



**IEEE Nanotechnology Council**  
Newsletter | August 2021



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## KEEP UP WITH US



## EDITOR'S NOTE

Welcome to the August 2021 issue of the Nanotechnology Council newsletter. This issue brings you the latest updates and activities in the IEEE-NTC community. I hope you enjoy it and do let us know if there is any topic you'd like to see covered in the future.

## BREAKING NEWS

### IEEE Open Journal of Nanotechnology: Call for Papers

*IEEE Open Journal of Nanotechnology (OJ-NANO)* is a new gold fully open access journal launched in 2020 by IEEE Nanotechnology Council. It publishes research advancing the theory, design and development of nanotechnology and its scientific, engineering and industrial applications. The journal has an independent editorial board, established peer-review process, is targeting a ten-week rapid publishing schedule and is fully compliant with funder mandates, including Plan S. Your work will also be exposed to 5 million unique monthly users of the IEEE Xplore® Digital Library. OJ-NANO is on track to receive an Impact Factor in 4 years.

*We are pleased to inform you that IEEE Open Journal of Nanotechnology will waive 50% of the APC (Article Publishing Charge) for submissions, which are accepted for publication before 31st December 2021 after peer review.*

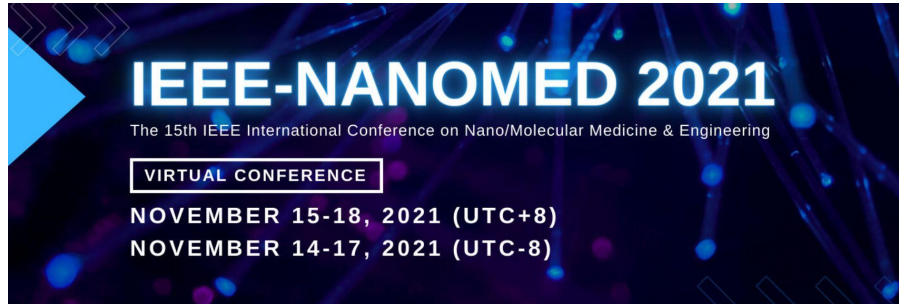
[View Call for Papers](#)

### IEEE OJ-NANO: Call for Papers for Special Issue on “Emerging Plasma Nanotechnologies”

The high level of attention and interest to nanoscience and nanotechnology to a large extent is linked to the continuing growth of information society. The development of nanoscience and nanotechnology are carried out by interdisciplinary cooperation among academic and industrial researchers. Plasma technology is the key driver to such

development. *IEEE Open Journal of Nanotechnology* (OJ-NANO) will publish collected papers in **Special Issue on “Emerging Plasma Nanotechnologies”**. This special issue will shed light on recent progresses on nanoscience and nanotechnology based on low pressure plasma, atmospheric plasma, and plasma simulation, whereas it will also suggest directions for future research.

[View Call for Papers](#)



## IEEE NANOMED 2021: Call for Papers

The 15th IEEE International Conference on Nano/Molecular Medicine & Engineering (IEEE NANOMED 2021) will be held from November 15 to 18, 2021 (UTC+8) / November 14 to 17, 2021 (UTC-8) virtually. The conference is one of the premier annual events organized by the IEEE Nanotechnology Council (NTC), dedicated to provide a forum to discuss the latest developments in all areas of the Nano/Molecular Medicine & Engineering.

### Important dates:

Two-Page Abstract Deadline (both Oral & Poster): **September 15, 2021 \***

*\* Best paper competition: A full paper (4 to 6 pages) is required by September 15, 2021 to enter best paper contests.*

[View Call for Papers](#)

## Call for Proposals for Future Sites for IEEE NMDC 2024

**EXTENDED Initial Proposal Deadline: 30 September 2021**

**For complete RFP, see posting on website:**

**<https://ieeenano.org/2021/call-for-proposals-ieee-nmdc-2024>**

The IEEE Nanotechnology Materials and Devices Conference (NMDC) aims to develop critical assessment of existing work and future directions in nanotechnology research from every sector in the nanotechnology research field, with a special focus on materials and devices. NMDC 2021 will be held in Vancouver, Canada, NMDC 2022 in Nanjing, China and NMDC 2023 in Paestum, Italy. Past locations of the NMDC have been in Asia (Korea, Japan, Taiwan, Singapore), USA (California, Michigan, Hawaii, Alaska, Portland), and Europe (Sicily, France, Stockholm). NMDC typically runs between mid-September and mid-October, with the later dates preferred since IEEE NANO runs in late July.

We are now seeking proposals for IEEE-NMDC 2024 which is expected to run in IEEE **Region 1-7 (North America)** or **Region 9 (South & Central America)**.

For conference history, visit <https://ieeenano.org/nmdc>.

*Early indication of an intention to submit a proposal is strongly recommended. Candidates for NMDC 2024 will be expected to present a 5-10 minute “Proposal in Preparation” based on the initial proposal at the online NTC Excom and AdCom meetings in November 2021.*

**Formal proposals must be e-mailed prior to the appropriate deadline to:** NTC Vice-President for Conferences Jin-Woo Kim, ([jwkim@uark.edu](mailto:jwkim@uark.edu)) with copies to Ed Perkins, NTC Secretary ([e.perkins@ieee.org](mailto:e.perkins@ieee.org)).

Contact Jin-Woo Kim, ([jwkim@uark.edu](mailto:jwkim@uark.edu)) with any questions.

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## Report on NANO 2021

The 21st IEEE International Conference on Nanotechnology (NANO 2021) was held virtually 28-30 July 2021. General Chair Clara Santato and Co-Chairs Federico Rosei and Fabio Cicoira thank all attendees and participants for another great conference. Program Chair Paolo Bollella reports 285 contributions and 20 tracks.

NANO 2021 Post Conference View-on-Demand Registration is still open. Presentations will be available through September. The conference program can be viewed [at this link](#).

## Register for NANO 2021 View-on-Demand Content

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## IEEE Nanotechnology Council Elects 2022 Officers

The IEEE Nanotechnology Council elected new officers at its Annual Administrative Committee Meeting held virtually on July 26-27. Positions start on 1-Jan.



### VP for Educational Activities

Lixin Dong  
Professor of Biomedical Engineering  
City University of Hong Kong (CityU)



### VP for Technical Activities

Xiaoning Jiang  
University Faculty Scholar  
North Carolina State University



### VP for Publications

Supriyo Bandyopadhyay  
Director of the Quantum Device Laboratory  
Virginia Commonwealth University

**Learn More About the New 2022 Officers**

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## 2021 Nanotechnology Awards Ceremony

The IEEE Nanotechnology Council announces its 2021 Award Winners. Individual Awards were presented at its 21st IEEE International Conference on Nanotechnology (NANO 2021) held virtually on 28-30 July 2021.



### 2021 Pioneer Award Recipient

Prof. Jean-Pierre Leburton, University of Illinois Urbana-Champaign

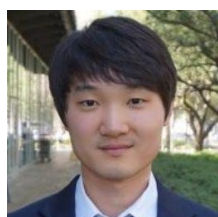
*“For pioneering contribution to the theory and simulation of semiconductor nanostructures and low dimensional nanoscale devices.”*



### 2021 Early Career Award Recipient – Academia

Prof. Max Shulaker, Massachusetts Institute of Technology

*“For his pioneering work in carbon nanotubes and the broad area of nano-systems, including nanofabrication technologies, nanodevices, circuits, and architectures.”*



### 2021 Early Career Award Recipient – Government

Dr. Myeong-Lok Seol, NASA Ames Research Center, USA

*“For innovative contributions to the development of triboelectric power generation and printed supercapacitors for space missions.”*



### 2021 Distinguished Service Award Recipient

Prof. John Yeow, University of Waterloo, Canada

*“For distinguished service, including accomplishments as an Editor-in-Chief of the IEEE Nanotechnology Magazine and other service achievements.”*



### 2020 Technical Committee Award Recipient

TC 3: Nanofabrication; Chair: Wei Wu

*“For starting new initiatives and promoting technological innovation and excellence in nanotechnology for the benefit of humanity through participation in NTC conferences, publications and education, and outreach activities.”*

[View Awards Ceremony Details](#)

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## IEEE T-NANO Best Paper of the Year 2020 Award

The winner of the 2020 TNANO Best Paper Award is:

## **“A Magnetic Field-to-Digital Converter Employing a Spin-Torque Nano-Oscillator”**

Published in the IEEE Transactions on Nanotechnology, Vol. 19, pp. 565 – 570, 13 July 2020. [DOI: 10.1109/TNANO.2020.3007344](https://doi.org/10.1109/TNANO.2020.3007344)

Co-authored by:

- Dagur Ingi Albertsson, Department of Electrical Engineering, School of EECS, KTH Royal Institute of Technology, Kista, Sweden.
- Johan Åkerman, Department of Physics, University of Gothenburg, Gothenburg, Sweden.
- Ana Rusu, Department of Electrical Engineering, School of EECS, KTH Royal Institute of Technology, Kista, Sweden.

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## **NTC Young Professionals Canada to Host a Webinar on 25 August**

On August 25<sup>th</sup> at 11 AM (UTC-6), join this free [Webinar] “Microfabrication: Challenges and Advances”. Different specialists from across Canada will talk about the fundamental challenges and discuss recent developments in microfabrication techniques. The event is free and open to all upon registration. This event is hosted by [the IEEE Nanotechnology Young Professionals Canada](#) and supported by the University of Saskatchewan.

Speakers:

- Dr. Benoît H. Lessard (Associate Professor, University of Ottawa),
- Dr. Oussama Moutanabbir (Professor, Polytechnique Montréal), and
- Ms. Priyadarshini Mangannavar (CMC Microsystems)

Moderator:

- Eng. Eric Pietro (Grad student at Dr. Achenbach’s group, University of Saskatchewan)

**Register for "Microfabrication: Challenges and Advances"**

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## **Announcing Fellow Search Committee**

The Fellow Search Committee (FSC) with Chair [Jean-Pierre Leburton](#) has been created. The role of the FSC is to identify potential NTC IEEE Fellow candidates and to assist with the nomination process when in the Committee’s judgment they meet the IEEE Fellow criteria.

The committee searches for talented IEEE NTC participants with exceptional scientific achievement, who may potentially be elevated to the grade of IEEE Fellow. The FSC mission that is independent from the Fellow Evaluation Committee (FEC), consists in also identifying potential sponsors to encourage them to nominate these IEEE-NTC members for the grade of Fellow. The Fellow Search Committee is independent of and does not communicate with the Fellows Evaluation Committee.

**[More information](#)**

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## **Introducing the Women in Nanotechnology**

**Women in Nanotechnology (WIN)** welcomes all members within the nanotechnology community who represent or support women engineers and scientists in both academia and industry. WIN is about celebrating technical accomplishments of women within the various sub-disciplines of nanotechnology and providing mentorship, networking and collaboration opportunities for the younger generation of aspiring women.

**Follow NTC WIN on LinkedIn**

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## **NTC has a New LinkedIn Page**

Are you following the new NTC LinkedIn account? Find us to stay up-to-date with NTC initiatives and member news!

**Follow NTC on LinkedIn**

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## **CALL FOR AWARDS**



### **PIONEER AWARD IN NANOTECHNOLOGY**

The Nanotechnology Council 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 consists of \$1000 (\$500 each if two awards are made) honorarium and a commemorative plaque.



### **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. The award consists of \$1000 (\$500 each if two awards are made) honorarium and a commemorative plaque.



### **DISTINGUISHED SERVICE AWARD**

The Nanotechnology Council established the Distinguished Service Award to recognize an individual who has performed outstanding service for the benefit and advancement of Nanotechnology Council. The award consists of \$1,000 honorarium and a commemorative plaque.



### **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 award consists of \$500 and a certificate.

**NOMINATIONS ARE DUE OCTOBER 1, 2021**



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## EDUCATION

### COVID-19 Hub: Your IEEE Resources



Check out the IEEE COVID-19 Hub for regular updates about IEEE members developing technologies to fight the virus, resources available across the IEEE, coping strategies from engineers around the world, and opportunities to get involved in the fight. [Read More](#).

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### TryNano.org Resource Site



About Nanotechnology

Education & Resources

Applications & Industry



[TryNano.org](#) offers broad and updated resources for those interested in exploring or participating in the fields of nanoscience and nanotechnology. The IEEE Nanotechnology Council (NTC) supports this initiative and maintains these resources to encourage professionals, students, and others to be informed about the latest research, trends, and educational opportunities. Contact TryNano Editor-in-Chief, [James Spicer](#) with feedback.

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### Call for 2022 Distinguished Lecturer Nominations

The IEEE Nanotechnology Council (NTC) is seeking nominations for distinguished lecturers. **Nominations are due 15 October 2021.** 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 programs of the Nanotechnology Council chapters and conferences. The term for the Lecturers is from 1 January until 31 December of 2022.

[View Call for Distinguished Lecturers](#)

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### IEEE NTC 2021 Summer Schools Announced

**IEEE Region 9 ‘2021 IEEE NTC Latin America Summer School on  
Nanotechnology (2021 IEEE LASSNANO)**  
*“Sustainable electronics and abundant nanomaterials from natural sources”*

Camilo Tellez Villamizar  
RF-MEMS Research Group  
Universidad Católica de Colombia, Bogotá, Colombia  
Email: [camilo.tellez@ieee.org](mailto:camilo.tellez@ieee.org)

Currently, there are over 100 university groups in Latin America researching nanotechnology and over 250 companies which develop or apply nanotechnology to final products. Despite encouraging numbers, it is known that nanotechnologies face two main challenges in Latin America: the implementation for the interests of society and the lack of qualification at different educational levels. The IEEE NTC summer school in Latin America may be one of the sparks to address those problems.

Based on the mission of IEEE NTC, the 2021 IEEE LASSNANO plans lectures and workshops to provide training and connect parties interested in nanotechnologies. The 2021 IEEE LASSNANO theme is ‘Sustainable electronics and abundant nanomaterials from natural sources’, and more specifically their usage in Latin America. The lectures will be experts in the field of nanotechnology in industry, academia, and government. We target senior undergraduates, graduate students, post-docs, and researchers, practitioners, and others seeking to explore new career areas.

**2021 IEEE NTC Romania Summer School on Nanotechnology**  
*“Nanomaterials & Nanotechnologies for Advanced Energy Systems”*

September 20-24, 2021

**[Website](#)**

Eden Mamut  
Institute for Nanotechnologies and Alternative Sources of Energy  
Ovidius University of Constanta, Romania  
Email: [emamut@univ-ovidius.ro](mailto:emamut@univ-ovidius.ro)

The theme of the summer school is the holistic approach in developing “safe-by-design” advanced energy systems integrating nanomaterials and nanotechnologies for performance improvement, reduction of environmental impact and the substitution of critical materials. The advanced energy systems are referring to fuel cells, thermoelectric convertors, hybrid solar panels and electro-opto-chemical reactors.

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## **STANDARDS**

### **Join the IEEE NTC Standards Committee and Make Your Mark**

*contributed by Tyler Jaynes, NTC Standards Committee Chair*

Whether you are new to the nanotechnology field, or are a professional considering a change and want to find out more about nanotechnology, we invite you to join the IEEE Standards Association **[IEEE NTC Standards Committee](#)** in making a meaningful impact on your industry and organization. The scope of the Nanotechnology Council Standards Committee (NTC/SC) is to provide a focal point for cooperative activities, both internally and externally, including the promotion, consolidation, and coordination of nanotechnology activities among IEEE entities in the theory, design, and development of nanotechnology and its scientific, engineering and industrial applications.



If you are interested in participating in the committee, please contact me as the Nanotechnology Council Standards Committee Chair at [tyler.l.jaynes@ieee.org](mailto:tyler.l.jaynes@ieee.org), or the IEEE SA Program Manager, Vanessa Lalitte, at [v.lalitte@ieee.org](mailto:v.lalitte@ieee.org).

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## YOUNG PROFESSIONALS

### NTC Young Professionals Update

*contributed by Rafal Sliz, NTC YP Representative*



Four 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](#)

[NTC YP LinkedIn  
Region 8](#)

[NTC YP LinkedIn  
Region 9](#)

[NTC YP LinkedIn  
Region 10](#)

More information about the NTC YPs

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## CHAPTERS

### Chapter of the Year Award

Nominations deadline: October 1

Nominations may be made by any full IEEE member, or by a representative of the nominee chapter. 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. Exemplary Chapters must have a high number of activities and creativity. The Chapter must consistently be active in organizing activities throughout the year.

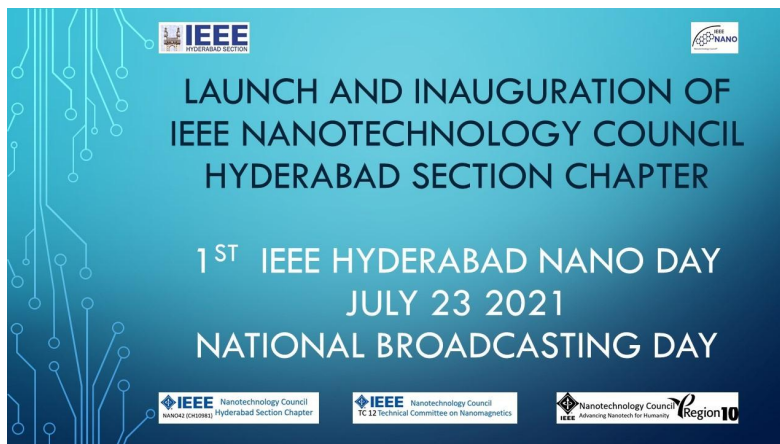
The award consists of \$500 and a certificate.

More information about the Chapter of the Year Award

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### Report on the 1st IEEE Hyderabad Nano Day

*contributed by the IEEE NTC Hyderabad Section Chapter*



The IEEE Nanotechnology Council Hyderabad Section Chapter hosted the 1st IEEE Hyderabad Nano Day on 23 July 2021. This virtual event had a diversity of events scheduled throughout the day ranging from Launch Address, Distinguished Keynotes, Technical Keynotes, Industry Experts Interaction, IEEE NTC Ex-Com Representation, IEEE Hyderabad Section Exe-com Representation, R10 Exe-com and Industry Expert Representation, Release of NTC HSC roadmap along with Volunteering and Networking opportunities exploration.

**More information about IEEE Hyderabad Nano Day**

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## PUBLICATIONS

### Tables of Contents

#### IEEE Transactions on Nanotechnology

View the full current issue of IEEE T-NANO

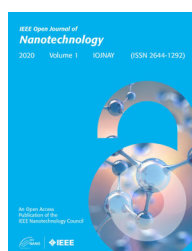
[T-NANO, Volume 20](#)

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

To submit to T-NANO, click [here](#).



#### IEEE Open Journal of Nanotechnology



[OJNANO, Volume 2](#)

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

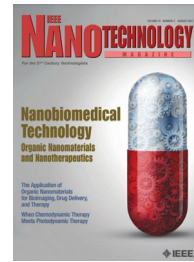
To submit to OJ-NANO, click [here](#).

#### IEEE Nanotechnology Magazine

View the full current issue of IEEE INM

**[INM, Volume 15, Number 4.](#)**

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



## IEEE Transactions on NanoBioscience

IEEE TRANSACTIONS ON  
**NANOBIOSCIENCE**

View the full current issue of IEEE T-NB

**[T-NB, Volume 20, Number 3](#)**

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

To submit to T-NB, click **[here.](#)**

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## IEEE J-XCDC: Call for Papers for Special Issue on “Cryogenic Semiconductor Devices and Circuits for Computing”

A call for papers is now open for the *IEEE Journal on Exploratory Solid-State Computational Devices and Circuits* (JXCDC) special topic on “**Cryogenic Semiconductor Devices and Circuits for Computing.**” JXCDC is an “Open Access” journal for publication of research using exploratory materials and devices aimed at novel energy efficient computation beyond standard CMOS (Complementary Metal Oxide Semiconductor) transistor technology.

[View Call for Papers](#)

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## CONFERENCES

### IEEE NAP 2021



September 5-11, 2021 | Odesa, Ukraine

**[Website](#)**

Registration is open for the the 2021 IEEE International Conference NANOMATERIALS: APPLICATIONS & PROPERTIES (IEEE NAP-2021). NAP-2021 is being held on Sept 5-11, 2021, at the beautiful [Gagarinn Hotel](#) in Odesa, Ukraine.

NAP is an international conference held annually in Ukraine since 2011. The prime focus of the NAP Conference is on nanoscale materials with emphasis on interdisciplinary research exploring and exploiting unique physical and chemical proprieties of these materials for practical applications.

To find more about the IEEE NAP-2021 Conference, please visit the conference [website](#) and follow us on [Facebook](#) and [LinkedIn](#). Have questions? Write to us: [info@nap.sumdu.edu.ua](mailto:info@nap.sumdu.edu.ua).

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## IEEE NMDC 2021



**POSTPONED to December 12-15, 2021 | Vancouver, British Columbia**  
**Late-Breaking-News Abstract Submission OPEN – Deadline Oct 1.**  
[Website](#)

The 16th IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2021) will be held in Vancouver, BC, Canada from December 12 to 15, 2021. IEEE NMDC 2021 will be co-located with the IEEE Conference on Electrical Insulation and Dielectric Phenomena ([IEEE CEIDP](#)). The two conferences will hold joint sessions to highlight important work being pursued at the nexus of their respective disciplines.

The technical program for NMDC 2021 will feature innovative research results on a wide variety of topics that emphasize the role of nanoscale phenomena, materials and devices in established and emerging technological areas. Before submitting abstracts, researchers are encouraged to examine the Technical Program Areas to identify the ones that most closely reflect the emphasis of their work.

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### List of Nanotechnology Council Officers (2021)

President, Jim Morris  
President-Elect, Fabrizio Lombardi  
Past-President, Yonhua (Tommy) Tzeng  
VP Conferences, Jin-Woo Kim  
VP Publications, Supriyo Bandyopadhyay  
VP Finances, Malgorzata Chrzanowska-Jeske  
VP Educational Activities, John Yeow  
VP Technical Activities, Kremena Makasheva  
Secretary, Edward Perkins

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