CONFERENCE PROGRAM

（Draft Version）

Istanbul, Turkey | September 24-26, 2025

Co-sponsored by

IEEE Turkey Section

Gazi Üniversitesi 1926

Azərbaycan memarlıq və inşaat universiteti

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Welcome Message

We are delighted to welcome you 2025 12th International Conference on Electrical and Electronics Engineering (ICEEE 2025) held in Istanbul, Turkey from September 24 to 26, 2025. This milestone edition brings together leading researchers, engineers, industry experts, and practitioners to explore the latest advancements, challenges, and opportunities in electrical and electronics engineering, and their transformative applications.

ICEEE 2025 serves as a premier forum for sharing cutting-edge research, innovative solutions, and emerging technologies shaping the future of data-driven computing. Over three days, the conference will feature keynote speeches, technical sessions, workshops, and presentations covering a wide spectrum of topics, such as Power Electronics, Control Systems, Signal Processing, Communication Systems, and many more.

As a key component of ICEEE 2025, we are proud to host and its workshop 2025 4th International Conference on Computer Engineering, Technologies and Applications (CETA 2025), dedicated to advancing research in software and information engineering, computer theory and technology, computer science and engineering, and many more.

Our program this year includes an impressive array of keynote speeches, invited speeches, technical sessions, and workshops, designed to provide valuable insights and inspire new approaches to education. We are honored to feature prominent speakers who will share their expertise on various topics, including the latest advancements in online education, innovative teaching methods, and the role of technology in shaping learning experiences.

We appreciate the dedication of all authors, reviewers, and participants who contribute to the intellectual vitality of ICEEE & CETA. Your engagement fuels progress in these critical fields. May this conference inspire meaningful discussions, foster collaborations, and accelerate innovations that address global challenges.

Welcome to Istanbul, and enjoy ICEEE & CETA 2025!

ICEEE & CETA Organizing Committee
September, 2025

On-site Conference Information

Conference Venue

Ottoman's Life Hotel Deluxe
Address: Molla Gürani Mah. Molla Gürani Cad. No: 8/16 Fatih 34093 İstanbul / Türkiye
Room Booking Link:
https://www.ottomanslifedeluxe.com/
RESERVATION CODE NAME: ICEEE & CETA

Single Superior Room Rate € 127,40
Double Superior Room Rate € 140,40
Prices are inclusive of VAT, accommodation tax and open buffet breakfast

Emergency Call

- ✓ Comprehensive Emergency Service: **112**

Average Temperature During the Conference

16℃ - 25℃

Presentation Tips

- ✓ The duration of a presentation slot is 15 minutes. Please prepare your presentation for 12 minutes & 3 minutes for questions from the audience;
- ✓ An LCD projector & computer will be available in every session room for regular presentations;
- ✓ Presentations MUST be uploaded at the computer at least 15 minutes before the session start.

Dress Code

- ✓ All participants are kindly requested to dress formally, as casual wear is discouraged.
- ✓ National formal dress is welcome.

Attention Please

- ✓ Please ensure the safety of your belongings in public areas. For personal and property security, delegates are advised to wear their identification badges during the conference and refrain from lending them to unauthorized individuals. The conference cannot be held responsible for the loss of personal items.

Online Conference Information

ZOOM Platform
Download Link: https://zoom.us/download

ZOOM INFORMATION Passcode: 2426	
ROOM A	https://us02web.zoom.us/j/85438342652
ROOM B	https://us02web.zoom.us/j/86002257904

Time Zone
- ✓ **İstanbul Standard Time, UTC/GMT +3**
- ✓ Please make sure that both the clock and the time zone on your computer are set to the correct standard time.

Sign In and Join
- ✓ Join a meeting without signing in: A Zoom account is not required if you join a meeting as a participant, but you cannot change the virtual background or edit the profile picture.
- ✓ Sign in with a Zoom account: All the functions are available.

Additional Suggestions
- ✓ A computer with an internet connection (wired connection recommended)
- ✓ USB plug-in headset with a microphone (recommended for optimal audio quality)
- ✓ Webcam (optional): built-in or USB plug-in
- ✓ Stable internet connection
- ✓ Quiet environment
- ✓ Proper lighting

Presentation Tips
- ✓ Each presentation slot is 15 minutes. Please prepare to speak for around 12 minutes, allowing 3 minutes for audience questions.
- ✓ Join the meeting room at least 10 minutes before the session begins.

Zoom Test
- ✓ Prior to the formal conference, presenter shall join the test room to make sure everything is on the right track.
- ✓ For presenters, please rename Zoom Screen Name in “Paper ID - Name” format before entering meeting room.

Conference Recording

- ✓ The entire conference will be recorded. If any participant objects to being recorded during their presentation, they are requested to inform the organizers in advance.
- ✓ The recording will be paused accordingly during their segment. Attendees are expected to dress formally and maintain appropriate decorum throughout the event.
- ✓ The recording is intended solely for conference-related purposes and academic publications. It is strictly prohibited to distribute, use commercially, or utilize the recording for any illegal activities.

Event at a Glance

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Daily Schedule – September 24, Wednesday

For On-site Participants

10:00-16:00	**Sign in and Collect Conference Materials** Location: Lobby of Ottoman's Life Hotel Deluxe Molla Gürani Mah. Molla Gürani Cad. No: 8/16 Fatih 34093 İstanbul, Türkiye

For Online Participants - ZOOM Test

09:00-12:00	**ZOOM Test for Committees / Session Chairs** ROOM A https://us02web.zoom.us/j/85438342652 Passcode: 2426
09:00-12:00	**ZOOM Test for Authors** ROOM B https://us02web.zoom.us/j/86002257904 Passcode: 2426

Daily Schedule – September 25, Thursday

Venue: B1 Floor, Ballroom, Ottoman's Life Hotel Deluxe		
Host: **Mahir Dursun**, Gazi University, Turkey		
Opening Ceremony		
09:00-09:05	**Welcome Message** **Mahir Dursun,** Gazi University, Turkey	
Keynote Speeches		
09:05-09:50	**Keynote Speech I:** *Measuring with Artificial Intelligence: Opportunities, Challenges, and Future Perspectives* **Leopoldo Angrisani,** University of Napoli Federico II, Italy	
09:50-10:20	Group Photo & Coffee Break	
10:20-11:05	**Keynote Speech II:** *The Symbiotic Future of AI, Mechatronics, and Biomedical Innovation* **Hüseyin ÜVET**, Yildiz Technical University, Turkey	
11:05-11:50	**Keynote Speech III:** *Energy and Infrastructure for Sustainable Electrification* **Gokturk Poyrazoglu**, Ozyegin University, Turkey	
11:50-14:00	Lunch | Lobby Floor, Winter Garden	
Author Presentation		
14:00-16:00	**Onsite Session 1** **Power Electronics Equipment Design and Device Simulation** CE1165 CE1168 CE1171 CE1108 CE1160 CE2232 CE3196	Ballroom B1

14:00-16:00	**Onsite Session 2** **Data computation and intelligent algorithms in digital information systems** CE1175 CE1005 CE3041 CE3042 CE3049 CE1011 CE1104-A CE2217	Maide Hall Lobby Floor
14:00-16:00	**Onsite Session 3** **AI-based Intelligent Systems and Innovative Applications** CE3194 CE2029 CE1016 CE2253 CE3045 CE3048	Fatih Room B1
14:00-16:00	**Onsite Session 4** **Control Models and Stable Operation in Power Systems** CE1170 CE1164 CE1149 CE1167 CE3008 CE2262 CE2195 CE2244	Divan Room B1
16:00-16:30	Coffee Break	
16:30-18:30	**Onsite Session 5** **Control Models and Structural Control in Complex Systems** CE1146 CE1176 CE2001 CE2187 CE1177 CE2026 CE2027 CE1136	Ballroom B1
16:30-18:30	**Onsite Session 6** **New Clean Energy Development and Energy Storage Technologies** CE2241 CE1113 CE2265 CE1141 CE3006-A CE1126 CE1134 CE3185	Maide Hall Lobby Floor
16:30-18:30	**Onsite Session 7** **Photovoltaic Panels and Power Generation Systems** CE3184 CE1125-A CE1133 CE1162-A CE1178 CE3176 CE2209 CE2257	Fatih Room B1

16:30-18:30	**Onsite Session 8** **Wireless Communication Systems and Security Analysis** CE2212 CE3003 CE2249 CE3179 CE3180 CE3007	Divan Room B1
18:30-20:30	Dinner | Lobby Floor, Winter Garden	

Daily Schedule – September 26, Friday

Onsite Author Presentation		
Venue: Ottoman's Life Hotel Deluxe		
09:00-11:00	**Onsite Session 9** **Electronic Device Design and Simulation Analysis** CE1110 CE1148 CE1158 CE1161 CE1145-A CE1172 CE2201	Maide Hall Lobby Floor
09:00-11:00	**Onsite Session 10** **Fault Location and Safety Detection in Modern Intelligent Power Systems** CE2202 CE1147-A CE1107 CE2199 CE3004 CE2259 CE1144	Fatih Room B1
11:00-11:30	Coffee Break	

Online Author Presentation		
Zoom ROOM A: https://us02web.zoom.us/j/85438342652 Zoom ROOM B: https://us02web.zoom.us/j/86002257904 Passcode: 2426		
09:00-11:15	**Online Session 1** **Electrical Equipment Fault Analysis and Reliability Prediction** CE1122 CE1109 CE1130 CE1138 CE1152 CE2211 CE1119 CE2248 CE2272 CE1008	Room A
09:00-11:45	**Online Session 2** **System Control and Optimal Configuration in Intelligent Electrical Systems** CE2254 CE1015 CE2190 CE2247 CE2267 CE2268 CE3195 CE3197 CE3193 CE2269 CE2270	Room B

11:45-13:30	Break Time	
13:30-15:30	**Online Session 3** **Performance Monitoring and Safety Detection in Communication Networks** CE1112 CE1007 CE1142 CE2188 CE2207 CE2213 CE1150 CE2240 CE3182 CE2022	Room A
13:30-16:00	**Online Session 4** **Modern Image and Signal Processing Technologies** CE1132 CE2193 CE2194 CE3051 CE2028 CE3046 CE1009 CE2219 CE1163 CE2233	Room B

Keynote Speaker

Leopoldo Angrisani

IEEE Fellow
University of Napoli Federico II, Italy
MedITech Competence Center I4.0 - Technical-Scientific
Committee Coordinator

Speech Time: 09:05am-09:50am, September 25
Location: B1 Floor, Ballroom

Leopoldo Angrisani is Full Professor of Electrical and Electronic Measurements with the Department of Information Technology and Electrical Engineering of the University of Naples Federico II, Italy. He is also Chair of the Board of the Ph.D. Program ICTH - Information and Communication Technology for Health of the University of Naples Federico II.

His research activity has always been focused on topics related to electrical and electronic measurements. He currently pays attention to the role of measurement in the IoT field and, more generally, in the Industry 4.0 and Health 4.0 fields, cyber-physical measurement systems, measurement of ICT systems sustainability and sustainability of measurements, sensors, sensor networks, and measurement methods in precision agriculture and livestock farming, operation and performance assessment of communication systems, equipment, and networks, measurement uncertainty, impact of quantum technologies on measurements, metrological characterization of advanced human-to-machine interfaces.

He was and is currently involved in many industrial research projects, in cooperation with small, medium, and great enterprises, for which he played and is currently playing the role of scientific coordinator. He is currently the Coordinator of the Technical/Scientific Committee of MedITech – one of the eight Italian Competence Centers on I4.0 enabling technologies.

He is Fellow Member of the IEEE Instrumentation and Measurement and Communications Societies. He was Honorary Chairman of the first (M&N 2019) and second (M&N 2022) edition of the IEEE International Symposium on Measurements & Networking, General Chairman of the second edition (MetroInd4.0&IoT 2019) of the IEEE International Workshop on Metrology for Industry 4.0 and IoT, and General Chairman of the first edition (IEEE MeAVeAS 2023) of the IEEE International Workshop on Measurements and Applications in Veterinary and Animal Sciences. He is vice-chair of the Italian Association “GMEE-Electrical and Electronic Measurements Group”, and corresponding member of the Accademia Pontaniana in Naples, the oldest Italian academy, with almost 600 years of history, which has always brought together renowned Neapolitan scholars.

In 2009, he was awarded the IET Communications Premium for the paper entitled “Performance measurement of IEEE 802.11b-based networks affected by narrowband interference through cross-layer measurements” (published in IET Communications, vol. 2, No. 1, January 2008).

The IEEE Instrumentation & Measurement Society Italy Chapter, which he has been

chairing since 2015, was awarded in 2016 the prestigious recognition “I&M Society Best Chapter Award” by the IEEE Instrumentation & Measurement Society, in 2017 the prestigious recognition “Most Improved Membership Chapter for 2016” by the IEEE Italy Section, in 2018 the prestigious recognition “Most Innovative Chapter 2018” by the IEEE Italy Section, and in 2021 the prestigious recognition "Chapter of the Year 2021" by the IEEE Region 8 (Europe, Middle Est, Africa).
In 2021, he was awarded the prestigious recognition “2021 IEEE Instrumentation and Measurement Society Technical Award” with the following citation “For contributions in the advancement of innovative methods and techniques for communication systems test and measurement”.

Measuring with Artificial Intelligence: Opportunities, Challenges, and Future Perspectives

Abstract: Artificial Intelligence (AI) is becoming increasingly relevant in many areas of engineering, ranging from electronics and telecommunications to robotics and biomedical engineering, among others. Metrology is not extempt form this trend. As a matter of fact, AI models are also starting to play a significant role in measurement tasks, especially when direct measurement of a physical quantity is complex, expensive, or not feasible. For instance, AI models can be used to estimate temperature, pressure, or displacement by processing signals or images that are easier to acquire. In simple terms, an AI model can be seen as a system that learns how to relate input quantities (usually called predictors) to output quantities (what we want to measure). Unlike traditional measurement framework, however, AI models do not follow deterministic physical laws, but rather learn their behavior from training data. This introduces an additional source of uncertainty as the model’s performance depends on the quality of the training data, the model structure, and the way it was configured. These aspects affect the trustworthiness in the output provided, and need to be considered alongside the established uncertainty contributions related to input data acquisition.
In this talk, a practical approach is presented to identify and evaluate the uncertainty introduced by the adoption of an AI model. Strategies are also outlined to reduce this uncertainty, allowing AI-based outputs to be considered as fully-fledged measurement results. This perspective opens the door to tangible benefits for our society, increasingly shaped by data-driven technologies and AI.

Keynote Speaker

Hüseyin ÜVET

Yildiz Technical University, Turkey

Speech Time: 10:20am-11:05am, September 25
Location: B1 Floor, Ballroom

Dr. Huseyin Uvet is an Associate Professor in the Department of Mechatronics Engineering at Yildiz Technical University. He holds a Bachelor of Science in Computer Engineering and pursued his graduate studies at Osaka University in Japan, where he earned both a Master of Science and a Ph.D. in System Innovation, supported by the prestigious Japanese Government (Monbukagakusho) Scholarship. Following his doctoral studies, he was awarded the Japan Society for the Promotion of Science (JSPS) Fellowship to conduct post-doctoral research at Nagoya University's Micro-Nano Mechatronics Center. With over 15 years of experience, Dr. Uvet has established himself as an expert in healthcare robotics, AI-driven medical technologies, and sports engineering. His research focuses on micro-nano robotics, holographic imaging, AI-based diagnostics, and autonomous systems. He has a proven record of leading large-scale R&D projects, securing over $10 million in research funding from institutions such as the European Union and The Scientific and Technological Research Council of Turkey (TÜBİTAK). Dr. Uvet has successfully bridged the gap between engineering and medicine by developing groundbreaking solutions, including robotic surgical systems and AI-powered diagnostic tools. His expertise is highly sought after, and he has provided senior consultancy services to numerous prominent organizations. His consulting portfolio includes collaborations with TURKCELL on IoT 4.0 integration and digital health technologies, Turkish Airlines on a VR Flight Simulator Program, DHL Logistics on warehouse automation systems, and the Antalya Muratpaşa Municipality on Smart Cities programs and EU projects. As an entrepreneur for two R&D startup companies and a leader in academic and administrative roles, Dr. Uvet has consistently driven innovation. His work is documented in numerous patents and high-impact publications, reflecting his significant contributions to mechatronics, and biomedical and sports technologies.

The Symbiotic Future of AI, Mechatronics, and Biomedical Innovation

Abstract: Today's toughest engineering problems call for answers that go beyond old-school boundaries. The fusion of smart computing with cutting-edge mechanical systems is opening doors, especially in medicine. This talk dives into how these fields work together, showing how clever algorithms and intricate machine designs are steering the future of tech.

We'll look at this blend from different angles. On the big-picture side, we'll talk about how sharp, efficient algorithms are transforming medical diagnostics with top-notch image

analysis. On the smaller scale, we'll dig into how smart control systems and high-precision vision tech allow tiny robots to move with pinpoint accuracy and spark new devices using effects like fluid dynamics. Pulling from a range of projects—like cancer detection powered by intelligent systems or guiding miniature robots without wires—this speech will shine a light on the vital role of engineers who bridge disciplines to turn complex ideas into real-world solutions that make a difference.

Keynote Speaker

Gokturk Poyrazoglu

Senior Member, IEEE
Department Head, Electrical & Electronics Engineering
Director, Grid Operations and Planning Laboratory
Ozyegin University, Istanbul, Türkiye

Speech Time: 11:05am-11:50am, September 25
Location: B1 Floor, Ballroom

Dr. Gokturk Poyrazoglu is an Electrical Engineer and Assistant Professor at Ozyegin University, Istanbul, where he leads the Electrical & Electronics Engineering Department and directs the Grid Operations and Planning Laboratory. He also serves as the Standards Coordinator for IEEE Türkiye.

He earned his M.Sc. (2013) and Ph.D. (2015) in Electrical Engineering from the State University of New York at Buffalo, USA. Before joining academia, Dr. Poyrazoglu gained industry experience in the USA as a Scientist at Mitsubishi Electric Research Laboratories (MERL, Boston), a Power Systems Consultant at Alevo Analytics (Charlotte, NC), and a Grid Operations and Planning Scientist at EPRI (Electric Power Research Institute). Since 2017, he has been a faculty member at Ozyegin University.

Dr. Poyrazoglu is recognized for his leadership in university–industry collaboration. He was awarded the “University-Business World Cooperation Award” at the 2022 YÖK Outstanding Achievement Awards for his ‘Harvesting Energy Efficiency in the Electric Distribution Sector’ project (TRAFORM), conducted in partnership with eight electric distribution companies and ELDER, with support from EPDK.

He also won the “Best Paper Award” at IYCE’24 in France for his co-authored study on the spatio-temporal impacts of EV charging loads on locational marginal prices, a key contribution to sustainable energy markets and EV infrastructure planning.

His research portfolio includes over 50 international peer-reviewed journal and conference publications, with active contributions to recent works in areas such as economic dispatch with physics-informed learning, EV charging hosting capacity, overvoltage mitigation in PV-rich networks, and sustainable nanogrid techno-economic assessments.

Dr. Poyrazoglu’s core research interests lie in energy economics, operations research in energy systems, renewable energy integration, smart grid applications, and power system monitoring and control, particularly focusing on power grid resilience, efficiency, and e-mobility integration.

Energy and Infrastructure for Sustainable Electrification

Abstract: The global energy landscape is undergoing a rapid transformation driven by decarbonization, decentralization, and digitalization. At the center of this transformation lies sustainable electrification, which requires the integration of renewable energy resources

and the development of flexible, resilient, and intelligent infrastructures.
This keynote will address electrification's technical, economic, and regulatory dimensions, with a particular emphasis on distribution networks, energy storage systems, and e-mobility integration. The talk will showcase pioneering initiatives such as the country's first battery implementation at the distribution level, the first sustainable EV charging pricing model, and university–industry partnerships that have set new energy efficiency and digitalization standards.
Special attention will be given to grid flexibility, forecasting, and optimization frameworks, where artificial intelligence and operations research play an increasing role in managing uncertainty and ensuring efficiency. The keynote will also discuss the evolving role of distribution system operators and highlight how regulatory mechanisms, market design, and innovative business models can accelerate sustainable electrification.