



VTS Councils and Communities

We hope you will make a special effort to join the 100th edition of the IEEE Vehicular Technology Conference (VTC), to be held during 7–10 October 2024 at the Ronald Reagan Building and International Trade Center in Washington, DC, USA. We look forward to celebrating not only the 100th edition of the conference but also the 75th anniversary of IEEE Vehicular Technology Society (VTS) and the 140th anniversary of IEEE. Many thanks to J. R. Cruz, as vice president of conferences; Lingjia Liu, as general chair; John Smee and Thomas Rondeau, as general cochairs; and Mike Buehrer, Rui Dinis, and Song Guo, as Technical Program Committee cochairs, of VTC2024-Fall.

In this article, I provide an overview of the IEEE Councils and Technical Communities that the VTS sponsors. Technical Councils are groups of Societies working together in broad areas of technology. Councils sponsor activities that benefit individuals in all of the member Societies. The VTS is a sponsoring Society of five of the eight Technical Councils within IEEE. The general Technical Communities pull together technologists with an interest in a hot multidisciplinary or emerging topic area to enable increased connection and awareness of developments. There are 22 Technical Communities in IEEE, and VTS sponsors four of them.

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WE LOOK FORWARD TO CELEBRATING NOT ONLY THE 100TH EDITION OF THE CONFERENCE BUT ALSO THE 75TH ANNIVERSARY OF IEEE VEHICULAR TECHNOLOGY SOCIETY AND THE 140TH ANNIVERSARY OF IEEE.

To contact any of the Council or Community representatives listed here, please visit the VTS website (<https://vtsociety.org/>) and navigate to “About” and then “Liaisons & Representatives.”

Technical Councils

IEEE Biometrics Council

VTS Representative: Se Young Chun
The mission of the IEEE Biometrics Council (<https://ieee-biometrics.org/>) includes the organization and support of high-quality conferences, workshops, and journals; disseminating technical content through the first-ever virtual journal from IEEE; and promoting biometrics technology that impacts every person in the world in one form or another.

The field of interest of the Council is the theory, design, and application of biometric characterization of human beings, based on physiological and/or behavioral features and traits, in particular for identification, identity verification, authentication, encryption, recognition, and medical diagnosis.

The 2024 IEEE International Joint Conference on Biometrics (IJCB) will be held from 15 to 18 September, in Buffalo, NY, USA. The con-

ference is intended to have a broad scope and invites papers that advance biometric technologies, sensor design, feature extraction and matching algorithms, security and privacy, and social impact of biometrics technology.

VTS members working in biometrics are encouraged to participate in the Biometrics Council, attend the IJCB, and subscribe to *IEEE Transactions on Biometrics, Behavior, and Identity Science*.

IEEE Council on RFID

VTS Representative: Zhengguo Sheng
The field of interest for the IEEE Council on RFID (CRFID) (<https://www.ieee-rfid.org>) is the theory and practice of matters relating to radio-frequency identification (RFID) and RFID-related systems. The purpose is to advance and coordinate work in the field of RFID carried throughout IEEE and thus is scientific, literary, and educational in character.

The CRFID hosted the IEEE Opportunity Research Scholars Symposium in June 2024, which gave a mentored student experience for both undergraduate and postgraduate (non-Ph.D.) students.

The winner of the first CRFID award, the James Clerk Maxwell Best

Journal Paper Award, was announced in September 2023 at the 13th IEEE International Conference on RFID Technology and Applications.

The CRFID is preparing a new *IEEE Journal in Digital Twins and Parallel Intelligence (JDPTI)*. Seven IEEE Societies, including the VTS, have expressed interest in the joint publication.

There is a strong research interest in digital twins (DTs) in the VTS community. According to a publication analysis on *IEEE Xplore*, 1,926 out of 8,971 DT papers (21.4%) are vehicle related. VTS participation in *JDPTI* will be a new opportunity to create synergy in related topics in the Society.

IEEE Sensors Council

VTS Representative: Jie Gao

The IEEE Sensors Council (<https://iee-sensors.org>) focuses on the theory, design, fabrication, manufacturing, and application of devices for sensing and transducing physical, chemical, and biological phenomena, with an emphasis on the electronics, physics, and reliability aspects of sensors and integrated sensor-actuators. The IEEE Sensors Council serves the sensor community with its well-recognized publications, conferences, and technical committees.

In October, the fall 2024 Administrative Committee meeting will take place in Kobe, Japan, in conjunction with the 23rd IEEE Conference on Sensors, the Council's largest and longest-established conference.

The VTS was one of the 14 founding Societies when the Council was established in 1998. VTS members are encouraged to publish in the Council's (co)sponsored journals and conferences, volunteer in publication editing and conference organizing activities, participate in educational events, and network with people from other member Societies of the Council.

IEEE Systems Council

VTS Representative: Fabrice Labeau

Established in 2005, the IEEE Systems Council (<https://ieeesystem>

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council.org) promotes, encourages, and supports the technical, academic, and application aspects of systems engineering and systems thinking through its own activities and with its Society members through joint activities for the growth of Council affiliate membership, member Society membership, and addressing overall global challenges.

Upcoming conferences of the Council include the 2024 International Symposium on Systems Engineering in October and the 2024 International Conference on Recent Advances in Systems Science and Engineering in November.

IEEE Transportation

Electrification Council

VTS Representative: Giambattista Grusso

The IEEE Transportation Electrification Council (<https://tec.ieee.org>) is the newest IEEE Council. It coordinates broad and deep activities throughout IEEE in the growing electrification revolution across transportation domains, including advances in electric and hybrid cars, more-electric ships and aircraft, rail systems, personal transport, and the motive, storage, power grid, electronic intelligence, and control technologies that make them possible. The Council creates leadership, professional development, standards development, and other opportunities for practitioners, researchers, students, and all IEEE Members interested in electric transportation.

The Council is currently very active in promoting training activities, webinars, and other events to support vehicular electrification and transportation.

Technical Communities

IEEE Blockchain Technical Community

VTS Representative: Haojin Zhu

The objective of the IEEE Blockchain Technical Community (BCTC) (<https://blockchain.ieee.org>) is to serve as a collaboration hub to facilitate and lead educational, technical, and standards development across the multidisciplinary communities interested in blockchain, distributed ledgers, and related technologies.

Examples of the BCTC conferences in 2024 include

- the 6th IEEE International Conference on Blockchain and Cryptocurrency, 27–31 May, Dublin, Ireland
- the 6th IEEE International Conference on Decentralized Applications and Infrastructures, 15–18 July, Shanghai, China
- the 3rd IEEE International Conference on Blockchain and Distributed Systems Security, 17–19 October, Pune, India.

VTS members are invited to join the BCTC and access valuable resources, including web portals, e-newsletters, conferences, educational opportunities, publications, and standards development. Members can participate in the development of standards and contribute to the advancement of blockchain technology within the vehicular technology field.

IEEE Technical Community for Climate Change

VTS Representative: Giambattista Grusso

The IEEE Climate Change Technical Community (<https://climate-change.ieee.org>) is for those seeking to utilize engineering pathways to

THE COUNCIL CREATES LEADERSHIP, PROFESSIONAL DEVELOPMENT, STANDARDS DEVELOPMENT, AND OTHER OPPORTUNITIES FOR PRACTITIONERS, RESEARCHERS, STUDENTS, AND ALL IEEE MEMBERS.

stabilize our planet's climate, mitigate circumstances caused by climate change, and make significant contributions to achieve comprehensive decarbonization. Community members reflect a balance of multistakeholder constituencies across many IEEE disciplines. Research from IEEE scientists in this sector cover areas such as sustainable energy systems, climate-resilient infrastructure, wildfire mitigation, weather pattern systems, and ozone recovery.

VTS members are encouraged to join the community to receive communications about networking opportunities, conferences, meetings, special events, other IEEE engagement opportunities, and more. In addition, you will receive a monthly newsletter. We hope you will engage in conversation and discussions with your peers via the IEEE Climate Change Technical Community.

IEEE Future Networks Community
VTS Representative: Abbas Jamalipour

IEEE Future Directions launched the IEEE 5G Initiative in December 2016. To better reflect the IEEE contribution to current and future generations of telecommunication systems, the initiative was rebranded as IEEE Future Networks, with the tagline "Enabling 5G and Beyond," in August 2018. In January 2023, IEEE Future Networks transitioned out of IEEE Future Directions to become the IEEE Future Networks Community (<https://futurenetworks.ieee.org>), sponsored by a consortium of nine

IEEE Societies, including the VTS, and two special interest groups, IEEE Women in Engineering and IEEE Young Professionals.

The VTS is very active in the IEEE Future Networks Community. VTS members can become a member of IEEE Future Directions for free (normally US\$5) and access resources including the "International Network Generations Roadmap"; webinars and e-learning; conferences and events, such as the flagship IEEE Future Networks World Forum; publications; podcasts; and the IEEE Future Directions Resource Center. IEEE Future Networks also assists in funding small projects for its members.

Abbas Jamalipour, the IEEE Future Networks VTS representative and VTS past president, served as the general cochair of the 2023 IEEE Future Networks World Forum, in November. He will serve as general cochair once more for the 2024 IEEE Future Networks World Forum, to be held in Dubai, United Arab Emirates, during 15–17 October 2024.

IEEE Smart Grid Community
VTS Representative: Ricardo Pinto de Castro

The IEEE Smart Grid Technical Community (<https://smartgrid.ieee.org/>) is the leading provider of globally recognized smart grid information. The IEEE Smart Grid initiative is intended to organize, coordinate, leverage, and build upon the strength of various entities within IEEE with smart grid expertise and interest.

The IEEE Smart Grid initiative brings together IEEE's broad array

of Technical Societies and organizations through collaboration to encourage the successful rollout of technologically advanced, environment-friendly, and secure smart grid networks around the world.

The Smart Grid field of interest was featured at the VTS-sponsored 2023 IEEE Vehicle Power and Propulsion Conference, with a tutorial entitled "Strategies for Electric Vehicle Charging Management: A Comprehensive Demand Response Approach" and a special session on "Integration of the Flexibility Potential of Electric Vehicles into the Energy System." There will be a smart grid tutorial at the 2024 IEEE Vehicle Power and Propulsion conference, in Washington, DC, USA, in October.

The IEEE Smart Grid Community can provide expertise and guidance for VTS members involved in the modernization and optimization of the grid. VTS members can also participate in the creation, promotion, and dissemination of smart grid knowledge via webinars, white papers, discussion panels, tutorials, or special sessions at IEEE events.

VTS members interested in engaging in this community are welcome to reach out to ricardo.decastro@ieee.org.

I would like to thank all the VTS representatives to the Councils and Technical Communities for their contributions within these organizations and Katie Becker Colón for her help in putting this article together. As always, I would like to know how the VTS can better serve you. Please do not hesitate to contact me with your ideas, suggestions, comments, questions, or concerns. If you have not already engaged in one of the Councils or Communities introduced here, I hope you will consider doing so in 2024!

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