SFB/TRR 21 - Seminar
14. Juli 2008, Stuttgart

Dr. Sandro Wenzel
(Universität Leipzig)

On quantum phase transitions and unconventional behavior in a 2D quantum Heisenberg Model

I will talk about the physics and critical exponents of quantum phase transitions in a special class of quantum Heisenberg models.
In particular I discuss recent quantum Monte Carlo results on the two-dimensional staggered dimerized quantum Heisenberg model, which may be related to the exciting notion of "deconfined quantum criticality".
By detailed comparison to five other dimerized models we show, contrary to the current believe, that the critical exponents of the staggered model are most likely not in agreement with the three-dimensional classical Heisenberg universality class. I will also consider further preliminary efforts to shed some light into this unconventional quantum critical point.

14. Juli 2008, 14:00 Uhr

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