



# ***EINLADUNG***

im Rahmen des Seminars für Mathematische Physik

zum Vortrag

von

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über

***„The infrared physics of bad theories“***

## **Abstract:**

Three-dimensional gauge theories with eight supercharges (3d  $N=4$ ) have a rich moduli space of supersymmetric vacua with different low energy physics. This infrared physics is well understood for theories with large enough number of flavours ("good theories"), but less so if the number of flavours is small ("bad theories"). In this talk I will focus on 3d  $N=4$  super-QCD theories with  $U(N)$  gauge group and  $N_f$  flavours of fundamental hypermultiplets. After reviewing known results and puzzles about such theories, I will discuss their quantum corrected moduli space of vacua, which consists of Higgs, Coulomb and mixed branches, and their low energy physics as  $N$  and  $N_f$  are varied. As a by-product, I will clarify if and in which sense bad  $U(N)$  gauge theories with  $N_f \geq N$  flavours flow to their "Seiberg dual" good  $U(N_f-N)$  theories with  $N_f$  flavours (plus free fields) at low energies, as is suggested by localization results.

**Zeit: Montag, 24.04.2017, 14:15**

**Ort: Kleiner Seminarraum, Boltzmannngasse 5, 5. Stock**

gez.: S. Fredenhagen, H. Steinacker