



Newsletter | December 2024

Editor's Note

Welcome to the December 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.



Yijun Cui
Nanjing University of Aeronautics and
Astronautics
Nanjing, China



Ke Chen
Nanjing University of Aeronautics and
Astronautics
Nanjing, China

Contents

[BREAKING NEWS](#)

[AWARDS](#)

[EDUCATIONAL ACTIVITIES](#)

[YOUNG PROFESSIONALS](#)

[PUBLICATIONS](#)

BREAKING NEWS

IEEE-NSENS 2025: Call For Papers



23 - 26 March 2025

Bangkok, Thailand

Website: <https://ieee-nsens.org/2025/>

The 4th IEEE International Conference on Micro/Nano Sensors for AI, Healthcare, and Robotics (IEEE-NSENS 2025) will be held on 23-26 March 2025 in Bangkok, Thailand.

IEEE-NSENS 2025 is one of the most important conferences that bring our members together from around the world to share professional experiences, expand professional networks, and receive updates on the latest advances in the fields of sensors, nanotechnology, artificial intelligence, healthcare monitoring and robotics.

Topics (The areas of interest include but are not limited to the following topics)

- Micro/Nano Electro – soft electronics
- Micro/Nano Electro – artificial intelligence
- Micro/Nano Electro – bioelectronics
- Micro/Nano Electro – sensors
- Micro/Nano Electro – power electronics
- Micro/Nano Electro – nanobiotechnology
- Micro/Nano Electro – healthcare electronics

- Micro/Nano Electro – medical diagnostics
- Micro/Nano Electro – human-robot interaction
- Micro/Nano Electro – machine learning
- Micro/Nano Electro – deep learning
- Micro/Nano Electro – humanoid robots
- Micro/Nano Electro – flexible sensors

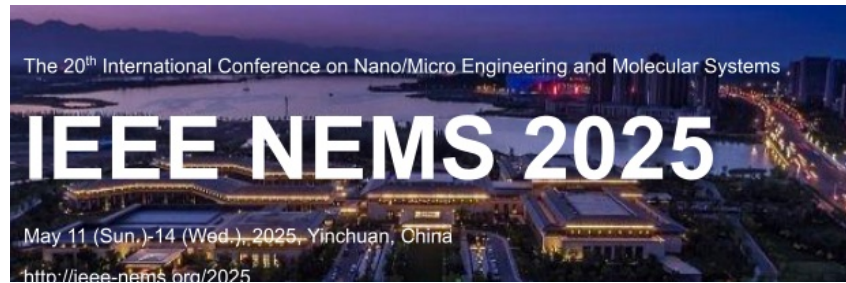
Important Dates:

Initial Submission Deadline: **20 December 2024**

Notification of Acceptance: 20 January 2025

Final Submission Deadline: 20 February 2025

IEEE-NEMS 2025: Call For Papers



Website: <https://ieee-nems.org/2025/>

The 20th IEEE Int'l Conference on Nano/Micro Engineered & Molecular Systems (IEEE NEMS 2025) will be held from 11-14 May 2025, Yinchuan, China.

IEEE-NEMS is a premier conference series sponsored by the IEEE Nanotechnology Council that promotes advanced research areas related to MEMS, nanotechnology, and molecular technology. Prior conferences were held Kyoto (2024), Jeju (2023), Virtually (2022), Xiamen (2021), San Diego (2020), Bangkok (2019), Singapore (2018), Los Angeles (2017), Matsushima Bay (2016), Xi'an (2015), Hawaii (2014), Suzhou (2013), Kyoto (2012), Kaohsiung (2011), Xiamen (2010), Shenzhen (2009), Hainan Island (2008), Bangkok (2007), and Zhuhai (2006). In 2025, we will celebrate the 20th anniversary of IEEE NEMS in Yinchuan.

Conference Scope:

The scope of the conference includes but not limited to:

- Micro/Nano Electro-Mechanical Systems (M/NEMS)
- Micro/Nano/Molecular Fabrication/Manufacturing
- Micro/Nano Robotics, Molecular Machines
- Micro/Nano/Molecular Physical/Chemical Sensors/Actuators
- Nano Photonics and Micro/Molecular Optical Devices
- Micro/Nano Composite Materials and Structures
- Micro/Nano Bio-/Medical Devices and Systems
- Functional Nanomaterials and Synthesis

Important Dates:

31 Dec. 2024: Initial Submission (Full Papers or Extended Abstracts) Deadline
28 Feb. 2025: Notification of Acceptance
28 Feb. 2025: Late News Submission Deadline
20 Mar. 2025: Early Registration Deadline
31 Mar. 2025: Presentation Only Submission Deadline
31 Mar. 2025: Final Submission Deadline

Organizers:

General Chair: **Lixin Dong** (City University of Hong Kong, China)
Program Chair: **Guangyong Li** (University of Pittsburgh, USA)

Sponsors:



IEEE NANO 2025: Call for Special Sessions and Papers



Website: <https://2025.ieeenano.org/>

Welcome to the 25th IEEE International Conference on Nanotechnology (IEEE NANO 2025), which will be held on 13-16 July 2025, in Washington DC, USA.

Since its founding in 2001, IEEE NANO has been the flagship conference of the IEEE Nanotechnology Council (NTC). It promotes advanced research in nanoscience and nanotechnology.

Visit the [official website](https://2025.ieeenano.org/) for all the information and updates.

CALL FOR SPECIAL SESSIONS

IEEE NANO 2025 welcomes proposals of special sessions describing the latest and emerging scientific and technological research and activities in the fields of nanoscience and nanotechnology.

Submit your proposal by **15 January 2025**, following the instructions at this [page](#).

CALL FOR PAPERS

IEEE NANO 2025 invites contributions from academic, government and industry-based researchers in all fields of nanotechnology. Discover the [topics](#) of the conference on the official website.

Contributions can be either as a paper (4-6 pages) in the IEEE style or a short abstract of 1 page using the [abstract template](#). Be ready to submit your contribution from 15 January to 1 March 2025, following the instructions [here](#).

Accepted papers will be published in IEEE *Xplore*.

CALL FOR APPLICATIONS: NSF GRADUATE STUDENT FELLOWSHIP

IEEE NANO 2025 will offer graduate student fellowships sponsored by the National Science Foundation (NSF) to full-time graduate students based in the U.S. The purpose of the fellowship is to encourage students to attend and present their research at the conference. Registration fee and expense for 2-night conference hotel will be covered for the Graduate Student Fellowship Awardees. The selection of the fellowship awardees will be based on merit, need, and increasing diversity of the conference participation.

Submit your application by 5 April 2025. More information can be found [here](#).

Important Dates:

Special Session Proposals: 15 Jan 2025

4-page Papers: 1 March 2025

1-page Abstracts: 15 April 2025

2nd Edition of the IEEE NANO STUDENT DESIGN COMPETITION (NANO-SDC)

NANO - SDC: What is it

The second edition of the IEEE NANO STUDENT DESIGN COMPETITION (NANO-SDC) will be organized during IEEE NANO 2025.

The student design competitions are planned to be unique events that challenge the creativity, competitive spirit, and enthusiasm of the students. The competition encourages students to employ creative problem solving and gain practical design experience by developing small samples, synthesis and characterization methodologies, novel software, simple prototypes or systems to address some interesting problems and work on hot topics that will be announced soon.

All students (B.Sc., M.Sc. PhD) or student teams are invited to participate in the IEEE NANO 2025 NANO-SDC

How it works:

- Submit your paper by 1 March, opting out that you are willing to participate in the NANO SDC
- Get your paper accepted for IEEE NANO 2025
- Submit a competition application form no later than 1 April 2024
- Work on the design project to advance and go beyond the paper submitted to the conference (EXTRA WORK IS NEEDED)
- Bring your amazing designs (e.g., software, prototypes, sensors, GUI, etc.) to the competition and showcase your work, competing against other student teams
- Get your certificate award at the social dinner
- Prepare an extended version of your work to be submitted to the *IEEE Nanotechnology Magazine*

General Rules & Essential Requirements

- Teams may consist of 1-4 full-time students, and professors or advisors must certify that students did the work.
- At least one team member must register for NANO2024 and attend the SDC in person in July 2025 to present and answer the judges' questions.
- Student teams are responsible for bringing their equipment, PCs and anything to run the demonstration.
- Travel visas are your responsibility, it is recommended to arrange these as early as possible.

For more info write to ieeenanosdc@gmail.com.

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](#)**)

- A. **[Best PhD Thesis Award information](#)**
- B. **[Publication Awards information](#)**
- C. **[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.

EDUCATIONAL ACTIVITIES

IEEE NTC NANO 2024 Student Design Competition

During IEEE NANO 2024 in Gijón (Spain), from 8 to 11 July, the first edition of the NANO Student Design Competition (SDC) was held. The NANO SDC was planned to challenge the creativity, competitive spirit, and enthusiasm of the students. To participate in the NANO SDC, after submitting a paper to the conference and having it accepted, teams of 1-4 students, registered to the conference were asked to bring their designs (e.g., software, prototypes, etc.) and showcase their results.

The awardees of the first NANO SDC edition were:

"FIRST-PRINCIPLE ANALYSIS OF ELASTIC CONSTANTS OF-946;-(ALXGA1-8722;X)2O3 FOR HETEROGENEOUS INTERFACE APPLICATIONS"

Hyokyung Lim
Pohang University of Science and Technology, Korea.

"FLEXIBLE GRAPHENE/PEDOT: PSS FREE-STANDING INFRARED PHOTODETECTOR"

Guanxuan Lu, Rui Zhou, Jiaqi Wang, Zhemiao Xie, Yifei Yuan, John T.W. Yeow,
University of Waterloo, Canada

"RAPID AND LOW-COST FABRICATION OF GRAPHENE FROM PENCIL LEAD"

Natchanon Jiwaratwat, Thapan Leuklwatanachai, Kunbhass Subhakornpichnan,
Chulalongkorn University, Thailand

Given the success of this joint initiative between Young Professionals and the Vice-President of Educational Activities, and the interest aroused in the Nanotechnology Council Community, the NANO SDC will be replicated in the next IEEE NANO 2025 conference to be held 13-16 July 2025 in Washington DC, USA. We hope that new and numerous students will participate!



IEEE NTC 2025 Seasonal Schools on Nanotechnology Call for Proposals

The IEEE Nanotechnology Council is changing the modality for proposing and organizing the Summer Schools.

From **1 December 2025 to 31 October**, the NTC is open to proposals for **2025 Seasonal School on Nanotechnology** which should be organized along some of the themes typically covered in the call for abstracts of the yearly flagship IEEE Nanotechnology Conference, including a wide range of nanoscience and nanotechnology topics.

The **IEEE Seasonal School on Nanotechnology** should be geared towards senior undergraduates, graduate students, post-docs, and researchers and practitioners who could deepen and broaden their skills in nanoscience and nanotechnology. It is expected that the attendance at the school should be around 50 to 100 participants.

Dates and Length: The IEEE Seasonal School on Nanotechnology will be held in any month from February to November of 2025. The length of seasonal school has typically been a minimum of 3 days to 1 week.

The date of the school is not restricted to the summer season and can be organized and held any time of the year, until November 2025.

Please submit your proposal using the [RFP 2025 Summer School on Nanotechnology Form](#). Questions regarding the submission process can be directed to the Summer School Subcommittee Chair, Prof. Luca Pierantoni at l.pierantoni@staff.univpm.it.

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.

Evaluation:

A dedicated and specific Subcommittee will manage the nomination and selection process of the NTC YPs AMBASSADORS and provide the results that will be announced both on the [NTC Website](#) and on the [TryNano webpage](#).

Contact NTC Young Professionals

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 \(Asia and Pacific\)](#)



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

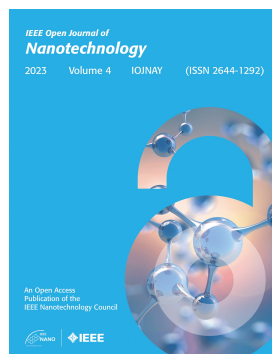
View the [full current issue of IEEE OJ-NANO](#).

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

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



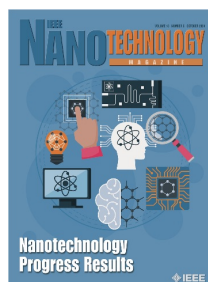
IEEE Nanotechnology Magazine

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

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

For information on submitting to INM, [click here](#).

INM, VOLUME 18, NO. 5

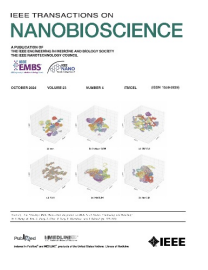


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For additional information, visit the [IEEE Xplore website](#).

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

T-NB, VOLUME 23, NO. 4



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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