

Preface

The transition of the electrical power system from centralized power generation to distributed generation without fossil and nuclear fuels is the great challenge of the next decades for the energy sector. Complex technical ever-changing issues have to be investigated by researchers and energy companies.

The NEIS 2017 was the fifth conference „Conference on Sustainable Energy Supply and Energy Storage Systems“. The NEIS provides a yearly occasion for scientists to present their current work. It is organised by the Chair of Electrical Power Systems of the Helmut Schmidt University/University of the Armed Forces Hamburg. In 2017, the NEIS was technically co-sponsored by the German chapter of the IEEE Power and Energy Society.

I really appreciate that **Prof. Dr.-Ing. István Erlich** from the University of Duisburg-Essen and **Prof. Dr.-Ing Jian Sun** from the Rensselaer Polytechnic Institute held two inspiring keynote speeches.

Prof. Dr.-Ing. István Erlich held a speech about “**Control Challenges in Power Systems Dominated by Converter Interfaced Generation and Transmission Technologies**”.

Prof. Dr.-Ing Jian Sun talked about „**Analysis and Mitigation of Renewable Energy and HVDC System Resonances**“.

Their expertise gave great inputs and impulses to the discussions in 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 the quality of the conference contributions and discussions. My always very engaged team of scientists and assistants guaranteed a trouble-free course of the conference.

Last but not least, I thank the CEO of the local distribution system operator Stromnetz Hamburg GmbH, Mr. Thomas Volk and his colleagues for the organization of the interesting visit to the modernized 110 kV switch-gear station in Hamburg-Jenfeld.

Detlef Schulz
Hamburg, October 2017