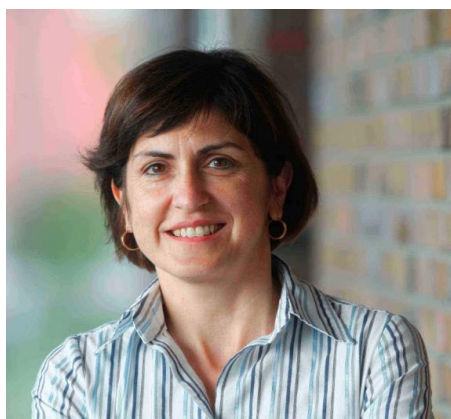




TECHNISCHE UNIVERSITÄT  
CHEMNITZ

# Institut für Physik Physikalisches Kolloquium



Mittwoch, 15.06.2016, um **16:00 Uhr**

Ort: Reichenhainer Str. 90;  
Zentrales Hörsaal- und Seminargebäude,  
Raum 2/N013

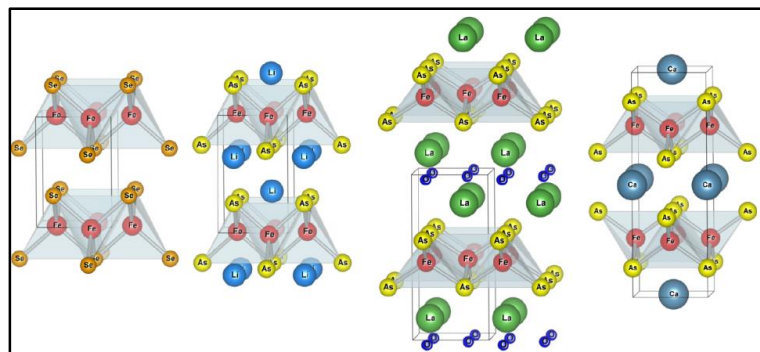
**Prof. Dr. Roser Valenti**

Goethe-Universität Frankfurt am Main  
Institut für Physik

## Towards computational design of correlated materials

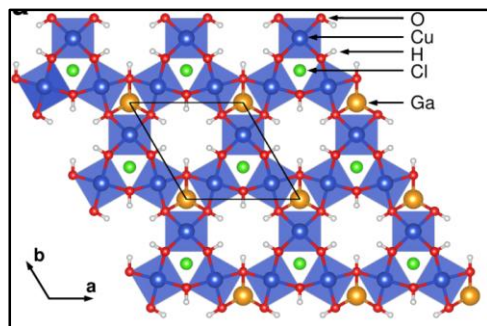
Unconventional superconductivity with high critical temperatures, frustrated magnetism, spin liquid

behavior, colossal magnetoresistance, heavy fermions, Heisenberg-Kitaev phenomenology are a few examples of exotic phases in correlated materials. In a correlated system electrons experience strong Coulomb repulsion and one of the big challenges in solid state physics is the microscopic description of such



systems. Moreover, being able to understand these materials implies the possibility of designing compounds with desirable properties.

In this talk I will review the world of some families of correlated materials ranging from unconventional superconductors, frustrated magnets and possible correlated Dirac metals and present some strategies on how to model them microscopically.



Alle Zuhörer sind ab 15:45 zu Kaffee und Tee vor dem Hörsaal eingeladen.

Informationen zum Vortrag erteilt:  
Prof. Dr. Michael Schreiber, Tel. 0371 531-21910



[www.tu-chemnitz.de/physik](http://www.tu-chemnitz.de/physik)