

THEORIEKOLLOQUIUM & Sonderkolloquium SFB/TRR80

Freitag, den 02.11.18 um 12:00 in MC 351

Prof. Dr. Warren Pickett

UC Davis

Superconductivity: Then and Now

This talk will begin with a brief overview of how the "high T_c superconductors" at a given time has evolved: some steady progress punctuated by unexpected spurts. In 2015 Eremets' high pressure group in Mainz reported T_c up to 200K at high pressure in hydrogen sulfide. For the first time, theory played a large role in the process leading to and through this discovery, so this synergy will be discussed. The conventional pairing mechanism -- exchange of phonons -- belies the quite complex confluence of several unconventional aspects that arise in a realistic theoretical description of H₃S. There will be brief speculation at the end about the likelihood of room temperature superconductivity in the foreseeable future.

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