An online Summer School "Characterization and Modeling of Electroceramics" was organized by the Materials Science Department of the Technische Universität Darmstadt in collaboration with the European Ceramic Society on August 21st and 22nd 2020, prior to the Electroceramics XVII online conference. The school was sponsored by the JECS Trust.

There were 57 registered participants coming from 16 countries (Belgium, Brazil, China, Croatia, France, Germany, Ireland, Italy, Netherlands, Portugal, Russian Federation, Saudi Arabia, Slovenia, Spain, Turkey, United States).

The participants learned about the requirements to obtain optimal results from various techniques. Additionally, examples of cutting edge research illustrated the respective advantages and new developments.

High quality courses were given during 2 days by

- James Lebeau Massachusetts Institute of Technology, USA Electron Microscopy
- Wolfgang Donner, Materials Science Department of the Technische Universität Darmstadt, Germany Structural characterization by x-ray diffraction and electron microscopy
- Baixiang Xu, Materials Science Department of the Technische Universität Darmstadt, Germany Phase Field Simulations
- Andreas Klein, Materials Science Department of the Technische Universität Darmstadt, Germany
  X-ray photoelectron spectroscopy (XPS)
- Clive Randall, PennState University, State College, USA Electroceramics Challenges
- Pedro Braga Groszewicz, University of Cambridge, UK Nuclear magnetic resonance (NMR) and electron paramagnetic resonance (EPR) methods
- Till Frömling, Materials Science Department of the Technische Universität Darmstadt, Germany Electrical analysis by impedance spectroscopy
- Karsten Albe, Materials Science Department of the Technische Universität Darmstadt, Germany Ab Initio Calculations
- Steffi Weyand, Materials Science Department of the Technische Universität Darmstadt, Germany Life Cycle Analysis of ceramics
- Nina Balke, Oak Ridge National Laboratory, USA Scanning Probe Techniques

Even though the Summer School was organised online, it was a great success and a good opportunity to exchange ideas between participants and lecturers taking part during those 2 days in the School.



The School was organised in Gather Town