# Newsletter | August 2023

## Editor's Note

Welcome to the Aug 2023 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 youâ€™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 Aeronautics and Astronautics
Nanjing, China

**Ke Chen**

Nanjing University of Aeronautics and Astronautics
Nanjing, China


**Contents:**


*BREAKING NEWS*

*AWARDS*

*TECHNICAL ACTIVITIES*

*WEBINARS*

*CHAPTER INFORMATION*

*WIN ACTIVITIES*

*YOUNG PROFESSIONALS*

*CONFERENCES*

*PUBLICATIONS*


# BREAKING NEWS

## IEEE Nanotechnology Council 2023 Election Results

The IEEE Nanotechnology Council (NTC) elected new officers at its Annual Administrative Committee Meeting held in Jeju, Republic of Korea, on 2 July 2023. 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 the second set of Vice-president-elects and Members-at-Large. The positions up for election were: **VP-elect for Conferences** and **VP-elect for Finances** (3 years, elect 2024; VP 2025-2026), and **Member-at-Large** (MAL) (up to 3) (2024-2025). **John T.W. Yeow**, University of Waterloo (Canada) was elected VP-elect for Conferences and **Malgorzata Chrzanowska-Jeske**, Portland State University (USA) was elected VP-elect for Finances. **Sanjukta Bhanja**, University of South Florida and **Li Tao**, Southeast University, Nanjing, China were elected Members-at-Large 2024-25.

**VP-elect for Finances** (3 years, elect 2024; VP 2025-2026)
**Malgorzata Chrzanowska-Jeske** is Professor of ECE and Director of VLSI & Emerging Technology DA Laboratory at Portland State University, where she was ECE Department chair from 2004 to 2010. Previously, she was with the Technical University of Warsaw and the Research and Production Center of Semiconductor Devices. She holds a Ph.D degree in EE from Auburn University. Her research interests include CAD for VLSI and 3DICs, nanotechnology and nano/bio systems, and design for emerging and renewable technologies. She has presented tutorial, keynote, and invited talks at international conferences, published 150+ technical papers, and serves as panelist/reviewer for the National Science Foundation, National Research Council Canada, and international journals and conferences. Her research has been supported by NSF and industry. She received the 1990 Best Paper Award from Alabama Section of IEEE and IEEE CEDA 2008 Donald O. Pederson Best Paper Award in *IEEE Transactions on Computer-Aided-Design*. She is the current NTC VP for Finances and was reelected.

**VP-elect for Conferences** (3 years, elect 2024; VP 2025-2026)
**John T. W. Yeow** is currently a Professor and a University Research Chair in the Department of Systems Design Engineering at University of Waterloo, Waterloo, ON, Canada. He is focused on the development of micro/nanodevices for a wide range of applications. He is a recipient of the Professional Engineers Ontario Engineering Excellence Award, Natural Science & Engineering Research Canada Innovation Challenge Award, Douglas R. Coltonâ€™s Medal of Research Excellence, Micralyne Microsystems Design Award, Ontario Ministry of Research and Innovationâ€™s Early Researcher Award, University of Toronto Alumni Association 7T6 Early Career Award, 2011 IEEE NANO Excellence Paper award and IEEE Canada Outstanding Engineer Award. He was a Canada Research Chair in Micro/Nanodevices (2004 â€“ 2019). He is a Fellow of the Canadian Academy of Engineering, the Engineering Institute of Canada, Engineers Canada, and a Member of the College of New Scholars, Artists and Scientists of the Royal Society of Canada.

**Members-at-Large (MAL)** (2024-2025)
**Sanjukta Bhanja** is a professor in the Electrical Engineering department at the University of South Florida. She earned her bachelorâ€™s degree in EE from Jadavpur University (1991), masterâ€™s degree from the Indian Institute of Science (1994), and a PhD in Computer Science and Engineering from the University of South Florida (2002). Currently serving as Engineeringâ€™s Executive Associate Dean, Bhanja manages faculty affairs, finance, HR, and space. Her research in nano-electronics and applied physics is supported by the National Science Foundation and NASA. Bhanja has graduated 12 PhD students who work in high-tech industries, and she advises four doctoral students, including three women. Her research has been published in top-tier peer-reviewed journals and conferences like Nature Nanotechnology. Bhanja has received the NSF CAREER award, university-level outstanding research and teaching awards, and the Florida Education Foundation William Jones Outstanding Mentor Award. She is a fellow of the Executive Leadership in the Academic Technology, Engineering, and Science (ELATES at DrexelÂ®) program.

**Li Tao** is a full professor at Southeast University, Nanjing, China. His research interests focus on 2D materials and their flexible/wearable devices for health care and internet of things, which had been featured in TIME blog, Nature News and 50+ tech media. He is an inventor of the silicene field-effect transistor and 12â€™â€™ wafer-scale graphene on evaporated Cu for GHz flexible RF electronics. He has published 60+ research articles, including first or corresponding author Nature Nanotechnology (citations>1200), Chemical Society Reviews, ACS Nano, Advanced Functional Materials etc., with a h-index 30 and citations ~5000. He is a principle investigator of several research projects with a total funding accumulated over US$1.5M. Prof. Tao is an associate editor for Research and Microelectronics Engineering, a committee member for EIPBN (3-beam) conference. He is a senior member of IEEE and NTC Distinguished Lecturer.

---

## Call for Proposals for Future Sites for IEEE-NANO 2026 and IEEE NMDC 2025

The IEEE Nanotechnology Council (NTC) is calling for proposals for future sites for IEEE-NANO 2026 and IEEE NMDC 2025.

**A. Call for proposals for future site for IEEE-NANO 2026**

**Initial Proposal Deadline: 1 October 2023**

The IEEE International Conference on Nanotechnology (IEEE-NANO) is the flagship IEEE Nanotechnology conference. The conference scope covers a wide range in nanoscience and technology. In particular, it covers nanofabrication, nanomanufacturing, nanomaerials, nanobiomedicine, nanoenergy, nanoplasmonics, nanoelectronics, nanosensors and nanoactuators, characterization and modelling of nano structures and devices. NANO 2023 was held in Jeju Island, Korea. Recent conferences were in the Balearic Islands, Spain (2022), Macau (2019), Cork (2018), Pittsburgh (2017), Sendai (2016), Rome (2015), and Toronto (2014). NANO 2020 and 2021 were held virtually due to the pandemic. NANO typically runs between early- to mid-July. We are now seeking proposals for IEEE-NANO 2026 which is expected to run in IEEE Region 10 (Asia & Pacific).

For conference history, visit https://ieeenano.org/ieee-nano-conferences/.

Early indication of an intention to submit a proposal is strongly recommended. Candidates for NANO 2026 will be expected to present a 5-10 minute â€œProposal in Preparationâ€ based on their initial proposal at the Fall NTC Conference Committee meeting, and a complete proposal at the NTC Excom and AdCom meetings in July 2024 held at IEEE-NANO 2024 in Gijon, Spain.

For instructions on developing the proposal see https://ieeenano.org/2023/call-for-proposals-for-future-sites-for-ieee-nano-2026-and-ieee-nmdc-2025#nano26.

**B. Call for proposals for future site for IEEE NMDC 2025**

**Proposal Deadline: 1 October 2023**

The IEEE Nanotechnology Materials and Devices Conference (IEEE 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 2023 will be held Paestum, Italy and NMDC 2024 in Salt Lake City (USA). Past locations of the NMDC have been in Asia (Korea, Japan, Taiwan, Singapore, Nanjing), North America (California, Michigan, Hawaii, Alaska, Oregon), Canada (Vancouver, BC) and Europe (Italy, France, Sweden). NMDC typically runs in early- to mid-October.

We are now seeking proposals for IEEE NMDC 2025 which is expected to run in IEEE Region 9 (South & Central America) or Region 10 (Asia & Pacific).

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

Proposals are due in October for presentation at the Fall NTC Conference Committee meeting.

For instructions on developing the proposal see https://ieeenano.org/2023/call-for-proposals-for-future-sites-for-ieee-nano-2026-and-ieee-nmdc-2025#nmdc25.

---

## Call for Nominations for 2024 Distinguished Lecturers

**Th2024 DL Nominationsâ€“Deadline: 1 October 2023**
More Information

The IEEE Nanotechnology Council (NTC) is seeking nominations for distinguished lecturers. The nomination deadline is **1 October 2023**. 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 of 2024**. 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 **2 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 up to three 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 2023**, via email to the VP Educational Activities, Lixin Dong, or online using the form found on the website.

# AWARDS

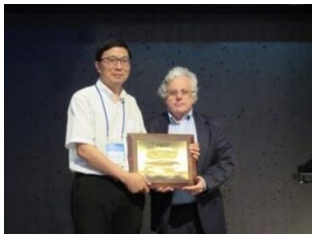
## 2023 Nanotechnology Council Awards Ceremony

The IEEE Nanotechnology Council announces its 2023 Award Winners. Awards were presented at its 23rd IEEE International Conference on Nanotechnology (NANO 2023) held in Jeju, Republic of Korea on 3-5 July 2023.

The **Pioneer**, **Early Career**, **Chapter of the Year**, **TNANO Best Paper**, **Technical Committee**, and **Best PhD Thesis** awards were featured.

**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.

**2023 Pioneer Award Recipient**
Xiangfeng Duan
Department of Chemistry & Biochemistry, UCLA
â€œFor pioneering contribution to the synthesis and integration of nanoscale materials and devices, especially Van der Waals heterostructures and devices.â€



Professor Xiangfeng Duan received his B.S. Degree from University of Science and Technology of China in 1997, and Ph.D. degree from Harvard University in 2002. He was a Founding Scientist and then Manager of Advanced Technology at Nanosys Inc., a nanotechnology startup founded based partly on his doctoral research. Dr. Duan joined UCLA with a Howard Reiss Career Development Chair in 2008, and was promoted to Associate Professor in 2012 and Full Professor in 2013. Dr. Duanâ€™s research interest includes nanoscale materials, devices and their applications in future electronic and energy technologies. Dr. Duan has published over 300 papers with over 85,000 citations, and holds >50 issued US patents. Dr. Duan has received many awards for his pioneering research in nanoscale science and technology, including MIT Technology Review Top-100 Innovator Award, NIH Directorâ€™s New Innovator Award, NSF Career Award, Alpha Chi Sigma Glen T. Seaborg Award, Herbert Newby McCoy Research Award, US Presidential Early Career Award for Scientists and Engineers (PECASE), ONR Young Investigator Award, DOE Early Career Scientist Award, Human Frontier Science Program Young Investigator Award, Dupont Young Professor, Journal of Materials Chemistry Lectureship, International Union of Materials Research Society and Singapore Materials Research Society Young Researcher Award, the Beilby Medal and Prize, the Nano Korea Award, International Society of Electrochemistry Zhao-Wu Tian Prize for Energy Electrochemistry, Science China Materials Innovation Award, AIP Horizons Lectureship, NanoMaterials Science Young Scientist Award, and Materials Research Society Middle Career Researcher Award. He is currently an elected Fellow of Royal Society of Chemistry and Fellow of American Association for the Advancement of Science.

**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.

**2023 Early Career Award Recipient**
Deep Jariwala, Department of Electrical & Systems Engineering, University of Pennsylvania
â€œFor breakthrough contributions in logic, memory and photonic devices from low-dimensional semiconductors.â€

Professor Deep Jariwala is an Assistant Professor in the Department of Electrical and Systems Engineering at the University of Pennsylvania (Penn). Deep completed his undergraduate degree in Metallurgical Engineering from the Indian Institute of Technology Banaras Hindu University and his Ph.D. in Materials Science and Engineering at Northwestern University. Deep was a Resnick Prize Postdoctoral Fellow at Caltech before joining Penn to start his own research group. His research interests broadly lie at the intersection of new materials, surface science and solid-state devices for computing, opto-electronics and energy harvesting applications in addition to the development of correlated and functional imaging techniques. Deepâ€™s research has been widely recognized with several awards from professional societies, funding bodies, industries as well as private foundations the most notable ones being the IEEE Photonics Society Young Investigator Award, IUPAP Early Career Scientist Prize in Semiconductors, the Alfred P. Sloan Fellowship and the Bell Labs Prize. He has published over 100 journal papers with more than 16000 citations and holds several patents.

**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 Chapter of the Year Award (read more) for 2022 is the University of Saskatchewan IEEE Nanotechnology Council Student Branch Chapter.
Chair: JosÃ© Alvim Berkenbrock
â€œFor outstanding performance during adverse times and innovative and collaborative initiatives that engaged nanotechnology experts and IEEE volunteers.â€

**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 2022 Best Paper Award Recipients**

â€œEdge Engineered Graphene Nanoribbons as Nanoscale Interconnect: DFT Analysis,â€ in *IEEE Transactions on Nanotechnology*, vol. 21, pp. 43-51, 2022, doi: 10.1109/TNANO.2021.3140041.

Authors: Sonal Agrawal and Anurag Srivastava, Advanced Nanomaterials Research Group (AMRG), Gwalior, India; Gaurav Kaushal, VLSI Design Laboratory ABV-Indian Institute of Information Technology, Management at Gwalior, Gwalior, India; Ashok Srivastava, Division of Electrical and Computer Engineering, Louisiana State University, Baton Rouge, LA, USA.

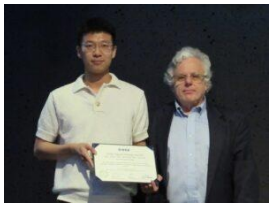
**TECHNICAL COMMITTEE AWARD**

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-16 (Quantum, Neuromorphic, and Unconventional Computing)
Chair: Giovanni Finocchio

**NTC BEST PhD THESIS AWARD IN NANOTECHNOLOGY**

This annual award recognizes a PhD thesis in nanotechnology with remarkable technology innovation or excellence which should have led to publications in NTC venues including journals and conferences. The awardee will be selected by a committee composed of the Chair and three members. The Chair is appointed by the NTC President with recommendation from the VP of Educational Activities.

**2023 Best PhD Thesis Awardee**



Chuanzhen Zhao, Ph.D.
Department of Chemical Engineering, Stanford University
â€œFor developing and applying nanoscale tools critical to chemical sensing for the BRAIN Initiative, with further applications in wearable sensorsâ€
Chuanzhen Zhao, Ph.D., is an NIH/NIBIB NRSA F32 postdoctoral fellow in Prof. Zhenan Baoâ€™s lab at

Stanford University. Dr. Zhao currently works on developing flexible and stretchable biosensors and bioelectronics. Dr. Zhao did his Ph.D. with Prof. Paul S. Weiss and Prof. Anne M. Andrews at University of California, Los Angeles (UCLA). His Ph.D. research focused on developing translational biosensors, including implantable neuroprobes and wearable devices, to monitor chemical signaling in the body.

---

## Call for Award Nominations 2023

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 the NTC Awards Committee (nominations due 1 October).
A. Individual Awards information
B. Chapter Award information
C. Contact NTC Awards Chair for information
Nomination for Awards Evaluated by NTC Specific Award Committees (nominations due 1 March)
D. Best PhD Thesis Award information
E. Publication Awards information
F. Technical Awards information

**Award Nominations due 1 October 2023**
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. 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.

**Pioneer Award**
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 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.

**Early Career Award**
The Nanotechnology Council has established an Early Career Award to recognize individuals who have made contributions with major impact on the field of nanotechnology.

**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.

**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. Exemplary Chapters must have a high number of activities and creativity. The Chapter must consistently be active in organizing activities throughout the year.

**Awards Nominations due 1 March 2024**
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 NTCâ€™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. Nominations for these awards are due on **1 March 2024**. 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.

**Best PhD Thesis Award in Nanotechnology**
Description: This annual award recognizes a PhD thesis in nanotechnology with remarkable technology innovation or excellence which should have led to publications in NTC venues including journals and conferences. Any member with no conflict of interest (i.e. advisor-advisee relationship) with any member of the NTC ExCom, NTC Education Committee, or NTC Technical Committees can submit a nomination to the Award Committee for this award. Self-nominations are not allowed. Requires three references.

**Best-Paper Award for the *IEEE Nanotechnology Magazine***
This annual award recognizes a highly influential and impactful article of the highest quality published in the IEEE Nanotechnology Magazine (INM) in the preceding 2 calendar years. (For example, the 2023 award recognizes a paper published in 2021 or 2022.) **Note: Nominations accepted from any current or past member of the INM Editorial Board within the last 3 years ONLY. No self-nominations. Requires three references.**

**Test of Time Publication Award**
This annual award recognizes a highly influential, widely visible, and impactful article of the highest quality which appeared in any Nanotechnology Council managed journal, magazine, or financially sponsored conference proceedings between 10 years and 25 years ago. **Note: Nominations from any Editorial Board member of any NTC publication within the last 25 years ONLY. No self-nominations. Requires three reference letters.**

**Technical Achievement Award(s)**
This annual award recognizes individuals with outstanding and innovative contributions to the different areas of nanotechnology that are represented by technical committees (TCs) as organizational entities of the Nanotechnology Council (NTC), usually within the past 10 and not more than 15 years. **Note: Nominations from any member of the NTC Technical Activities Committee within the last three years (including the nomination year) ONLY. No self-nominations. Up to 3 awards will be presented each year. Requires three reference letters.**

**Best Paper Award for the *IEEE Transactions on Nanotechnology***
An annual best paper award to recognize a paper published in the *IEEE Transactions on Nanotechnology* (T-NANO) that is remarkable by its novelty, scientific merit, and potential impact. This award will encourage submission of excellent papers to the journal, and reward outstanding submissions. **Note: Nominations by members of the T-NANO Editorial Board ONLY.**

# TECHNICAL ACTIVITIES

## Report for IEEE NTC Technical Activities Workshops (TAW) in Jeju

Jeju, 6 July 2023 - The IEEE Nanotechnology Council (NTC) recently completed its Technical Activities Workshop (TAW) alongside NANO 2023, bringing together NTC officers, Technical Committee (TC) Chairs, Member Society representatives, and Young Professionals (YPs) to advance the NTC's Technical Activities and foster a culture of mentoring within the organization.


During the opening, Weiqiang Liu, the VP-elect of Technical Activities, stressed the significance of the TAW in educating participants on effectively supporting NTC initiatives. The TAW aimed to strengthen collaboration between Technical Committees, Chapters, and Member Societies, ultimately fostering a more engaged and cohesive NTC community.

The workshop featured roundtable discussions and brief presentations from 10 Technical Committees and 6 Member Society representatives, highlighting their progress and future interests. NTC President, Fabrizio Lombardi, outlined his strategy, emphasizing the importance of expanding conferences and ensuring sustainable revenue to build a stronger NTC community. He stressed the need for greater participation from new generations to support NTC activities and the significance of focusing efforts for optimal impact.

Sorin Cotofana, Editor-in-Chief of IEEE TNANO, provided insights into the journal's scope and publication process. Prof. Lixing Dong, VP for Educational Activities, discussed educational initiatives, including the Distinguished Lecturers program,

Summer Schools, and the Best Ph.D. Thesis award in nanotechnology. Other presenters covered topics such as the NTC Forum on Nanotechnology Focus, TC renewal cycles, awards, NTC Chapters' mission and objectives, and the connection between industry, academia, and government in promoting continuing education for nanotechnology scientists and engineers.

In the afternoon session, Rafal Sliz introduced the MENED program, highlighting its goal to increase YP involvement in TCs and ensure satisfaction among TC Chairs and YPs. The financial status of the NTC was presented by Malgorzata Chrzanowska-Jeske, VP for Finances. Kremena Makasheva, VP for Conferences, shed light on the crucial role of NTC Conferences, while Jin-Woo Kim, Chair of NANO 2023, delivered a report on the recent conference. Montserrat Rivas, Chair of NANO 2024, shared exciting plans for the next IEEE NANO conference in Gijon, Spain. Supriyo Bandyopadhyay, VP Publications, provided an overview of the NTC's publications, while EiCs for OJNANO (Dr. Jin-Woo Kin) and NTC Magazine (Dr. Bing Sheu) also offered general information on the publications. Matteo Lodi, NTC YP Chair, emphasized the proactive role of Young Professionals within the council and the ongoing efforts to encourage YP involvement and ensure financial stability while enhancing publications and conferences.


The event concluded with a productive wrap-up discussion, where attendees addressed various issues, including reviewer certificates, sponsorships for conferences, increasing publishing revenue for NTC, conference session proposals, and emerging nanotechnology trends.

The Technical Activities Workshop concluded successfully, leaving participants well-informed and enthusiastic about their contributions to the IEEE Nanotechnology Council's mission and future endeavors in the field of nanotechnology.

## WEBINARS

### Nanomaterials-Mediated Manipulation of Cellular Functions

**IEEE NANOTECHNOLOGY COUNCIL â€“ Technical Committee 2 Nano-Biomedicine** presents â€œNanomaterials-Mediated Manipulation of Cellular Functionsâ€ with Prof. Gianni Ciofani
**Tuesday, 12th September 2023**
**11:00 AM (GMT +1 â€“ Rome (IT))**
**Register here**

Abstract:
The remote control of cellular functions through smart nanomaterials represents a bio-manipulation approach with unprecedented potential applications in many fields of medicine, ranging from cancer therapy to tissue engineering. By actively responding to external stimuli, smart nanomaterials act as real nanotransducers able to mediate and/or convert different forms of energy into both physical and chemical cues, fostering specific cell behaviors [1, 2].
A new paradigm is proposed for nanomedicine, in order to exploit the intrinsic properties of nanomaterials as active devices rather than as passive structural units or carriers for medications.

Speaker:

Gianni Ciofani is Senior Researcher Tenured at the Istituto Italiano di Tecnologia (Italian Institute of Technology, IIT), where he is Principal Investigator of the Smart Bio-Interfaces Research Line and Coordinator of the Center for Materials Interfaces (Pontedera, Italy).

He received his Master Degree in Biomedical Engineering (with honors) from the University of Pisa, Italy, in July 2006, and, in the same year, his Diploma in Engineering (with honors)

from the Scuola Superiore Santâ€™Anna (Santâ€™Anna School of Advanced Studies, SSSA) of Pisa, Italy. In January 2010, he obtained his Ph.D. in Innovative Technologies (with honors) from SSSA. He joined IIT as Post-Doctoral Fellow from January 2010 to August 2013, and then as Researcher from September 2013 to October 2015. From October 2015 to October 2019 he was Associate Professor at the Polytechnic University of Torino (Torino, Italy), maintaining at the same time his research activity in IIT, where he is Senior Research Tenured since November 2019. In 2021, he was appointed Coordinator of the Center for Materials Interfaces; in the same year, he has been Visiting Professor at Waseda University, Tokyo (Japan).

His main research interests are in the field of smart nanomaterials for nanomedicine, in vitro models, and biology in altered gravity conditions. He is coordinator or unit leader of several projects (about 5 MEur granted); in particular, he was awarded a European Research Council (ERC) Starting Grant and two ERC Proof-of-Concept Grant in 2016, 2018, and 2022, respectively. Thanks to grants from the Italian Space Agency (ASI) and the European Space Agency (ESA), he had the opportunity to carry out experiments onboard the International Space Station (ISS) in 2017 and 2019. In 2018, his real-scale model of the blood-brain barrier was highlighted in the Annual Report on the ERC Activities and Achievements.

---

### IEEE Nanotechnology Council TC10 â€“ Modeling and Simulation 2023 Webinar Series

**Organizer:** Josef Weinbub, TC 10 Vice Chair, weinbub@iue.tuwien.ac.at
**Format:** 1-hour Webex webinars

**Webinar 2**
**Date:** 12 October 2023
**Time:** 16:00 PDT, 1:00 CEST, 08:00 JST
**Speaker:** Gerhard Klimeck, Professor and nanoHUB Director, Purdue University
**Topic:** nanoHUB for Research and Education in Nanoelectronics
Register here to receive the meeting link.

## CHAPTER INFORMATION

### NTC- Chapterâ€™s Travel Grant for IEEE Nano 2023 Conference

The IEEE NTC Chapters & Regional Activities Committee is pleased to congratulate the following Chapter Travel Grant awardees for winning US$1,500 each to attending the IEEE Nano 2023 and the NTC Adcom meeting in Jeju:

1. Yiping Zhang (NTC Guangdong Chapter, China),
2. Eui-Hyeok Yang (North Jersey NTC Chapter, US),
3. Jiming Bao (Houston NTC Chapter, US),
4. Weida Hu (Shanghai Chapter, China),
5. Partha Kaushik (Uttar Pradesh Section Chapter, India),
6. Pawan Kumar (Madhya Pradesh Section India)
7. Sumit Chaudhary (IIT Indore SBC, India)

---

### NTC Chapters & Regional Activities Committee Announces New Coordinator

The IEEE NTC Chapters & Regional Activities Committee is pleased to announce the appointment of Prof. Murilo A. Romero to the Chapterâ€™s committee as the new Region-9 Coordinator.

Murilo A. Romero was born in Rio de Janeiro, Brazil, in 1965. He received the electrical engineering and the M.S. degrees in 1988 and 1991, both from the Catholic University of Rio de Janeiro, Brazil. In 1995, he received a Ph.D. degree from Drexel University, Philadelphia, USA. After his return to Brazil in 1995, he joined the University of Sao Paulo, at Sao Carlos, as a faculty member. At the University of Sao Paulo (USP), the largest and best-ranked Brazilian university, he became an Associate Professor in 2001 and a Full Professor in 2008.

He was then Head of the Electrical Engineering Department at EESC-USP (from

2009-2013) and has also served as chair of the Electrical and Biomedical Engineering Committee of the Brazilian Research Council (CNPq, from 2011-2013). More recently, from 2014-2018, he was the Head of the Electrical Engineering area at CAPES, an agency of the Brazilian government, established to regulate and carry out quality control of graduate studies in Brazil (a process similar to the British REF or the Italian VQR).

His research interests span over a large variety of topics in semiconductor devices, optical communications and microwave-photonics. Samples of his research work can be found in more than 50 journal papers, including manuscripts at *IEEE Transactions on Nanotechnology*, *IEEE Transactions on Microwave Theory and Techniques*, *IEEE Transactions on Circuits and Systems*, *IEEE Transactions on Electron Devices*, *IEEE Journal of Quantum Electronics*, *IEEE Photonics Technology Letters*, *IEEE/OSA Journal of Lightwave Technology*, *IEEE Sensors* and IEEE *Access*, among others in top-ranked journals by other publishers.

He has served as Editor-in-Chief of the Scopus-indexed Journal of Microwaves, Optoelectronics and Electromagnetics Applications, as well as served in a variety of international conference TPCs. He is now Associate Editor for Terahertz and Microwave Photonics for the newly launched journal Frontiers in Photonics.

## WIN ACTIVITIES

### Women in Nanotechnology Special Session Held in IEEE NANO 2023 Conference


The event on women in nanotechnology that was held on 5th July for the interview and panel discussion with nanotechnology leaders were incredibly insightful and inspiring. The event provided a unique platform for nanotechnology leaders to share their personal journeys and life stories, with a particular emphasis on encouraging women and diverse groups. The stories shared were not only informative but also served as a source of motivation for aspiring professionals in the field. The caliber and expertise of the speakers were commendable. Their knowledge and experience provided valuable insights into the challenges and triumphs of working in nanotechnology. The panel discussion fostered a rich exchange of ideas and perspectives, leaving the audience with a deeper understanding of the industry and its potential.

The session was organized by Dr. Kanika Singh, WIN Chair and moderated by Mr. Edward Perkins, NTC Secretary and speaker list included Prof. James Morris, Prof. Malgorzata Chrzanowska-Jeske, Prof. Montserrat Rivas, Prof. James Speice and Prof. Lan Fu and many participants attended who made this event a resounding success. The meticulous planning and seamless execution were apparent, and it was an engaging and informative experience for all attendees.

The event plays a crucial role in promoting diversity and inclusivity in the field of nanotechnology. By highlighting the achievements and challenges faced by women and men in academics and industry, Women in Nanotechnology(WIN) are not only inspiring the next generation of female professionals but also fostering an environment that values and encourages diversity. The knowledge and inspiration

gained from the event will undoubtedly have a lasting impact on all the attendees.


## YOUNG PROFESSIONALS

### 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

### MARSS 2023: Call for Papers

MARSS
International Conference on Manipulation, Automation and Robotics at Small Scales

MARSS 2023 ABU DHABI

Abu Dhabi, UAE
Oct. 09–13, 2023

**6th International Conference on Manipulation, Automation and Robotics at Small Scales**
9-13 October, 2023, Abu Dhabi, UAE
**Website: https://marss-conference.org**
**Early Bird registration: 10 August 2023**

MARSS, the annual International Conference on Manipulation, Automation and Robotics at Small Scales, is a non-profit conference run by the microrobotic community and technically supported by IEEE-RAS and IEEE-NTC. MARSS2023 will be held in-person on 9-13 October 2023, in Abu Dhabi, UAE. The conference is the flagship forum to discuss cross-disciplinary activities on 1) manipulation, automation, measurement, and characteriÂzation at micro/nano scales, and 2) all kinds of small-scale robots and their applications.

**Important Dates:**
Notification of full paper status: within 2 weeks after the submission
Notification of Short paper status: 2-3 days after the submission

---

### IEEE NANOMED 2023: Call for Papers


**Website: https://ieee-nanomed.org/2023/**
Click here for CFP

IEEE-NANOMED is one of the premier annual events organized by the IEEE Nanotechnology Council (NTC) to bring together physicians, scientists, and engineers alike from all over the world and every sector of academy and industry,

working at advancement of basic and clinical research in medical and biological sciences using nano/molecular medicine and engineering methods. IEEE-NANOMED is the conference where practitioners will see nono/molecular medicine and engineering at work in both their own and related fields, from essential and advanced scientific and engineering research and theory to translational and clinical research.

**Conference Scope:**

- Nano and molecular technologies in medical theranostics
- Nanotechnology in drug delivery
- Biomedical imaging
- Bio/Nano sensing
- Biochips and Bio-MEMS
- Biomechatronics
- Biological interface Cells at the nanoscale
- Frontiers in nanobiotechnology
- Translational medicine
- Biomicrofluidics and Bioprinting

**Important Dates:**
Notification of Acceptance: 10 Sept. 2023
Full-Paper submission Deadline: 20 Oct. 2023
Early Bird Registration: 30 Sept. 2023

## PUBLICATIONS

### IEEE Transactions on Nanotechnology

View the full current issue of IEEE T-NANO

For additional information, visit the IEEE *Xplore* website.

To learn how to submit to T-NANO, click here.

**T-NANO, VOLUME 22**

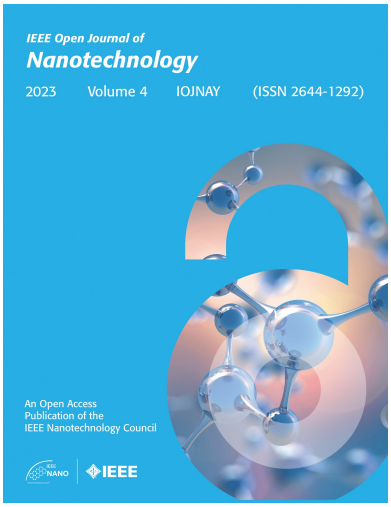
### IEEE Open Journal of Nanotechnology

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 *XploreÂ*® Digital Library. Among numerous articles published so far, we've selected a few review articles to highlight here.




**OJNANO, VOLUME 4**

### IEEE Nanotechnology

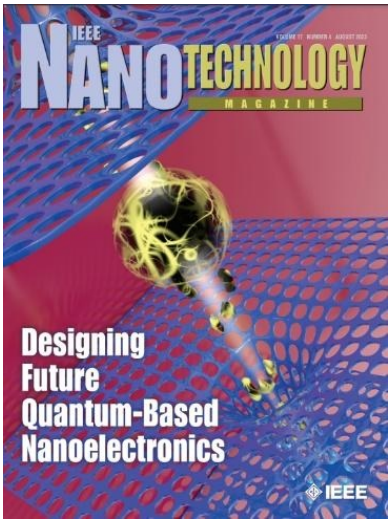
## Magazine

View the full current issue of IEEE INM

For additional information, visit the IEEE *Xplore* website.

To find how to submit to INM, click here.

**INM, Volume 17, Number 4**




---

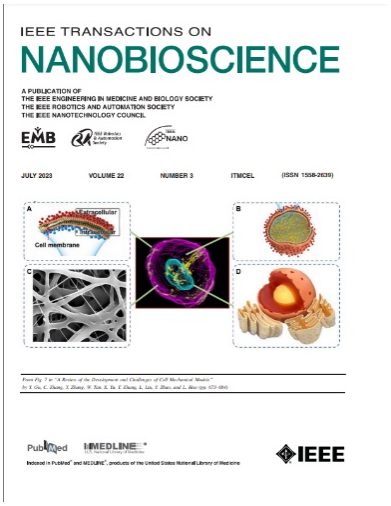
## IEEE Transactions on NanoBioscience

View the full current issue of IEEE T-NB

For additional information, visit the IEEE *Xplore* website.

To find how to submit to T-NB, click here.

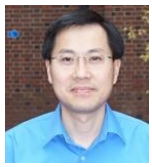
**T-NB, Volume 22, Number 3**




---

### LIST OF NANOTECHNOLOGY COUNCIL OFFICERS (2023)

| Position | Name | Position | Name |
|---|---|---|---|
| **President** |  **Fabrizio Lombardi** | **Past-President** |  **James Morris** |
| **President-Elect** |  **Jin-Woo Kim** | **Vice President for Conferences** |  **Kremena Makasheva** |
| **Vice President for Educational Activities** |  **Lixin Dong** | **Vice President-Elect for Educational Activities** |  **Luca Pierantoni** |
| | | | |

| | | | |
|---|---|---|---|
| **Vice President for Finances** |  **Malgorzata Chrzanowska-Jeske** | **Vice President for Publications** |  **Supriyo Bandyopadhyay** |
| **Vice President-Elect for Publications** |  **Georgios Sirakoulis** | **Vice President for Technical Activities** |  **Xiaoning Jiang** |
| **Vice President-Elect for Technical Activities** |  **Weiqiang Liu** | **Secretary** |  **Edward G. Perkins** |

{{my.Comm Preferences:default=edit me}}