



IEEE Nanotechnology Council

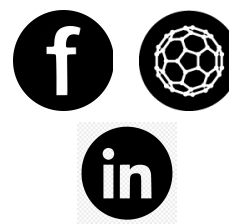
Newsletter | June 2021



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KEEP UP WITH US



EDITOR'S NOTE

Welcome to the June 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

16th IEEE Nanotechnology Materials and Devices Conference (IEEE NMDC 2021)

Late Breaking News: New Conference Dates
December 12-15, 2021

Regular Paper Submission
EXTENDED TO JULY 31

Late Breaking News: Abstract Submission
OPEN

Regular, Special Session and Invited Papers Submission
EXTENDED TO JUNE 30, 2021

December 12-15, 2021, Vancouver, BC, Canada

Website: <https://ieeenmdc.org/nmdc-2021>

For further information, please refer to the [Conference](#) section.

Call for Proposals for Future Sites for IEEE-NANO 2024 and IEEE NMDC 2024

Initial Proposal Deadline: 30 June 2021

For complete RFP, see posting on website:

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

A. Call for proposals for a future sites for IEEE-NANO 2024

The IEEE Nanotechnology Conference (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, nanomaterials, nanobiomedicine, nanoenergy, nanoplasmonics, nanoelectronics, nanosensors and nanoactuators, characterization and modelling of nano structures and devices. NANO 2021 will be held virtually due to the COVID-19 pandemic, but NANO 2022 in Balearic Islands, Spain and NANO 2023 in Jeju Island, Korea. Recent conferences were in Macau (2019), Cork (2018), Pittsburgh (2017), Sendai (2016), Rome (2015), and Toronto (2014). NANO 2020 was held virtually due to the pandemic. NANO typically runs between mid- to late-July.

We are now seeking proposals for IEEE-NANO 2024 which is expected to run in **IEEE Region 8 (Europe, Africa and Middle East)**.

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

Initial Proposal deadline: 30 June 2021

Early indication of an intention to submit a proposal is strongly recommended. Candidates for NANO 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 July 2021.

B. Call for proposals for a future site for IEEE-NMDC 2024

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 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 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 July 2021.

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

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

Congratulations to Alex Balandin, selected for the Vannevar Bush Faculty Fellows!



NTC Awards Chair Alex Balandin was selected for the DoD The Vannevar Bush Faculty Fellows (VBFF) program this year. This is the highest DoD recognition for the US professors, which comes with \$3M single-PI research funding. His topic is specifically on nanotechnology. The project is on creating a new research field: one-dimensional quantum materials.

[More Information on the VBFF Program](#)

Call for Papers on "Emerging Hardware for Cognitive Computing" to JXCDC

A call for papers is now open for **[the IEEE Journal on Exploratory Solid-State Computational Devices and Circuits](#)** special topic on “Emerging Hardware for Cognitive Computing.”

Submission Deadline: 15 July 2021

[More Information on this Special Topic](#)

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 Us on LinkedIn

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

More Information About NTC Awards

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](#).

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.

IEEE NTC Distinguished Lecturers for 2021

The IEEE Nanotechnology Council (NTC) has appointed its Distinguished Lecturers for 2021. Talks by NTC Distinguished Lecturers can be requested by IEEE student branches; NTC or member Society Chapters; NTC and member Society Conferences; conferences of other IEEE Societies not members of the NTC for major plenary/keynote (based on availability of funding). Please contact the presenter directly to arrange for a presentation. The 2021 DLs can be found [here](#).

Click [here](#) to learn how to request a DL presentation.

IEEE NTC 2021 Summer Schools Announced

IEEE NTC 2021 Summer Schools Announced

The Council is pleased to announce that two summer school proposals are approved.

2021 IEEE NTC Romania Summer School on Nanotechnology

“Nanomaterials & Nanotechnologies for Advanced Energy Systems”

Proposed dates: 5 days (September 20-24th)

Proposer:

- Prof. Eden Mamut, Institute for Nanotechnologies and Alternative Sources of Energy, Ovidius University of Constanta, Romania, email: emamut@univ-ovidius.ro

The aim of the summer school is to offer a holistic approach on the development of advanced energy systems integrating nanomaterials and nanotechnologies.

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.

IEEE Region 9 ‘2021 IEEE NTC Latin America Summer School on Nanotechnology (2021 IEEE LASSNANO)

“Sustainable electronics and abundant nanomaterials from natural sources”

Proposed dates: 2 days (1st day: Design, modeling, simulation; and 2nd day: Fabrication).

Proposers:

- Camilo Tellez Villamizar, RF-MEMS Research Group, Universidad Católica de Colombia, Bogotá, Colombia. E-mail: camilo.tellez@ieee.org.
- Guilherme Brasil Pintarelli, Institute of Biomedical Engineering, Federal University of Santa Catarina (UFSC), Florianopolis, Brazil. E-mail: gbpintarelli@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.

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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**, or the IEEE SA Program Manager, Vanessa Lalitte, at **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](#)**

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TECHNICAL COMMITTEES

Congratulations to TC-03, 2021 TC Award Winner!

The IEEE Nanotechnology Council Technical Committee Award is a recognition for the work accomplished by **one of the IEEE NTC TCs** during 2-year period. The NTC TCs serve as focal points for research in various area of Nanotechnology. The activities

developed by the NTC TCs are appreciated according to their impact in the scientific, literary and educational areas coordinated by IEEE NTC.



It is our pleasure to announce that the 2021 NTC TC Award is accorded to NTC TC03 Nanofabrication chaired by Wei Wu (left). Without any doubt we can say that the nanofabrication technologies have made great impacts on everyone's lives through the semiconductor industry.

At present they spread beyond this field. They have reached the stage that they can be used in much broader applications, such as sensing, bio-medical devices and human-machine interface. In the last two years the NTC TC03 Nanofabrication succeeded in 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. Thank you for your effort!

[More information about TC-03](#)

[More information about the TC Award](#)

New Chairs of TC-09 and TC-13



TC-09: Nano-Metrology and Characterization

Peng Li, Beijing University of Technology (BJUT)

lipeng2020@bjut.edu.cn

[More information about TC-09](#)



TC-13: Nano Energy, Environment and Safety

Zhan Yang, Soochow University, China

yangzhan@sdua.edu.cn

[More information about TC-13](#)

Kickoff Meeting of TC-16

The newborn Technical Committee on Quantum, Neuromorphic and Unconventional computing of the IEEE Nanotechnology Council held their kickoff meeting on June, 11th, 2021 virtually with a very exiting program with speakers from around the world either from academia and industry.

The scope of TC-16 is to serve as an interdisciplinary guide for scientists working in

quantum, neuromorphic and unconventional computing with the main goal to bring researchers of the three different communities to create a common language. In addition, TC16 will focus on the role of nanotechnology, in term of solutions, which can impact the developments of those computational paradigms.

Interested in getting involved? Contact TC-16 Chair: Giovanni Finocchio at giovanni.finocchio@unime.it

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CHAPTERS

Chapter News

The IEEE Nanotechnology Council Chapters & Regional Activities Committee would like to congratulate the recent establishment of the new NTC and NTC Student chapters:

- *Nanjing Section and Zhejiang Subsection Joint Section - NTC Hangzhou Chapter*
- *Bombay Section NTC Chapter*
- *Kolkata Section and Patna Subsection and Patna Subsection Joint Section Chapter*
- *United Kingdom and Ireland Section Chapter*
- *Bombay Section and Madhya Pradesh Subsection Joint Section Chapter*
- *Bombay Section, Indian Institute of Technology-Indore IEEE NTC Student Branch Chapter*
- *Dehli Section, Indian Institute of Technology - Jodhpur IEEE NTC Student Branch Chapter*

The committee would also like to invite more interested local areas/groups to form new NTC Chapters to promote research, education and development in nanoscience and nanotechnology. The new NTC Chapter formation can be applied through an on-line petition process via <https://mga.ieee.org/resources-operations/formations-petitions#technical>. Please note that all the newly formed NTC Chapters (including Student Chapters) in 2021 will be eligible for new chapter startup funding application for up to USD\$1000 to support new chapter initiatives and activities.

For more detailed instruction or any enquiry about the new chapter formation/petition/startup funding, please contact the IEEE Nanotechnology Council Chapters & Regional Activities Committee Chair, [Prof. Lan Fu](#).

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.

Conference Report on Signal Processing for Nanoelectronics and Biosciences

contributed by the IEEE NTC Gujarat Chapter

A two-day Symposium on Signal Processing for Nanoelectronics and Biosciences, jointly organized by the IEEE SPS Gujarat Section and the IEEE NTC Gujarat Section, was held in virtual mode during 26-27 March 2021. This event was dedicated to advancements in signal processing and nano-bio sciences. Shrinking sensor devices to nano-scale gives a roadmap for development of plethora of small, ultra-low-power devices and systems. Many students and young faculty members are picking up the field of Nanoelectronics and Biosciences as their research field, however, they do not know the design and operational challenges they might face while developing these sensors. Such sensors/systems are extremely sensitive to external influences and demand meticulous signal processing schemes. Students, researchers and faculty members from different institutes/universities participated in this event and interacted with the experts.

In this symposium, experts from NPL, IIT, IIIT, NIT, Industry and University of Switzerland presented their research work. More than 220 students, faculties and industry personnel registered in this event. All the sessions of the Symposium were too interactive. This event has given them a roadmap for development of plethora of small, ultra-low-power medical devices and systems.

More information about the Symposium

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PUBLICATIONS

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IEEE Transactions on Nanotechnology

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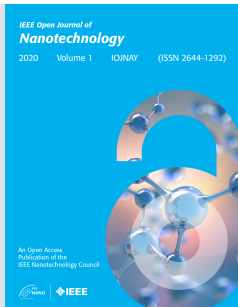
[T-NANO, Volume 20](#)

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**.

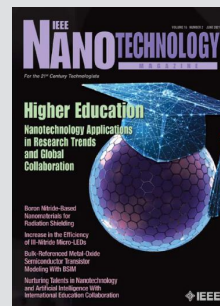
To submit to OJ-NANO, click **here**.

IEEE Nanotechnology Magazine

View the full current issue of IEEE INM

INM, Volume 15, Number 3

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 2

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

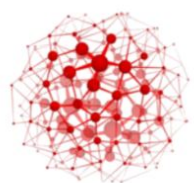
To submit to T-NB, click **here**.

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CONFERENCES

IEEE NANO 2021

International conference on nanotechnology
21st edition of IEEE NANO
July 28th to 30th



Flagship Conference

July 28-30, 2021 | VIRTUAL

[Website](#)

Registration is now open for NANO 2021. Early bird registration runs until July 9.

Register for IEEE NANO 2021

IEEE NAP 2021



September 5-11, 2021 | Odesa, Ukraine

[Website](#)

The IEEE International Conference on “**Nanomaterials: Applications & Properties**” (NAP-2021) will be held as a “physical” meeting on Sept. 5-11, 2021 in hotel **GAGARINN**, Odesa, Ukraine. For last four years NAP conference was co-organized by **Sumy State University** and the **IEEE Nanotechnology Council**. The #NAP2021 is endorsed and supported by the **International Union for Pure and Applied Physics**, and the **IEEE Magnetics Society**. This is an annual conference, and 200+ international attendees are expected.

Second Call for Abstracts/Papers:

We are pleased to post the second **Call for Papers** and invite submissions of abstracts and papers for Oral and Poster presentations at the IEEE NAP-2021 Conference. Follow us on **Facebook** and **LinkedIn** and **start your Abstract submission** today!

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**.

View the Call for Papers

IEEE NMDC 2021



December 12-15, 2021 | Vancouver, British Columbia

[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.

For info on submission see

<https://ieeenmdc.org/nmdc-2021/call-for-papers/authors-info/>

View Call for Papers

IEEE 3M-NANO 2021



August 2-6, 2021 | Xi'an, China

[Website](#)

3M-NANO is the annual International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale; it will be held on 2-6 August 2021 in Xi'an, China. The ultimate ambition of this conference series is to bridge the gap between nanosciences and engineering sciences, aiming at technology opportunities and new markets. The advanced technologies for manipulation, manufacturing and measurement at nanoscale promise novel revolutionary products and methods in numerous areas of application.

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
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