

Prof. Dr.-Ing. Mathias Noe



Current position

Director Institute for Technical Physics and Professor for Applications of High-Temperature Superconductors in Power Systems at KIT

Previous positions

Researcher and Group Leader at Institute for Technical Physics at Research Centre Karlsruhe (1998-2006)

Postdoctoral researcher at Ecole Polytechnique Federale de Lausanne, CH (1997-1998)

Scientific degrees

PhD in electrical engineering, Leibniz University Hanover, Germany (1998)

MSc in Electrical Engineering, Leibniz University of Hanover, Germany (1991)

Recent research topics

Superconducting applications, power system simulation, energy storage integration

Awards, honors, memberships

Spokesperson of Helmholtz Program Energy Storage and cross-linked Infrastructures (2015-2020)

Coordinator EERA joint program Energy Storage (2015-2018)

Publications/Patents (5 most important)

- Y. Liu, F. Schreiner, M. Lao, **M. Noe**, M. Doppelbauer, Design of a superconducting DC demonstrator for wind generators, *IEEE Trans. on Energy Conversion*, Vol. 33, Issue 4, (2018), [doi:10.1109/TEC.2018.2846721](https://doi.org/10.1109/TEC.2018.2846721)
- D. Kottonau, E. Shabagin, **M. Noe**, S. Grohmann, Opportunities for High-Voltage AC Superconducting Cables as Part of New Long-Distance Transmission Lines, *IEEE Trans. Applied Superconductivity*, Vol. 27, Issue 4, (2017), [doi:10.1109/TASC.2017.2652856](https://doi.org/10.1109/TASC.2017.2652856)
- S. Hellmann, M. Abplanalp, L. Hofstetter, **M. Noe**, Manufacturing of a 1-MVA-Class Superconducting Fault Current Limiting Transformer with Recovery-Under-Load Capabilities, *IEEE Trans. on Applied Superconductivity*, Vol. 27, Issue 4, (2017), [doi:10.1109/TASC.2017.2652493](https://doi.org/10.1109/TASC.2017.2652493)
- Y. Li, **M. Noe**, M. Doppelbauer, Feasibility study of a superconducting DC direct-drive wind generator, *IEEE Trans. on Applied Superconductivity*, Vol. 26, Issue 4, (2016), [doi:10.1109/TASC.2016.2536103](https://doi.org/10.1109/TASC.2016.2536103)
- W.T.B. de Sousa, A. Polasek, T.M.L. Assis, R. de Andrade, **M. Noe**, Simulations of resistive and air coil SFCLs in a power grid, *IEEE Trans. on Applied Superconductivity*, Vol. 25, Issue 3, (2015), [doi:10.1109/TASC.2014.2387311](https://doi.org/10.1109/TASC.2014.2387311)