

## Preface

It was a great pleasure and I was very delighted to welcome the participants to the 10th NEIS conference! After two years of a purely virtual conference, it was an honour to welcome so many highly motivated researchers in Hamburg to our first hybrid event. Fortunately, a personal exchange between the participating scientists was once again possible.



This year, we celebrated an anniversary: 10 years of NEIS conference.

In 2013 we started with the idea of a small conference with a focus on innovative approaches in the field of electrical power systems. The intention was and still is to present new research results and stimulate the scientific exchange between academics and industry. In 2016 we switched to the English language to establish an international platform for young scientists. We want to give the opportunity for an open and inspiring exchange of knowledge, new approaches, and new methodologies. What was the Konferenz für Nachhaltige Energieversorgung und Integration von Speichern, in short NEIS, now became the NEIS Conference on Sustainable Energy Supply and Energy Storage Systems. Ever since we have had international keynote speakers and participants who bring new impulses and contacts to the international community.

Since 2017 we organize the conference with the support of the IEEE PES German Chapter Board. This conference is further supported by the Cluster Renewable Energy Hamburg and I would like to thank our cooperation partners for their valuable support!

This year the conference again focuses on electrical power grids and grid-related aspects such as load management, power system measurements and identification methods, as well as energy storage systems, and grid integration of electro-mobility.

We received more than 60 abstracts. After the reviews, 35 full papers were accepted for presentation and publication. The authors, speakers, and participants came from Austria, Denmark, Greece, Norway, Spain, Thailand, and Germany.

Three inspiring keynote presentations showed new insights into this topic. Prof. Henrik Lund from Aalborg University in Denmark presented insights on “Smart Renewable Energy Systems and Decarbonisation”. Prof. René Hoffmann from the Vienna University of Technology presented his work on “New optimization Paradigms for Sector-Coupled Industrial Energy Systems”. Prof. Nikolaos Hatziargyriou from the National Technical University Athens introduced us to the topic “Resilience Enhancement by Distributed Energy Resources”

To highlight the recent developments in the industry, there was a workshop organized by Sebastian Hubschneider from Opal-RT Germany GmbH on Power Hardware-in-the-Loop and live Q&A in the exhibition room by EGSTON Power Electronics GmbH, morEnergy GmbH, and OPAL-RT Germany GmbH.

Many thanks go to our keynote and session speakers. Their expertise gave great input and impulses to the discussions during the conference sessions. I am grateful for the commitment of the session chairs, the reviewers, the scientific advisory board, and the presenting authors. They ensured again the quality of the conference contributions and discussions.

Our always very engaged team of scientists and assistants guaranteed a trouble-free course of the hybrid conference. This year's conference was planned and managed by the Organizing Committee of Lukas Baum, Dennis Hamann, and Johannes Schröder. I want to express many thanks to the committee and the whole supporting team. Thank you very much for your preparation work and your engagement! Organizing, planning, and implementing this hybrid conference was again a new challenge. An open live stream on our webpage was only the tip of the iceberg. As well, this year, they introduced a central online conference management platform, which hopefully streamlined the submission and registration process. Thank you for the countless hours spent managing this conference. Well done! Also, my thanks go to Manuel Sommer from the HSU Media Centre, for providing the audio-visual media equipment and valuable support.

Speaking of icebergs: During the hot summer a very special guest showed up in our laboratories. Looking for colder climates and attracted by our climate-controlled labs, the NEISbear showed up. As a polar bear, he is one of the best-known animals affected by climate change. The NEISbear will stay with the NEIS conference as the conference-mascot, and as a symbol to do our best to reduce the climate impacts of energy production, transmission, and usage.

*Detlef Schulz*

Hamburg, October 2022



## Conference Organisation

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