

## Preface

We are pleased to present the proceedings of the IEEE Power and Energy Student Summit 2025 held at the Technical University of Munich. This event continues a proud tradition that began in 2009, traveling across leading universities in Germany before making its way to Munich for the 2025 summit.

The Power and Energy Student Summit has always been more than a conference. It is a platform where young engineers, researchers, and industry professionals come together to exchange ideas, share innovations, and strengthen the bridge between academia and industry. As we face the global challenges of the energy transition in ensuring sustainability, security, and access, developing a strong and capable workforce is essential. This summit contributes to encouraging dialogue, learning, and networking among the next generation of power and energy experts.

The 2025 program reflected this mission, offering a range of technical sessions, presentations, and opportunities for interdisciplinary exchange. We hope the contributions collected in these proceedings will not only document the insights shared during the summit but also inspire continued research and collaboration in the field.

We extend our sincere appreciation to our Gold Sponsor, Siemens Energy, and our Silver Sponsors, DIgSILENT and OMICRON electronics for their generous support. We also acknowledge the efforts of the organizing team at the TUM Chair of Electric Power Transmission and Distribution and the Center for Combined Smart Energy Systems (CoSES) at TUM, whose dedication made this event possible.



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