array Design for Neuro-Inspired Computing](#)," in *IEEE Transactions on Nanotechnology*, vol. 20, pp. 243-247, 2021, doi: 10.1109/TNANO.2021.3066319.

### TECHNICAL COMMITTEE AWARD

Each year, the Council will provide an award for the best Technical Committee (TC) for the prior year.

The winner of the 2022 Technical Committee Award ([read more](#)) is:

**TC 6: Nanoelectronics**

Chair: Malgorzata Chrzanowska-Jeske

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## Call for Award Nominations 2022

The IEEE Nanotechnology Council (NTC) is soliciting nominations for its Individual and Chapter Awards. To view the full detailed listing of each award please visit the [Awards nominations page](#). Awards are presented at the IEEE-NANO conference.

Nominations are due on **1 October 2022**. Nominators should utilize the forms associated with each award description found on the [website](#). Please make sure that nominators and references specifically address contributions, impact, and evidence related to the Basis for Judgment associated with each award.

For further information, please see the [Awards page](#) or contact the (new) Awards Committee Chair, [Paul Weiss](#).

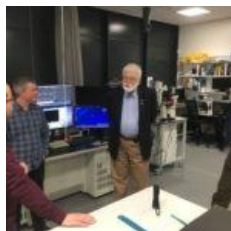
## CHAPTERS

### UK & Ireland at Nottingham Trent University

Prof Jim Morris, the Past President of IEEE Nanotechnology Council visited the UK and Ireland Section Chapter, currently hosted by Nottingham Trent University (NTU), on 29 June 2022.

Following tours of NTU, Prof Morris delivered a Hybrid Seminar starting with a brief overview of the IEEE Nanotechnology Council and best Chapter practices, followed by a scientific seminar about electron transport in discontinuous metal thin films.

The Chapter in the UK and Ireland Section was formed by Mohsen Rahmani (Chair) and Lei Xu (Vice-chair), both from NTU, Faezeh Arab Hassani (Treasurer) from the University of Bristol, and Lee Crudgington (secretary) from the University of Southampton in May 2021. In the last year, the Chapter has organized several face-to-face, online and hybrid seminars delivered by pioneers in Nanotechnology and NTC distinguished lecturers.



## New Chapters

Congratulations on the formation of these new chapters:

### Section Chapter

- NTC Chapter Peru Section. Peru (R9)

### Nanotechnology Council Student Branch Chapters

- University of Jaffna Electron Devices Society and Nanotechnology Council Student Branch Chapter, Sri Lanka (R10)
- Prakasam Engineering College, India (R10)
- Geethanjali College of Engineering & Technology, India (R10)
- Lords Institute of Engineering and Technology, India (R10)

## DISTINGUISHED LECTURERS

### 2023 DL Nominations-Deadline: 1 October 2022

The IEEE Nanotechnology Council (NTC) is seeking nominations for distinguished lecturers. The nomination deadline is **1 October 2022**. The NTC has created a distinguished lecturers program to enhance the visibility of NTC among nanotechnology societies. The NTC Distinguished Lecturers are appointed to honor excellent speakers who have made technical, industrial or entrepreneurial contributions of high quality to the field of nanotechnology and science, and to enhance the technical activities of the Nanotechnology Council chapters and student branches. Consideration is given to having a well-balanced variety of speakers who can address a wide range of topics of current interest in the fields covered by the Society.

The term for the Lecturers is from **1 January until 31 December 2023**. The Lecturers serve for a one-year term and may be reappointed for one additional year with the approval of the NTC Distinguished Lecturer Committee. A budget will be provided to each Lecturer to give lectures for NTC Chapters and Branches based on the availability of funding through the NTC. DLs are expected to give a minimum of **two lectures per year** as part of their commitment to serve.

Candidates for DLs may be nominated by any current IEEE member, using the IEEE NTC **Distinguished Lecturer Nomination Form**. Self-nomination is not accepted. Endorsements are not required but are recommended.

The selection of distinguished lectures will be made by the Distinguished Lecturer Committee, a subcommittee of the Education Committee chaired by the VP Educational Activities, and approved by the NTC ExCom.

Please submit the nomination by midnight (US Pacific Time) on **1 October 2022**, via email to the VP Educational Activities, **Lixin Dong**, or online using the form found on the **website**.

## EVENTS

### IEEE NTC YP Canada - Meet the Editors Webinar

On **8 September**, at **12 PM** (MDT, UTC-6) join us in our next free [Webinar] **Meet the Editors**. In this first event of our career development series, senior editors (associate and in-Chief) from different relevant journals focused on micro and nanotechnology will share some tips, DOs and DONTs, and general advice while answering some questions asked by the moderator. The audience will have the chance to ask questions during the Q&A session.

The event is free and open to all upon registration.

**Register at** <https://events.vtools.ieee.org/m/315511>

**Moderator:**

Dr. Charlotte Allard, Associate Editor of Nature Reviews Materials

**Panelists:**

Dr. Aaron Wheeler (University of Toronto), Editor-in-Chief of Lab on a Chip (RSC)

Dr. Deji Akinwande (the University of Texas at Austin)

Dr. Juewen Liu (University of Waterloo), and

Dr. Terry Odom (Northwestern University), Editor-in-Chief of Nano Letters (ACS)

**Time zones:**

12 PM (MDT), (UTC-6)

2 PM (EDT), (UTC-4)

8 PM (CEST), (UTC+2)

11:30 PM (IST), (UTC+5:30)

2 AM (CST), (UTC+8)

This event is co-hosted by the IEEE Nanotechnology Young Professionals Canada and the uSask IEEE NTC Student Branch Chapter and supported by the University of Saskatchewan and IEEE NTC.

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## Second University at Buffalo-IEEE Nano-Symposium

The 2nd **UB-IEEE Nano-Symposium** will be held on 21-23 September 2022, at the University at Buffalo, The State University of New York.

The Symposium is chaired by Prof. Huamin Li (Department of Electrical Engineering) and sponsored by IEEE EDS Buffalo Chapter (Chair: Prof. Vasili Perebeinos), IEEE Buffalo Section (Chair: Padma Kasthurirangan), Department of Electrical Engineering (Chair: Prof. Jonathan Bird) and School of Engineering and Applied Sciences (Dean: Prof. Kemper Lewis) at the University at Buffalo.

Especially, a special session is organized on 21 September to celebrate "the 75th anniversary of the transistor," in which a series of invited talks will review the transistor technology in different perspectives, including nanomaterials in transistors (Prof. Aaron Franklin, Duke University), two-dimensional transistors (Prof. Xiangfeng Duan, University of California, Los Angeles), tunnel transistors (Prof. Alan Seabaugh, University of Notre Dame), flexible transistors (Prof. John Rogers, Northwestern University), neuromorphic memtransistors (Prof. Mark Hersam, Northwestern University), and power transistors (Prof. Grace Xing, Cornell University).

**For information on participation contact:**

Huamin Li, Ph.D.

Department of Electrical Engineering

University at Buffalo, The State University of New York

Phone: (716) 645-1026

Email: [huaminli@buffalo.edu](mailto:huaminli@buffalo.edu)

**Time:** 09/21/2022 – 09/23/2022

**Location:**

Buffalo room, Capen Hall

University at Buffalo, Buffalo, New York

For more details see [website](#).

## EDUCATION

### Student Research Symposium-22 at Indian Institute of Technology Indore, India

**Virtual Student Research Symposium (SRS-2022)**  
**10-11 August 2022**  
**from Indian Institute of Technology Indore, India**

<https://ieee.ntc.iiti.ac.in/srs22/home>

#### "Emerging Nanotechnology in Electron Devices"

The objective of this **Virtual Symposium** is to provide a platform for the exchange of thoughts between distinguished guests and participants, coming from diverse fields of scientific research, renowned industries, entrepreneurs, and academicians with an emphasis on the technological requirements of the emerging industries in line with self-reliant India. The symposium aims to inspire and encourage the young researchers, and undergraduate and postgraduate student community to pursue a career in research and development. See flyer below.



The SRS-2022 is jointly organized by IEEE-NTC Student Chapter IIT Indore, IEEE Madhya Pradesh Section EDS Chapter, and IEEE Sensor Council Student Chapter IIT Indore.



The poster for the SRS '22 Symposium is titled "Emerging Nanotechnology in Electron Devices" and is held from August 10-11, 2022. It is organized by IEEE-Nanotechnology Council Student Chapter Indian Institute of Technology Indore, with collaboration from IEEE EDS Chapter, MP Section, and IEEE Sensors Council Student Chapter IIT Indore. The poster is divided into several sections: Objective, Modules, Advisory Committee, Events, and Organizers. The Objective section states that the symposium aims to inspire and encourage the undergraduate and postgraduate student community to pursue career in research. The Modules section lists various technology areas including Transistors, Non-volatile Memories, Sensors, Health Care, Photonics, Energy, and Flexible Electronics. The Advisory Committee lists several professors and their affiliations. The Events section lists SRS-2022 Student Activities including Research (Oral/Poster) Presentation, Model Presentation, and Thesis Presentation, as well as a Distinguished Lecture Series. The Organizers section features portraits and names of the event head and chairs.

**IEEE** Advancing Technology for Humanity

**IEEE NANO** Nanotechnology Council\*

**IEEE Sensors Council**

**IEEE NTC WIN** Women in Nanotechnology

**SRS '22** STUDENT RESEARCH SYMPOSIUM

"Emerging Nanotechnology in Electron Devices"

August 10-11, 2022

This event organized by IEEE-Nanotechnology Council Student Chapter Indian Institute of Technology Indore with the collaboration of IEEE EDS Chapter, MP Section and IEEE Sensors Council Student Chapter IIT Indore.

**Objective**

The SRS-2022 aims to inspire and encourage the undergraduate and postgraduate student community to pursue career in research. SRS-2022 has become a veritable platform to nurture the young minds towards research, innovation and entrepreneurship and intends to bring the undivided attention of the students towards both industries and academia to redress the academic research challenges, concerns of the entire student community and upcoming entrepreneurs around the globe.

**Modules**

- ❖ Transistors Technologies
- ❖ Non-volatile Memories Technologies
- ❖ Sensors Technologies
- ❖ Health Care Technologies
- ❖ Photonics Technologies
- ❖ Energy Technologies
- ❖ Flexible Electronics Technologies

**Advisory Committee**

- ❖ Prof. G. S. Tomar, Chair IEEE MP Section
- ❖ Prof. Shaibal Mukherjee, IIT Indore
- ❖ Shri. M. K. Badapanda, IRC Chair, IEEE MP Section
- ❖ Prof. Mukesh Kumar, IIT Indore
- ❖ Prof. Ram Bilash Pachori, IIT Indore
- ❖ Dr. Pankaj Sharma, IIITDM Jabalpur
- ❖ Prof. Ajay Agarwal, IIT Jodhpur
- ❖ Prof. Santosh K. Vishwakarma, IIT Indore
- ❖ Dr. Saptarshi Ghosh, IIT Indore
- ❖ Shri Subham Gupta, Head of Student Activity IEEE MP Section

**Events**

- ❖ SRS-2022 Student Activities
  - Research (Oral/Poster) Presentation,
  - Model Presentation
  - Thesis Presentation (PG and Ph.D.)
- ❖ Distinguished Lecture Series- Academicians and Industrialists

**Organizers**

Mayank Dubey  
Chair, IEEE-NTC  
Student Chapter IIT Indore

Sanjay Kumar  
Event Head  
SRS-22

Pawan Kumar  
Chair, IEEE Sensor Council  
Student Chapter IIT Indore

Ruchi Singh  
Secretary, IEEE-NTC  
Student Chapter IIT Indore

**HNRG**

## STANDARDS

### Meeting Schedule of IEEE P3151™ – Standard for Spray-On Surface Antimicrobial Coatings

#### IEEE P3151 – SURFACE ANTIMICROBIAL COATINGS WORKING GROUP (SACWG)

**Standards Committee:** **EMB Standards Committee**, Engineering in Medicine and Biology Society (Primary sponsor)

**Standards Committee Chair:** Carole C. Carey [c.carey@ieee.org](mailto:c.carey@ieee.org)

**TITLE:** Standard for Spray-On Surface Antimicrobial Coatings Test Methodology

**Scope:** This standard specifies an objective performance test methodology to assess the efficacy of non-porous surface antimicrobial coatings against different organism groups (e.g., bacteria, viruses, yeasts, and molds) present within hospital and healthcare environments. The standard is applicable to all types of environmental surface antimicrobial coatings that are designed to be sprayed onto and coat the surface to provide continual antimicrobial activity for a specified period of time. This standard excludes antimicrobial coatings (such as, antimicrobial plastics, polymers, silicone, paints, etc.) incorporated during the manufacturing process and non-environmental antimicrobial coatings specifically intended for medical devices.

**Website:** <https://sagroups.ieee.org/3151/>

**Chair:** Jade Pallett, [jade.pallett@zoono.com](mailto:jade.pallett@zoono.com)

#### Planned Meetings:

Fourth meeting: 26/07/22 from 10 – 11 am EDT

Fifth meeting: 16/08/22 from 10 – 11 am EDT

Sixth meeting: 06/09/22 from 10 – 11 am EDT

Seventh meeting: 27/09/22 from 10 – 11 am EDT

Eight meeting: 18/10/22 from 10 – 11 am EDT

Ninth meeting: 15/11/22 from 10 – 11 am EST

Tenth meeting: 06/12/22 from 10 – 11 am EST

First meeting of 2023: 10/01/23 from 10 – 11 am EST

## Meeting Schedule of IEEE P3155™, Standard for Programmable Quantum Simulator

**IEEE Standards Association (IEEE SA)** invites you to participate in the Working Group for **IEEE P3155™, Standard for Programmable Quantum Simulator**.

The quantum simulator (i.e., one controllable quantum system simulates another) has a quantum advantage over classical supercomputers that fail by exponential explosion (i.e., number of parameters grows exponentially with the quantum system size). This standard defines programming methods of quantum simulators according to analog (i.e., target Hamiltonian), digital (i.e., non-native Hamiltonian evolution) and hybrid (i.e., quantum-quantum or quantum-classical architectures) devices for the simulation of quantum phenomena beyond classical computing applications. It includes algorithms to represent the nano-scale properties of quantum simulation devices, and excludes any proposal for the architecture of quantum simulators.

**Meeting registration is required.**

**Website:** <https://sagroups.ieee.org/3155/>

For additional information and **how to participate**, contact the IEEE P3155™ Working Group Chair, **Jonathan J. Attia**, at [jjja@ieee.org](mailto:jjja@ieee.org) or the IEEE SA Program Manager, **Vanessa Lalitte**, at [v.lalitte@ieee.org](mailto:v.lalitte@ieee.org).

Meeting Date	Time
Friday, 15 July 2022	11:00 AM – 1:00 PM EDT
Friday, 19 August 2022	11:00 AM – 1:00 PM EDT
Friday, 16 September 2022	11:00 AM – 1:00 PM EDT
Friday, 21 October 2022	11:00 AM – 1:00 PM EDT

## WOMEN IN NANOTECHNOLOGY

### Regional Coordinators for IEEE NTC Women in Nanotechnology

The appointment of two Regional Coordinators for IEEE NTC Women in Nanotechnology (WIN)/WIE/DEI are announced:

- Pawan Kumar, IIT Indore, Vice Chair IEEE NTC IIT Indore Chapter and IEEE NTC WIN Regional Coordinator (R10)
- Stephen A. Okwiri, THE TECHNICAL UNIVERSITY OF KENYA, IEEE Kenya Section Student Representative and IEEE NTC WIN Regional Coordinator (R8, Africa)



**Pawan Kumar**



**Stephen A. Okwiri**

### Role of the Regional Coordinators

- IEEE WIN/DEI Regional Coordinator focused on supporting and meeting the members' needs and IEEE membership recruitment and retention strategies
- Regional Coordinator will attend the IEEE NTC WIN virtual meetings
- Host or moderate the WIN events and flagship events
- Will be listed on WIN Charter
- Participate in special projects

See the [IEEE NTC WIN](#) page for more information.



## IEEE NTC Mentoring Program: from Effectiveness to Durability (NTC MENED program)

**First Training Event, July 8th, 2022, Palma de Mallorca, Spain, in conjunction with IEEE NANO 2022**

The major strength of IEEE Nanotechnology Council (NTC) resides in its large number of members and volunteers, and the unlimited spectrum of nanotechnology applications. Currently, the IEEE NTC activities (technical, educational, conferences, publications, standing committees, etc.) and initiatives are extremely rich and rise the IEEE NTC to the level of a well-recognized world leader in the field of nanotechnology. To guarantee sustainability of NTC activities and to enable successful succession planning in the NTC's leadership, a new initiative has been launched at the beginning of 2022, namely the **IEEE NTC Mentoring program: from Effectiveness to Durability, or the so-called NTC MENED program**. The NTC MENED program aims to enable the NTC volunteers to grow indispensable skills to carry out the NTC activities and to gradually integrate a larger number of well-trained NTC volunteers into the different initiatives. The objectives of NTC MENED program are as follows: 1) To reach a high level of success in the NTC activities; 2) To maximize the chance of new volunteers to reach their goals; and 3) To establish a mentoring culture that concerns the durability of NTC MENED program. Through the NTC MENED program, the final goal of NTC is to connect people and create teams in which everyone brings ideas, trust and rapport.

This pioneer initiative of the Nanotechnology Council, although not limited to, is directed to the NTC Young Professionals (YPs). Thus, the first call for application to participate in the NTC MENED program was released early this year, and a selection of 17 YPs, each one with scientific expertise corresponding to one of the 17 NTC Technical Committees, was made by the NTC TC Chairs, in agreement with the NTC VP for Technical Activities and the NTC MENED program leaders. The selection of the NTC MENED trainees was based on declared skills and motivation for volunteer work presented by the candidates.

The First Training Event of the NTC MENED program was held on July 8th, 2022 in Palma de Mallorca, Spain, in conjunction with the NTC flagship conference IEEE NANO 2022. The event was in a hybrid mode and attended by all NTC MENED trainees. Specific training tasks were developed and presented by the NTC MENED program leaders. During this First Training Event, the NTC MENED trainees had the possibility to learn about the structure of NTC, the main activities developed through different NTC initiatives, the responsibilities and coordinated actions between the NTC units and committees. They were also given the possibility to develop soft skills by working in a team. They were asked to present themselves and work together with their peers during NTC YP journey mapping exercises. The actions and contributions of the NTC MENED trainees to the NTC activities were discussed and advised in the perspective of their integration to the NTC TCs. All these happened in the very pleasant and serene atmosphere of the beautiful city of Palma (see photos).

### Leaders of the NTC MENED program

Kremena Makasheva (Senior Scientist, LAPLACE, CNRS, University of Toulouse, France), Past NTC VP TA 2020-2021

Rafal Sliz (Asst. Professor, OPEM Unit, University of Oulu, Finland), Chair of NTC Young Professionals (YPs) Committee



## NTC Young Professionals Update

Five Regional NTC YP LinkedIn pages have been established and are timely updated. The regional coordinators established cooperation with the

regional NTC conference organizers in order to support and ensure presence of young professionals.



NTC YP LinkedIn:

- [Region 7 \(Canada\)](#)
- [Region 9 \(Latin America\)](#)
- [NTC YP India](#)
- [Region 8 \(Africa, Europe, Middle East\)](#)
- [Region 10 \(Asia and Pacific\)](#)

## CONFERENCES

### IEEE-NMDC 2022:



The IEEE Nanotechnology Materials and Devices Conference will be first time to held on-site in Mainland of China, on 16-19 October 2022 at the International Conference Hotel in Nanjing, China. It will bring together key researchers from every sector in the nanotechnology research field, with a special focus on Materials and Devices. Conference papers will be published in *IEEE Xplore* after passing peer-review, with limited invitation for submission to *IEEE Transactions on Nanotechnology* or *IEEE Nanotechnology Magazine*. There are special award sessions for posters, graph contest, young scientists, women in engineering and entrepreneurs.

#### Important Dates:

Notification of Acceptance: 15 August 2022

For details see the NMDC 2022 [Website](#).

### IEEE NAP 2022: Call for Participation



The 2022 IEEE 12th International Conference "Nanomaterials: Applications & Properties" will be held on 11-16 Sept. 2022, in a hybrid format, with a "physical" meeting in Kraków, Poland. We are happy to have a beautiful and modern 4- star GALAXY hotel as our conference venue!

The Conference is organized through a partnership between the IEEE Nanotechnology Council, Silesian University of Technology, and Sumy State University, with endorsements and support from the International Union for Pure & Applied Physics and the IEEE Magnetics Society.

The prime focus of the IEEE NAP-2022 is on nanoscale materials with emphasis on

interdisciplinary research exploring and exploiting their unique physical and chemical properties for practical applications. Although nanoscience and nanotechnology are still in their infancy, this rapidly evolving field of research is quickly transforming almost all aspects of our everyday life. From the low power electronics and supercomputers to advanced drugs and personalized medicine, from new industrial applications and renewable energy to advanced transportation and clean air technologies, nanoscience is the foundation of many transformational discoveries in the decades to come.

#### Plenary/Invited Speakers:

We are honored to host truly world-class Plenary Speakers, internationally recognized physicists, chemists, and materials science experts:

- [Prof. Anne M. Andrews](#), University of California, Los Angeles;
- [Prof. Sandro Carrara](#), Swiss Federal Institute of Technology;
- [Prof. Yury Gogotsi](#), Drexel University;
- [Prof. Laura H. Greene](#), National High Magnetic Field Laboratory & Florida State University;
- [Prof. Nicola Pinna](#), Humboldt University of Berlin;
- [Prof. Paul S. Weiss](#), University of California, Los Angeles.

Please visit the conference website with a complete list of our outstanding [invited speakers](#).

#### Important Dates:

Conference Program available: 15 August 2022

For details see the NAP 2022 [Website](#).

## PUBLICATIONS

### IEEE Transactions on Nanotechnology

View the full current issue of IEEE T-NANO

For additional information, visit the [IEEE Xplore website](#).

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**T-NANO, VOLUME 21**

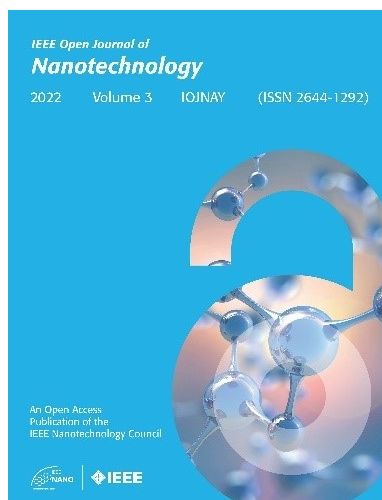
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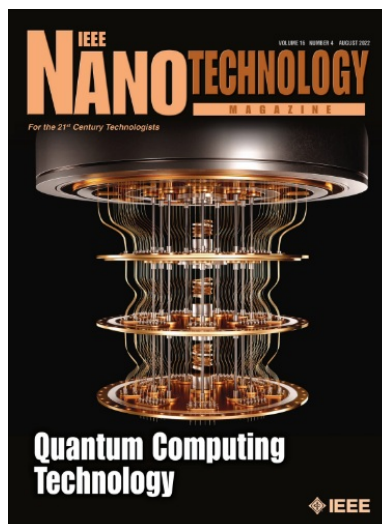
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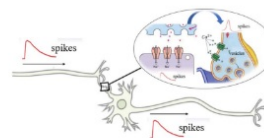
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From Fig. 1 in "Modeling and Properties of Wave-Active Mechanisms in Neuron-Spike Communication" by M. N. et al., pp. 455-465

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