

SPIN+X
SFB/TRR 173
Kaiserslautern • Mainz



Fachbereich Physik, Mathematik und Informatik

**SONDERTERMIN:
SFB TRR 173 Spin+X - Kolloquium**

**Thursday 30th, 2020 at 10:30 am
online via Skype for Business**

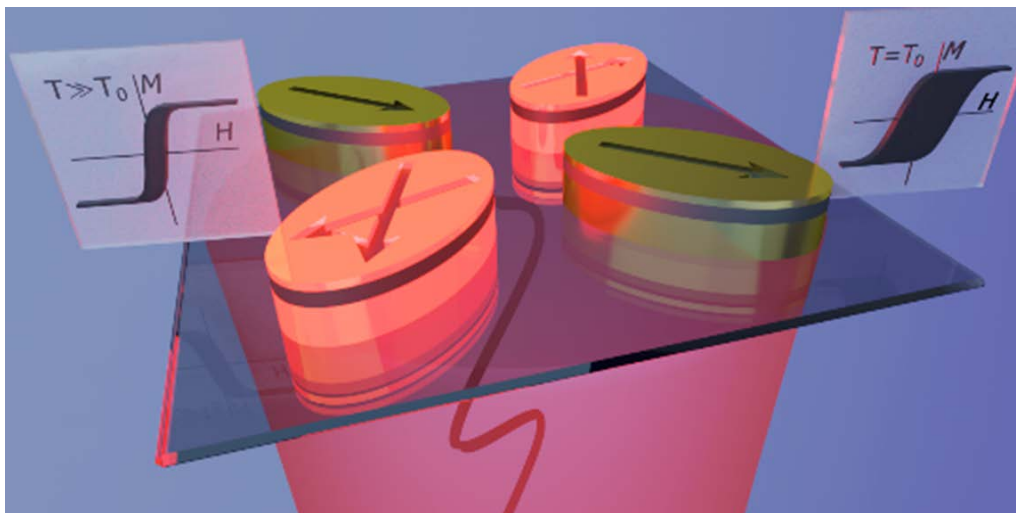
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Artificial Spin Ice: From Frustration to Computation

Artificial spin ices, which are arrays of magnetostatically-coupled single-domain nanomagnets, have been a testbed to study emergent correlations in frustrated two-dimensional lattices. In recent years, their propensity to relax to low-energy configurational states has begun to be investigated for use in computation, e.g. as Ising-model solvers or as a platform for low-power probabilistic computation schemes with implemented memory.

In this talk, I will initially discuss the experimental observation of short-range ice-like order in artificial kagome ice to introduce the concept of frustration. I will then show recent results on how to control nanomagnetic relaxation pathways for computation; specifically covering our work on the tuning their functionality by the spatial design of circuits, as well as via fast, spatially- and sublattice-specific heating schemes enabled by plasmon-assisted photoheating.



The guest is invited by Prof. Dr. M. Kläui
Everybody interested is welcome!