

Preface

With great pleasure and profound delight, I extend a warm welcome to all the participants of the 13th NEIS Conference.



We are honoured to host numerous highly motivated researchers in Hamburg for our hybrid event.

Our journey began in 2013 with the vision of a modest conference, focusing on innovative approaches in the field of electrical power systems. Since then, our mission has remained, to present, cutting-edge research and to encourage scholarly exchange between academia and industry. In 2016, we adopted English as the conference language to establish an international platform for emerging scientists, committed to promoting open knowledge sharing, fresh perspectives, and novel methodologies.

What began as the "Konferenz für Nachhaltige Energieversorgung und Integration von Speichern," or NEIS, has grown into the "NEIS Conference on Sustainable Energy Supply and Energy Storage Systems." Over the years, we have had the pleasure of welcoming international keynote speakers and participants who have brought fresh perspectives and global connections to our community. Since 2017, the IEEE PES German Chapter Board has partnered with us in organizing the conference, with further support from the Cluster Renewable Energy Hamburg. We sincerely thank our collaboration partners for their invaluable support.

This year's conference maintains its focus on electrical power grids and related topics, covering advancements in renewable energy sources, AI-driven solutions, and practical strategies for power system planning, optimization, and management. We received an impressive total of over 77 abstract submissions. After a thorough, double-blind peer review process, 41 full papers have been accepted for presentation and publication.

Our conference included two thought-provoking keynote presentations. Prof. Mohamad Ramadan, Senior Research Associate at the Université d'Angers, France, and Professor in the Thermofluids Group at the Lebanese International University, Lebanon, presented on the topic "Green to Green Energy Systems: A Step Forward Toward an Optimal Energy Policy."

Prof. Martin Kaltschmitt, Head of the Institute of Environmental Technology and Energy Economics (IUE) at the Technische Universität Hamburg (TUHH), delivered his keynote on "Increasing Shares of Fluctuating Power Generation within Electricity Supply Systems – Trends and Implications".

This year, our conference was enhanced by exhibition booths provided by *morEnergy GmbH*.

We sincerely thank our keynote and session speakers, whose expertise greatly enriched the discussions throughout the conference. We also extend our gratitude to the session chairs, reviewers, the scientific advisory board, and the authors who presented their work, all of whom played an essential role in maintaining the high quality of the conference.

Following the first day of the conference, we enjoyed a boat tour on the Elbe River, taking in Hamburg's evening skyline from the water while sharing good food and drinks.

Behind the scenes, our committed team of scientists and assistants ensured the smooth running of this hybrid conference. This year's event was carefully planned and expertly managed by the Organizing Committee, consisting of Dr. Khaled Alosmani, Dr. Munira Halimjanova, and Arash Nosrat. We sincerely thank the committee and the entire support team for their steadfast dedication.

Organizing, planning, and running this hybrid conference was, as always, a challenging task. As part of the complex planning, we introduced an open live stream on our website. We also employed a central online conference management platform to simplify submissions and registrations. We extend our thanks to everyone involved for the countless hours devoted to ensuring the conference's success.

Lastly, our gratitude extends to Mr. Manuel Sommer and his team from the HSU Media Centre for providing invaluable audio-visual media equipment and support.

As NEISbear, our beloved polar bear mascot, celebrated its forth birthday, sporting a violet t-shirt this year, it has become a symbol of our shared commitment to minimizing the climate impact of energy production, transmission, and use. From an unexpected laboratory visitor to a cherished conference mascot, NEISbear's journey is not only a story of resilience but also a powerful reminder that positive change is possible, even in the face of challenges.

We are very pleased that students of the Kunstschule Wandsbek (Wandsbek Art School) created a video for us telling the full story of the NEISbear. Please enjoy this video on our conference website: neis-conference.com



We look forward to welcoming you again at the next NEIS Conference on September 21st and 22nd, 2026, as a hybrid event offering both virtual and in-person participation in Hamburg!

Detlef Schulz

Hamburg, October 2025