

**Tuesday, June 27, 2023**

8:00 Conference Registration and Coffee/Tea

8:45 Welcome & Introduction to the Conference

Stefan Seelecke, Saarland University

Elena Yorgova-Ramanauskas, Madam State Secretary, Ministry of Economics, Innovation, Digitalization & Energy

Dirk Bähre, Scientific Director, ZeMA gGmbH

KEYNOTE

9:15 Compression-based Elastocaloric Cooling: Advances in Materials and Systems

Ichiro Takeuchi, University of Maryland

POSTERSESSION

10:00 Poster Pitch Presentations (2 mins./Poster)

10:30 COFFEE BREAK / POSTER EXHIBIT

ELASTOCALORIC DEVICES & CONCEPTS I

10:45 Development of a Regenerative Elastocaloric Device

Jaka Tušek, University of Ljubljana

11:45 Elastocalorics – Exergyn’s Technology for Next Generation Heating and Cooling Systems

Paul Groves, Exergyn Ltd.

11:15 The First US DOE Project on Elastocaloric Cooling

Jun Cui, Iowa State University

12:15 LUNCH BREAK / POSTER EXHIBIT

ELASTOCALORIC MATERIALS I

13:00 The Origin of Functional Fatigue in Shape Memory Alloys

Huseyin Sehitoglu, University of Illinois UC

14:00 Supercompatibility and its Role on Fatigue in Shape Memory Materials

Eckhard Quandt, CAU University Kiel

13:30 Customized Shape Memory Alloys for Elastocaloric Applications

Burkhard Maaß, Ingpus GmbH

THERMODYNAMICS OF CALORICS I

14:30 Elastocaloric Materials under Magnetic Field: The Multicaloric Response

Lluís Mañosa, University of Barcelona

15:00 Elastocaloric and Related Mechanocaloric Effects

Antoni Planes, University of Barcelona

15:30 COFFEE BREAK / POSTER EXHIBIT

SOCIAL PROGRAM

16:00 Transfer to UNESCO World Heritage “Völklinger Hütte”

17:00 Guided Tour Historic Steel Plant UNESCO World Heritage “Völklinger Hütte”

19:00 Dinner Restaurant Alter Bahnhof Völklingen, Welcome Note: Reinhard Störmer, Chair of Board of Trustees, Montan-Stiftung-Saar Foundation

22:30 Transfer back to Saarbrücken, Hotel area



Wednesday, June 28, 2023

8:00 Start of Day 2 with Coffee/Tea

KEYNOTE

8:30 The Thermodynamic Competition between B19' Martensite and the R-Phase
Tom Duerig, Confluent Medical Technologies

ELASTOCALORIC MATERIALS II

09:15 Shape Memory Alloy Wire Ropes
John Shaw, University of Michigan

09:45 A Unified Approach to Thermo-Mechano-Caloric Characterization of Elastocaloric Materials
Franziska Louia, Saarland University

LAB TOURS

10:15 Lab Tour iMSL, Round 1 - Coffee Break / Poster Exhibit

10:45 Lab Tour iMSL, Round 2 - Coffee Break / Poster Exhibit

ELASTOCALORIC DEVICES & CONCEPTS II

11:15 Shape Memory Film-based Elastocaloric Cooling
Manfred Kohl, Karlsruhe Institute of Technology

11:45 SMA-based Elastocaloric Cooling/Heating Materials, Structures and Devices
Qingping Sun, Hong Kong UST

12:15 LUNCH BREAK / POSTER EXHIBIT

THERMODYNAMICS OF CALORICS II

13:00 Thermal Control Devices for Caloric Technologies
Andrej Kitanovski, University of Ljubljana

14:00 Thermodynamics and the Concept of Energies for Modeling Elastocaloric Materials
Stefan Seelecke, Saarland University

13:30 Ferroelectric Materials for Heating & Cooling
Xavier Moya, University of Cambridge

MODELING AND SIMULATION

14:30 The First Italian Elastocaloric Device for Air Conditioning
Adriana Greco, University of Naples

15:30 Modeling of Elastocaloric Cooling Systems
Suxin Qian, Xi'an Jiaotong University

15:00 CHECK TEMPERATURE – Heating Control of Electronic Circuits
Claudia Masselli, University of Naples

16:00 COFFEE BREAK / POSTER EXHIBIT

ELASTOCALORIC DEVICES & CONCEPTS III

16:30 Enabling Low-Cost Elastocaloric Cooling with Composite Active Structures
Julie Slaughter, Ames National Laboratory

17:30 Development of Optimized Concepts for Elastocaloric Cooling Applications
Paul Motzki, Saarland University

17:00 Long-term Stability of Elastocaloric Material in a New System Approach
Kilian Bartholomé, Fraunhofer IPM

18:00 END OF CONFERENCE, DINNER