Program DDMC 2019 – Monday 18 November 2019

9:00 – 9:45  Registration
9:45 – 10:00  Opening address

Session 1: Monday 10:00-12:30, Chair: Ch. Bahl

10:00-10:30  F. Cugini, Parma, Italy, Tuning the magnetic and magnetocaloric properties of austenitic Ni_{48}Mn_{34}(In,Sn)_{16} Heusler compounds

10:30-11:00  B. Weise, Dresden, Germany, In-situ investigation of the martensitic transformation in NiMnGa thin films

11:00-11:30  Coffee break

11:30-12:00  M. Fries, TU Darmstadt, Germany, Making a cool choice: the materials Library of magnetic refrigeration

12:00-12:30  I. Batashev, TU Delft, The Netherlands, Ab initio calculations of the magnetocaloric properties of Fe3P-based alloys

12:30-14:00  Lunch break + Posters

Session 2: Monday 14:00-16:00, Chair: M. LoBue

14:00-14:30  G. Allodi, Parma, Italy
55Mn NMR studies on giant magnetocaloric FeMnPSi alloys

14:30-15:00  N. Maraytta, Jülich, Germany
Direct and indirect magnetocaloric effect of MnFeSi and MnGe

15:00-15:30  X.F. Miao, Nanjing, China
In-situ TEM studies on the magnetocaloric transition of (Fe,Mn)_{2}(P,Si)

15:30-16:00  F. Guillou, Hohhot, China, Search for compositional adjustments in EuIn and complementary studies in FeMn(P,Si)

16:00-16:30  Coffee break

Session 3: Monday 16:30-18:30, Chair: L. Caron

16:30-17:00  C. Bahl, DTU, Denmark, Development of a magnetocaloric heat pump towards an innovative multi source heat pump system

17:00-17:30  F. Scheibel, TU Darmstadt, Germany, Exploiting thermal hysteresis by using a multi-stimuli cooling cycle – concept and possible materials

17:30-18:00  A. Gracia-Condal, University of Barcelona, Spain, Caloric and multicaloric effects in metamagnetic Ni-Mn-In under uniaxial stress and magnetic field

18:00-18:15  H. Vieyra, Vacuumshmelze, Germany, Effect of hysteresis on the magnetocaloric properties of LaFeSi alloys for Cryogenic applications

18:15-18:30  S. Lionte, UbiBlue, Strasbourg, France, Mechanical and magnetocaloric characteristics of first order LaFeSi-based materials

19:00  Dinner
Program DDMC 2019 – Tuesday 19 November 2019

Session 4: Tuesday 9:00-10:30, Chair: E. Brück

9:00-9:30  D. Dzekan, IFW Dresden, Germany, Energy harvesting using thermomagnetic generators with magnetocaloric materials

9:30-9:45  L. Beyer, Dresden, Germany, Optimizing the fabrication of magnetocaloric composite wires with different magnetocaloric core materials

9:45-10:00  K. Rajamani, University of Twente, The Netherlands, Experimental investigation of magnetic pumping for magnetocaloric refrigerator applications

10:00-10:15  J.A. Lozano, University of Santa Catarina, Brazil, MagChill: Development of an air conditioner operated by a magnetic refrigeration unit

10:15-10:30  D. Bessas, ESRF, France, Inelastic X-ray scattering for Magneto-Caloric Compounds

10:30-11:00  Coffee break

Session 5: Tuesday 11:00-12:30, Chair: T. Gottschall

11:00-11:30  S. Ahmim, ENS Paris, France, A La-Fe-Si based thermo-magnetic generator

11:30-12:00  N. Sun, Shenyang, China, Microstructure, mechanical and magnetocaloric properties of bulk La_{0.9}Ce_{0.1}Fe_{11.7-x}Mn_{x}Si_{1.3} hydrides

12:00-12:15  Y. Ouyang, Ningbo, China, A high throughput study of magnetocaloric materials: gradient solidification applied to La-Fe-Si

12:15-12:30  C.D. Christiansen, DTU, Denmark, Freeze-casting of monolithic regenerators with micro-channels and varying Curie temperatures for magneto-caloric compounds

12:30-14:00  Lunch break + Posters

Session 6: Tuesday 14:00-16:00, Chair: N.H. van Dijk

14:00-14:30  T. Gottschall, Dresden, Germany, Advanced characterisation of magnetocaloric materials in pulsed magnetic fields

14:30-15:00  X. You, TU Delft, The Netherlands, Synchrotron experiments on LaFeSi alloys

15:00-15:30  L.M. Moreno-Ramirez, University of Sevilla, Spain, When actual effects look like artifacts: deconvolution of the concurrent transitions in Ni-Mn-In Heusler alloys

15:30-15:45  R. Skini, Uppsala University, Sweden, Large magnetocaloric effect at room temperature in Pr_{0.64}Sr_{0.36}MnO_{3} manganite

15:45-16:00  L. Caron, Bielefeld University, Germany, Pressure effect on the magneto-structural phase transition in MnsCuNo.75C 0.25

16:00  Closing remarks

16:00-17:00  Farewell drinks
**Posters DDMC 2019 – Monday 18 & Tuesday 19 November 2019**

**P1**  
H. Ben Khlifa, F. Ayadi, W. Cheikhrouhou-Koubaa, G. Schmerber,  
*Screening of the synthesis route on the structural, magnetic and magnetocaloric properties of La$_{0.6}$Ca$_{0.2}$Ba$_{0.2}$MnO$_3$ manganite: A comparison between solid-solid state process and a combination polyol process and Spark Plasma Sintering*

**P2**  
L. Beyer, T. Gottschall, B. Weise, A. Funk, A. Waske, M. Krautz,  
*Thermal performance of magnetocaloric composite wires in pulsed magnetic fields*

**P3**  
S. Dalvi, M. Shahi,  
*Numerical analysis of magneto-caloric effect within a circular annulus*

**P4**  
F. Erbesdobler, C.R.H. Bahl, R. Bjørk, and K.K. Nielsen,  
*Spatial and temporal characterization device for magnetocaloric effect and phase transitions*

**P5**  
S. Ghorai, R. Skini, S. A. Ivanov, P. Svedlindh,  
*Tuning the magnetocaloric effect towards room temperature by B-site doping in the perovskite La$_{0.8}$Sr$_{0.2}$MnO$_3$*

**P6**  
B. Huang, N.H. van Dijk, E. Brück,  
*A magnetic heat pump prototype for experimental purpose and its multi-layer regenerator bed extension plan*

**P7**  
J. Liang, C.D. Christiansen, K. Engelbrecht, K.K. Nielsen, R. Bjørk, C.R.H. Bahl,  
*Thermodynamic characterization of freeze-cast regenerators*

**P8**  
K. Löwe, H. Vieyra, A. Barcza, M. Katter,  
*Fast measurement of adiabatic temperature changes in LaFeSi-based alloys at cryogenic temperatures*

**P9**  
M. Maschek, X. You, N. van Dijk, E. Brück,  
*Minimization of impurity phases in MnFePSi*

**P10**  
K. Navickaitė, J. Liang, C.R.H. Bahl, K. Engelbrecht, S. Wieland,  
*Experimental performance of passive regenerators with nature-inspired flow structure*

**P11**  
K.K. Nielsen, F. Erbesdobler, C.R.H. Bahl, R. Bjørk  
*Detailed isofield calorimetry of La(Fe,Si,Mn)H revealing localized variation in phase transitions*

**P12**  
D. Nguyen Ba, L. Becerra, N. Casaretto, M. Marangolo, M. LoBue,  
*Growth temperature dependence of phase transformation and of entropy change in gadolinium thick films*

**P13**  
A. Pasko, S. Ahmim, D. Nguyen Ba, M. Trassinelli, M. Marangolo, M. Almanza, F. Mazaleyrat, M. LoBue,  
*Modelling of a La(Fe,Si)$_{12}$-based magnetocaloric material for a thermomagnetic generator*

**P14**  
*Magnetocaloric heat exchangers*

**P15**  
J. Zemen, L. Beran, J. Zázvorka, M. Veis, F. Johnson, D. Boldrin, A. Mihai, B. Zou, L.F. Cohen,  
*Magneto-Optical Spectra of an elastocaloric Antiferromagnet: Theory and Experiment*
P16  F. Zhang, X. You, N. van Dijk, E. Brück,

*Magnetocaloric effect in the (Mn,Fe)2(P,Si) system: from bulk to nano*

P17  C. Frommen, C. Bahl, E. Delczeg, H. Fjellvåg, B.C. Hauback,

*3D printed high entropy alloy micro and nano particles for magnetocaloric energy conversion HI-ENTROPY*

P18  L.M. Moreno-Ramirez, J.Y. Law, V. Franco, A. Conde, I.A. Radulov, K.P. Skokov, O. Gutfleisch,

*Analysis of the field dependence of magnetocaloric effect of La(Fe,TM,Si)13 (TM = Cr,Ni) alloys*

P19  S. Wieland, C. Breitzke,

*Curie-temperature and geometrical variation of La(FeSi)13 heat exchangers produced via laser beam melting*