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## Einladung zum Seminar

**Vivek Kumar Anand**

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**„ Magnetism and Crystal Field Effect in Pr-Compounds “**

Pr-based compounds exhibit a variety of ground states due to the critical role of crystalline-electric-field (CEF) effects and quadrupolar fluctuations; fascinating physics is observed when the CEF splitting energy is very low and comparable to other interactions, the unconventional heavy fermion superconductivity observed in  $\text{PrOs}_4\text{Sb}_{12}$  is one such example. In this presentation magnetic and transport properties of few novel Pr-based compounds will be discussed and the role of crystal field effect will be examined. It will be shown that how low-lying crystal field excitations lead to excitonic mass enhancement in  $\text{PrRh}_2\text{B}_2\text{C}$  and  $\text{Pr}_2\text{Rh}_3\text{Ge}_5$ . This mechanism to the heavy fermion behaviour in Pr-compounds is quite different from the usual Kondo route to heavy fermions in Ce-compounds.

Host: S. Bühler-Paschen

**Dienstag, 25. August 2009, 11:00 Uhr**  
**Seminarraum 138B, 7. OG, Turm C (rot)**  
**Wiedner Hauptstraße 8-10**  
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