



Newsletter | March 2022

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Editor's Note

Welcome to the February 2022 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 new editors: Yijun Cui and Ke Chen.



Yijun Cui

Nanjing University of
Aeronautics and
Astronautics
Nanjing, China



Ke Chen

Nanjing University of
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PRESIDENT'S MESSAGE

I am welcoming you as the 2022 President of the IEEE Nanotechnology Council (NTC)! The Council is a multi-disciplinary group supporting the theory, design, and development of nanotechnology and its scientific, engineering, and industrial applications.

The NTC provides you with opportunities to keep technically up to date through our publications and conferences, network with like-minded colleagues, and take advantage of our educational materials.

The Council sponsors five publications and eleven well-recognized conferences, in addition to the Bimonthly newsletter. For a full list of NTC's sponsored publications and conferences, please visit the [IEEE Nanotechnology Council website](#).



Fabrizio Lombardi

BREAKING NEWS

WOMEN IN NANOTECHNOLOGY (WIN) Plan in 2022

WOMEN IN NANOTECHNOLOGY (WIN) committee chair Kanika Singh announces WIN committee plans in 2022. Go beyond its boundaries to establish tight relationships with a formidable team sharing the main objectives of IEEE WIE. Raising awareness about the existence of this Women in Nanotechnology (WIN) committee and to boost the involvement of members in its activities. WIN committee strives to advance and honor the contributions of women at all stages of their career and recognize the successes of IEEE NTC members. The main focus is to elevate the program to enhance nanotechnology knowledge base, plan for new initiatives, improve academia and industry liaison, plan for flagship events involving all ten regions of IEEE.

- LinkedIn Page: [IEEE NTC Women in Nanotechnology\(WIN\)](#)
- Hashtags: #ieeentcwin
- Facebook Page: [IEEE NTC Women in Nanotechnology](#)

IEEE NTC WIN - Celebrating International Women's Day

TECH SEMINAR BY PAMELA NORRIS
15 March 2022, 8pm (EST)

Agenda:

- Introduction of IEEE NTC WIN Committee

- Seminar: "Hold the Door! Making Way for the Next Generation of Scholars and Leaders"

Pamela Norris is the Vice Provost for Research at George Washington University, and is an honorary member of American Society of Mechanical Engineers (ASME) and is co-author of the book "Women in Nanotechnology Contributions from the Atomic Level and Up", part of the Women in Engineering and Science book series by Springer.

[Read details and register.](#)

Call for Papers: OJ-NANO Special Issue on "IEEE-NANOMED 2021: Nano/Molecular Medicine & Engineering"

IEEE OJ-NANO will devote a special issue/section on "IEEE-NANOMED 2021: Nano/Molecular Medicine and Engineering" to a collection of papers highlighting research and technology development in the field of nanobiotechnology, molecular engineering, micro/nano-fluidics, micro/nano-system integration, nano-biology and nanomedicine. IEEE Nanotechnology Council sponsors the 15th IEEE International Conference on Nano/Molecular Medicine & Engineering (IEEE-NANOMED 2021) held on 15-18 November 2021 to foster interaction between physicians, scientists and engineers in these emerging areas. The submission deadline is 30 April 2022.

[Read Details.](#)

Call for Papers: TNANO Special Section on IEEE NANO 2021

IEEE Transactions on Nanotechnology (TNANO) Special Section on the 21st IEEE International Conference on Nanotechnology (IEEE NANO 2021)

The nanotechnology revolution is founded upon the understanding of phenomena occurring at the nanoscale and the ability to fabricate and manipulate nanomaterials and nanodevices for practical applications. Researchers are contributing new ideas from a wide range of disciplines, including materials science, biology, biomedicine, engineering, physics, and chemistry. To make interesting research presented at the 21st IEEE International Conference on Nanotechnology (IEEE NANO 2021) widely available, in expanded form and in one publication, *IEEE Transactions on Nanotechnology* (TNANO) is extending a Call for Papers for a Special Section reflecting the scope of the conference. Submitted manuscripts will undergo a full peer review process. Submissions are welcome, and all interested NANO 2021 participants are encouraged to submit. Authors who were attendees are requested to significantly expand the previous conference version to contain substantial new technical material, as per TNANO and IEEE restrictions on duplicated publications and the competitive acceptance process.

Submission deadline: 15 April 2022

[Read Details.](#)

DISTINGUISHED LECTURERS 2022

The IEEE NTC is pleased to announce the appointments of Distinguished Lecturers for 2022. 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.

For detail introduction of the Distinguished Lecturers' information, please visit the [NTC website](#).



Dr. Kin Fong Lei

Topic(s)

- Analyses of Molecular Expression of Cancer Cells Cultured in Stacking Nanofiber Substrate
- Impedimetric Monitoring of Cancer Cell Responses in Three-dimension Culture Environment



Dr. Elena A. Rozhkova

Topic(s)

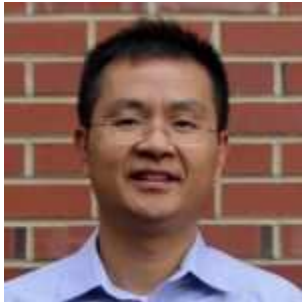
- Merging Nanotechnology & Synthetic Biology toward Directed Evolution of Energy Materials
- Magnetic Nanostructures for Future Medicine: from Cell Actuation to Ultrasensitive Detection
- Nano for BRAIN technologies



Aida Todri-Sanial

Topic(s)

- Novel devices and circuits design methods energy efficient neuromorphic computing with oscillatory neural networks



Yong Zhu

Topic(s)

- Nanomaterial-Enabled Soft Electronics
- MEMS for Characterizing Mechanical and Coupled Properties of Nanomaterials



Ken-Tye Yong

Topic(s)

- Nanocarbons for Biology and Medicine: Sensing, Imaging, and Drug Delivery



Antonio Di Bartolomeo

Topic(s)

- Electrical transport measurements in 2D materials
- Nanotransistors
- 2D Materials: fabrication, properties and applications



Weida Hu

Topic(s)

- Nanoscale infrared photodetectors manipulated by localized fields



Massimiliano Di Ventra

Topic(s)

- Quantum transport in nanoscale systems
- MemComputing: Fundamentals and Applications
- Next-generation sequencing with nanochannels
- Industrial research from an academic point of view



Yang Xu

Topic(s)

- Graphene/Silicon Heterojunctions for Integrated Nanotechnology

NEW TC CHAIRS

Welcome new 2022 NTC TC Chairs: Dr. Xiaogang Liang for TC3, Dr. Attila Bonyar for TC11, Dr. Lin Lin and Dr. Adam Noel for TC14.

Congratulations to the new chairs/co-chairs and we look forward to working with the new chairs closely to promote NTC technical activities.

The detailed introduction of the new TC chairs can be found at the [NTC website](#).



Dr. Xiaogan Liang

University of Michigan
TC3 Nanofabrication



Dr. Attila Bonyár

Budapest University of
Technology and
Economics
TC11 Nanopackaging



Lin Lin

Tongji University
TC14 Nanoscale



Adam Noel

University of Warwick in
Coventry

YOUNG PROFESSIONALS

IEEE Nanotechnology Marathon organized by the NTC Young Professionals



Under the patronage of the IEEE Nanotechnology Council 2020 President, Professor James Morris, the NTC Young Professionals team organized the first IEEE Nanotechnology Marathon. On the 24th of November, throughout a 24-hour period, 24 distinguished lecturers, nanotechnology experts, and influential scientists presented their work and the latest achievements. The YP Team engaged almost 700 participants from six continents, starting from Australia, through Asia, Africa, and Europe, and ending in the South and North Americas. In the difficult times, this event is the best example of how creative and innovative approaches help popularise nanotechnology, without borders.

For detailed information on the Marathon, [please check here](#).

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

IEEE NANO 2022: Call for Papers



The 22nd IEEE International Conference on Nanotechnology (IEEE-NANO 2022) will be held from July 4th to 8th of 2022. Here you will find the important deadlines whether you wish to submit an article or to register for the conference.

IEEE-NANO is the flagship IEEE international conference on Nanotechnology, which has been a successful annual conference since 2001. Recent conferences were held in Montreal (2021), on-line (2020), Macau (2019), Cork (2018), Pittsburgh (2017), Sendai (2016), Rome (2015), and Toronto (2014).

Key dates:

Submission Deadline Extended : 6 March 2022

Presentation without publication submissions: 15 May 2022

Notification of acceptance: 15 April 2022

Camera-ready submission: 15 May 2022

Early-bird registration: 1 June 2022

For details see the [IEEE-NANO 2022 Website](#).

IEEE-NMDC 2022: Call for Papers



The IEEE Nanotechnology Materials and Devices Conference will be first time to held on-site in Mainland of China, on 16-19 October 2022 at the International Conference Hotel in Nanjing, China. It will bring together key researchers from every sector in the nanotechnology research field, with a special focus on Materials and Devices. Conference papers will be published in *IEEE Xplore* after passing peer-review, with limited invitation for submission to *IEEE Transactions on Nanotechnology* or *IEEE Nanotechnology Magazine*. There are special award sessions for posters, graph contest, young scientists, women in engineering and entrepreneurs.

Key dates:

Abstract Submission Deadline: 30 April 2022

Full Paper Submission Deadline: 30 May 2022

Notification of Acceptance: 15 July 2022

Camera Ready & Early Bird Registration Deadline: 30 July 2022

For details see the [NMDC 2022 Website](#).

IEEE-3M-NANO 2022: Call for Papers



3M-NANO is the annual International Conference on Manipulation, Manufacturing and Measurement on the Nanoscale; it will be held on 8-12 August 2022 Tianjin,

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. Scientists working in research fields related to 3M-NANO topics are invited to submit papers. All accepted full papers (presented at the conference and following IEEE format) will be submitted in IEEE *Xplore* database and Ei Compendex.

Download [Call for Papers](#).

MARSS-22: Call for Papers



The 5th International Conference on Manipulation, Automation and Robotics at Small Scales

25-29 July 2022, Toronto, Canada

MARSS, the annual International Conference on Manipulation, Automation and Robotics at Small Scales, will be held in-person on 25-29 July 2022, in Toronto, Canada. The conference is the flagship forum for cross-disciplinary R&D communities to discuss current activities related to manipulation and automation (including measurement and characterization) at micro and nano scales, and all kinds of small scale robots and their applications.

Important Deadlines:

Full paper submission (5-6 pages): 15 May 2022

Notification of full paper status: 5 June 2022

Submission of final full papers: 20 June 2022

Registration for the full papers: 20 June 2022

Short paper submission (1-3 pages): 15 June 2022

Notification of short paper status: 2-3 days after the submission

Special session proposals: 15 May 2022 (preliminary proposal)

20 June 2022 (final proposal)

For details see the [MARSS Website](#).

IEEE-NEMS 2022: Registration



The 17th International Conference on Nano/Micro Engineered and Molecular Systems (NEMS) will be held from 14-17, April 2022 (UTC+8) virtually. The IEEE-NEMS is a premier conference series sponsored by the IEEE Nanotechnology Council focusing on the promotion of advanced research areas related to MEMS, nanotechnology, and molecular technology. Prior conferences were held in Xiamen (China, 2021), California (USA, 2020), Thailand (2019), Singapore (2018), Los Angeles (USA, 2017), Matsushima Bay and Sendai (Japan, 2016), Xi'an (China, 2015), Hawaii (USA, 2014), Suzhou (China, 2013), Kyoto (Japan, 2012), Kaohsiung (Taiwan, 2011), Xiamen (China, 2010), Shenzhen (China, 2009), Hainan Island (China, 2008), Bangkok (Thailand, 2007), and Zhuhai (China, 2006). The IEEE-NEMS Conference typically attracts over 600 attendees with participants from more than 20 countries and regions worldwide.

Important Dates:

Notification of Acceptance: 1 March 2022

Full-paper Submission Deadline: 31 March 2022

Early Bird Registration Deadline: 1 April 2022

For details see the [IEEE-NEMS 2022 Website](https://www.ieee-nems.org/).

IEEE NAP 2022: Call for Papers



The 2022 IEEE 12th International Conference "Nanomaterials: Applications & Properties" will be held on 11-16 Sept. 2022, in a hybrid format, with a "physical" meeting in Kraków, Poland. We are happy to have a beautiful and modern 4- star GALAXY hotel as our conference venue!

The Conference is organized through a partnership between the IEEE Nanotechnology Council, Silesian University of Technology, and Sumy State University, with endorsements and support from the International Union for Pure & Applied Physics and the IEEE Magnetics Society.

The prime focus of the IEEE NAP-2022 is on nanoscale materials with emphasis on interdisciplinary research exploring and exploiting their unique physical and chemical proprieties for practical applications. Although nanoscience and nanotechnology are still in their infancy, this rapidly evolving field of research is quickly transforming almost all aspects of our everyday life. From the low power electronics and supercomputers to advanced drugs and personalized medicine, from new industrial applications and renewable energy to advanced transportation and clean air technologies, nanoscience is the foundation of many transformational discoveries in the decades to come.

Important Dates:

Abstract submission site opens: 1 February 2022

Abstracts submission deadline: 25 April 2022

Papers submission deadline: 20 May 2022

Acceptance notification: 30 June 2022

Early registration fees deadline: 15 July 2022

For details see the [NAP 2022 Website](#).

EIPBN



The International EIPBN Conference is the premier gathering of scientists and engineers who are dedicated to electron, ion and photon lithography, imaging, and analysis; atomically precise fabrication; nanofabrication process technologies; related emerging technologies, and their applications in a broad spectrum of fields. This is the 65th meeting of the EIPBN, where top researchers from academia, government laboratories, and industry from around the world meet to present and discuss recent trends and future directions in these technologies.

The online attendee registration deadline is Sunday, 15 May 2022

The early registration deadline is Sunday, 17 April 2022

The online booth registration deadline is Sunday, 15 May 15, 2022

The registration is open, [click here for detailed information](#).

IEEE DTS 2022: Call for Papers



4th IEEE International Conference on
Design & Test
of integrated micro & nano-Systems

June 6 - 9, 2022, Cairo, Egypt

The IEEE international conference on Design & Test of integrated micro & nano-Systems represents a scientific and technological event dedicated to integrated electronic systems which reach the nanoscale era. The interests of the conference cover all the aspects from the design to the test of micro and nano systems.

IEEE DTS is an important meeting where well known researchers from universities and companies will present the latest innovations in the field of micro and nano electronics. It will be also an opportunity for researchers to present and discuss their latest work. IEEE DTS'22 will be organized by the Germain International University (GIU), Egypt. The conference official language is English.

Important Dates:

Submission deadline: 28 February 2022

Notification of acceptance: 15 April 2022

Final version due date: 5 May 2022

For details see the [DTS 2022 Website](#).

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 21

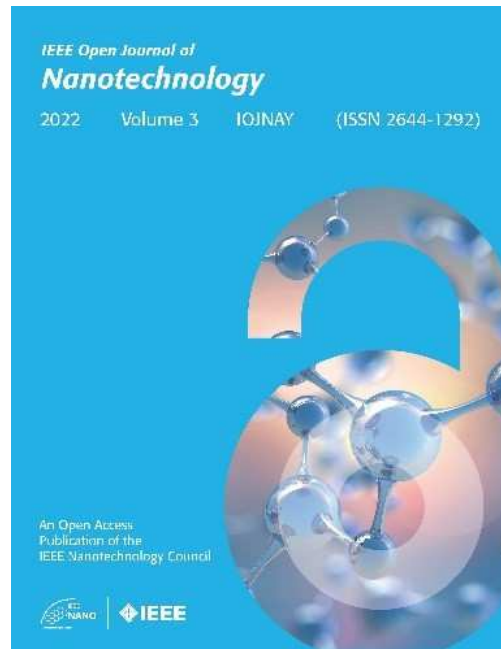
IEEE Open Journal of Nanotechnology

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

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

OJNANO, VOLUME 3



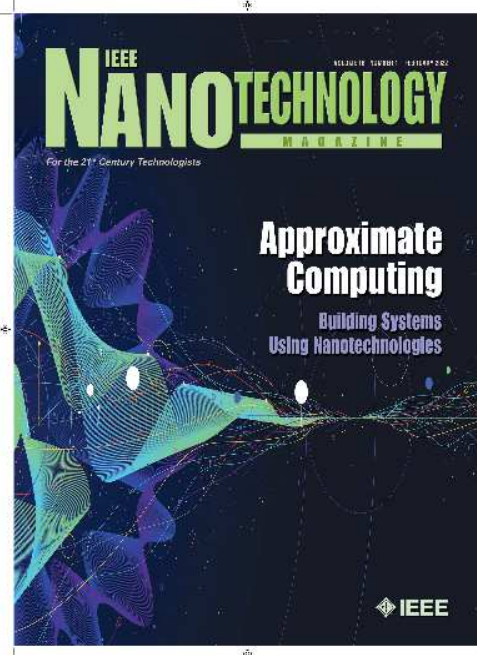
IEEE Nanotechnology Magazine

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](#).

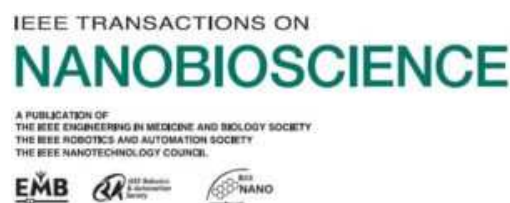
INM, Volume 16, Number 1



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 21, Number 1

LIST OF NANOTECHNOLOGY COUNCIL OFFICERS (2022)

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VP Publications, Supriyo Bandyopadhyay
VP Finances, Malgorzata Chrzanowska-Jeske
VP Educational Activities, Lixin Dong
VP Technical Activities, Xiaoning Jiang
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