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EINLADUNG zum IFP-SEMINAR

Superconductivity: Then and Now

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University of California, Davis

Host: Jan Kuneš
Termin: Montag, 12. November 2018, 13:00 Uhr
Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum DB gelb 09 (gelber Bereich, 9. OG)

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 pivotal 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.