



Newsletter | October 2024

Editor's Note

Welcome to the October 2024 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 editors: Yijun Cui and Ke Chen.



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BREAKING NEWS



**IEEE Open Journal of Nanotechnology (OJ-NANO)
Special Issue on
"In Tribute to Professor Brajesh Kumar Kaushik"**

IEEE OJ-NANO will devote a special issue to the memory of Prof. Brajesh Kumar Kaushik who passed away on 31 July 2024. Prof. Kaushik was the coordinator of the IEEE Nanotechnology Council chapters in India, a member of the Administrative Committee of the Council, and a guest editor of special issues on spintronics and neuromorphic computing in the *IEEE Transactions on Nanotechnology* and *IEEE Transactions on Electron Devices*. He was a member of the Technical Committee on Spintronics, and a Founding Member of the Technical Committee on Quantum, Neuromorphic and Unconventional Computing. He was an exemplary mentor to many students who are now active researchers in nanotechnology. His enthusiasm and compassion touched many in the nanotechnology community.

Areas of interest include but are not limited to:

- Spintronics
- Skyrmionics
- Nano-sensors
- Nano-packaging
- Unconventional computing
- Neuromorphic computing

Submissions from present and past students of Prof. Kaushik and his collaborators are especially solicited. For information on submissions, see the [OJ-NANO website](#).

Deadlines:

Manuscript Submission 1 November 2024
Anticipated Publication 15 April 2025

Guest Editors:

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AWARDS

Call for Award Nominations 2024

The IEEE Nanotechnology Council (NTC) gives several awards yearly. Six are for individuals, two for the best papers published in the *Transactions on Nanotechnology (T-NANO)* and the *IEEE Nanotechnology Magazine (INM)*, one is for the best Chapter, and one for the best Technical Committee.

Nomination for Awards Evaluated by NTC Specific Award Committees (**nominations due 1 March**)

- Best PhD Thesis Award information**
- Publication Awards information**
- Technical Awards information**

Awards Nominations Due 1 March 2025

The Nanotechnology Council (NTC) is pleased to offer these **new awards** (starting in 2023):

- [Best PhD Thesis Award in Nanotechnology](#) (publication)
- [Test of Time Publication Award](#) (e.g. over 10-25 years) (publication)
- [Technical Achievement Award\(s\)](#) (Technical Committees)
- [Nanotechnology Magazine Best-Paper Award](#) (publication)
- [Best Paper Award for the IEEE Transactions on Nanotechnology](#) (publication)

The IEEE Nanotechnology Council (NTC) is soliciting nominations for these awards. See the [awards page](#) for more information on all the NTC's awards. To view the full detailed listing of each award please visit the [awards nominations page](#). Awards are presented at the IEEE-NANO conference.

CHAPTERS

IEEE NTC Shanghai Chapter 2024 Nanotechnology Distinguished Seminar

Shanghai, 29 June 2024 – The IEEE Nanotechnology Council (NTC) Shanghai Chapter recently completed its Nanotechnology Distinguished Seminar (NDS), bringing together NTC Shanghai Chapter officers, Shanghai Jiao Tong University professors, Tongji University professors, Anhui University professors, East China Normal University professors, and Shanghai Institute of Technical Physics (SITP), Chinese Academy of Science (CAS) representatives to advance IEEE NTC Shanghai Chapter's NDS Series and promote communication and commonality within the organization.

During the opening, Weida Hu, the Chair of IEEE NTC Shanghai Chapter, emphasized the importance of technology interconnection and clarified the important impact of the NDS Series on NTC Shanghai Chapter and NTC initiatives. The NDS aims to promote multi-scientific and technological cultural exchanges, break down information barriers, and ultimately achieve collaborative development within the organization.

The seminar featured roundtable discussions and a detailed presentation by Fang Wang from the Shanghai Institute of Technical Physics (SITP) as the Vice Chair of IEEE NTC Shanghai Chapter, Mingsheng Long from Anhui University, Anyuan Gao and Xinghan Cai from Shanghai Jiao Tong University, Tao Jiang and Jin Wang from Tongji University, Xiang Yuan from East China Normal University, and Jin Wang, Fang Zhong, Fuxing Dai from SITP. A series of insightful presentations showcased groundbreaking developments in nanotechnology. Highlights of the talks included:

- The discovery of three-dimensional Van Hove singularity.
- Dual quantum spin Hall insulator by density-tuned correlations in TaIrTe₄.
- Nonlinear Nano-Imaging of Interlayer Coupling in 2D Graphene-Semiconductor Heterostructures.
- High-Sensitive Uncooled Mid-Wave Infrared Detector Based on TiS₃ Nanoribbon.
- Next-generation Photodetectors Beyond van der Waals Junctions.

The IEEE NTC Shanghai Chapter Nanotechnology Distinguished Seminar was a great success, making all participants rejoice in their contribution to the synergistic development within IEEE NTC Shanghai Chapter and future endeavors in the field of nanotechnology.





NTC WIN

Join the NTC WIN Team as a Regional Coordinator

Are you passionate about advancing women in nanotechnology? Join the [Women in Nanotechnology \(WIN\)](#) at IEEE NTC as a Regional Coordinator!

Why join us? To enhance your skills and gain experience, connect with professionals, researchers, and students, and promote opportunities for women in nanotechnology.

Your responsibilities: To help us to organise regional events, collaborate with local IEEE sections promote WIN initiatives and support professional development

Ready to make a difference? Apply now by filling out the form [here](#). Together, we can empower women in nanotechnology!

Noushin Nasiri, IEEE NTC WIN Chair

YOUNG PROFESSIONALS

NTC YP Ambassadors Program



The IEEE Nanotechnology Council (NTC) Young Professionals (YPs) and the Vice-President for Educational Activities, supported by the ExCom, have established a new program called NTC YPs AMBASSADORS. This program has the objective of inspiring and informing NTC YPs on a variety of topics (e.g., technical, nontechnical) to enhance their interest and engagement in the field of nanoscience and nanotechnology. The NTC YPs ambassadors will deliver talks at various Chapters/Sections "on-demand" and in a virtual modality.

Eligibility & Applications:

The call for nominations is starting from **1 September** with a **deadline for the 21 December 2024**.

The candidate must:

- be an IEEE member,
- NTC participant,
- belong to the IEEE YP;
- have about 5 years or more experience reflecting professional maturity (e.g, university, professional, volunteering, etc.).

The ambassadors are selected for a term of one year. The appointment starts from **1 January 2025**. All new ambassadors **are required to give at least two talks during their tenure of one year**.

For the application the following details are needed:

1. a resume or CV (two pg. max.);
2. the title(s) of the maximum 2 talks;
3. a brief writeup on the benefits of the talk proposed to the NTC YPs community;
4. a 5-min short video sample of any proposed talk.

The applications must be sent to matteobrunolodi@ieee.org.

YP Event at NMDC



"Using economic tools for career decisions"

Dr. Julie Percival

Abstract: Much has changed since Feynman complained that "Social science is an example of a science which is not a science... They follow the forms... but they don't get any laws." The social sciences, particularly economics, have made huge strides in being able to provide both the data and analytic tools that can help people make sound, evidence-based decisions about their lives. But not all analysis or data is created equal.

In this talk, I'll explain how you can use free, readily available public data to improve your and your bosses lives, and why it is that high quality, reliable economic data collection should probably not be shrunk down to 20 people living in North Dakota running web scraping / AI tools and publishing the data.



Speaker's Bio: Dr. Julie Percival is the Regional Economist for the Dallas Regional Office of the U.S. Bureau of Labor Statistics. She received her Master of Public Policy in 2011 and Ph.D. in Public Policy and Political Economy in 2015, both from the University of Texas at Dallas. Dr. Percival began working for BLS in 2016.

Her division publishes about 200 regional news releases annually, and speaks regularly to users of BLS data in a variety of forums. Through interactions with the press, researchers, business and labor organizations, and the general public, she promotes a better understanding of BLS data and its potential impact on day-to-day life. Outside of her official work at BLS, her areas of specialty include technology, education, and disability policy.

For the Young Professionals (YPs) attending IEEE Nanotechnology Materials and Devices Conference (NMDC) 2024 in Salt Lake City (Utah) this October a YPs reception has been announced. Dr. Julie Percival, Regional Economist for the Dallas Regional Office of the U.S. Bureau of Labor Statistics, will give a talk entitled "Using economic tools for career decisions" on Tuesday, 23 October, 6:00 PM. The talk will enlighten the audience on data and analytic tools that can help people make sound, evidence-based decisions about their lives.

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

NMDC 2024 – Call for Registration



19h IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2024)
22-25 October 2024, Salt Lake City, Utah, United States
<https://ieeenmdc.org/nmdc-2024>
Conference venue: Radisson Salt Lake City Downtown

IEEE NMDC is a flagship conference series of the IEEE Nanotechnology Council (NTC), focusing on research advances in the fields of nanoscience and nanotechnology.

Conference Scope:

The conference focuses on the latest scientific and technological advances related to

- Nanorobotics and nanomanufacturing
- Nano-biomedicine
- Nanofabrication
- Nano-Optics, Nanophotonics, and Nano-Optoelectronics
- Spintronics
- Nanoelectronics
- Nanoscale communications and Nanonetworks
- Nanosensors and Nanoactuators
- MEMS/NEMS
- Nanoelectronics
- Nano-fluidics and integrated bio-chips
- Nanomaterials
- DNA Nanotechnology
- Nanodiamond and nanocarbon structures: materials and devices
- Nanometrology and Characterization
- Modeling and Simulation
- Nanopackaging
- Nanomagnetism
- Nanoenergy, Environment and Safety
- Nano-acoustic Devices, Processes & Materials
- Quantum, Neuromorphic & Unconventional Computing
- Emerging Plasma Nanotechnologies
- Emerging material and device challenges in futuristic systems
- Education in nanotechnology
- Ethics in Nanotechnology
- Commercializing nanotechnology
- Fundamentals and applications of nanotubes, nanowires, quantum dots and other low dimensional materials

Accepted and presented full papers (4 to 6 pages) for IEEE NMDC 2024 will be included in [IEEE Xplore](#) as well as other Abstracting & Indexing (A&I) databases.

We are proud to announce that the 19h IEEE Nanotechnology Materials and Devices Conference (NMDC) will be held in lovely Salt Lake City, Utah, USA 22 to 25 October 2024. IEEE NMDC 2024 will be the perfect stage to promote research from all across the world.

IEEE-NANOMED 2024: Call for Registration



2-5 December 2024
Honolulu, Hawaii, USA
[Website](#)

IEEE-NANOMED is one of the premier annual events organized by the IEEE Nanotechnology Council (NTC), and brings together physicians, scientists, and engineers from all over the world and every sector of academy and industry for the advancement of basic and clinical research in medical and biological sciences through nano/molecular medicine and engineering. Attendees of IEEE-NANOMED can share their latest research in engineering and nano/molecular , medicine with other practitioners in their field and related fields, ranging from basic scientific and engineering research to translational and clinical research.

Suggested Topics:

- Nano and molecular technologies in medical theranostics
- Nanotechnology in drug delivery
- Biomedical imaging
- Bio/Nano sensing
- Biochips and Bio-MEMS
- Biomechatronics
- Biological interfaces
- Nanobiotechnology
- Translational medicine
- Bioprinting
- Biomicrofluidics

Important Dates:

Notification of Acceptance: 13 September 2024
11 October 2024 (for inclusion on IEEE *Xplore*)

PUBLICATIONS

IEEE Transactions on Nanotechnology

View the [full current issue of IEEE T-NANO](#).

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

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

T-NANO, VOLUME 23



IEEE Open Journal of Nanotechnology

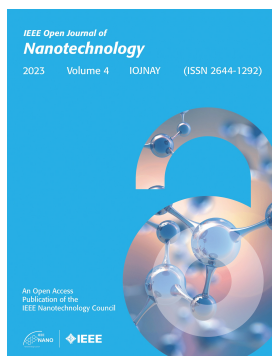
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To find how to submit to OJ-NANO, [click here](#).

The *IEEE Open Journal of Nanotechnology* (OJ-NANO) is dedicated to publishing articles on timely topics in the field of nanotechnology by making them available immediately, freely, and permanently available to all. All articles published in OJ-NANO are exposed to 5 million unique monthly users of the IEEE Xplore® Digital Library. Among numerous articles published so far, we've selected a few review articles to highlight [here](#).

OJ-NANO, VOLUME 5



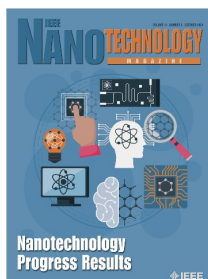
IEEE Nanotechnology Magazine

View the [full current issue of IEEE INM](#).

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INM, VOLUME 18, NO. 5

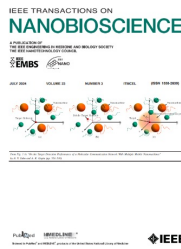


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T-NB, VOLUME 23, NO. 3



LIST OF NANOTECHNOLOGY COUNCIL OFFICERS (2024)

Position	Name	Position	Name
President	 Jin-Woo Kim	Past-President	 Fabrizio Lombardi
Vice President for Conferences	 Kremena Makasheva	Vice President-Elect for Conferences	 John Yeow
Vice President for Educational Activities	 Luca Pierantoni	Vice President for Finances	 Malgorzata Chrzanowska-Jeske
Vice President for Publications	 Georgios Sirakoulis	Vice President for Technical Activities	 Weiqiang Liu
Secretary	 Edward G. Perkins		

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