

**Hauptseminar: Hochtemperatursupraleitung**

- participation at all talks mandatory to obtain a certificate (Schein). An attendance list will be circulated at each seminar meeting
- 30 minutes per talk (blackboard or projector), practice your talk to make sure you'll finish in time!
- 15 minutes discussion after each talk (two rounds: on topic and presentation style)
- each participant has to ask at least one question per talk!
- reading material will be sent to you by your advisor (or see references in the table below)
- make sure to set up a first meeting with your advisor to discuss your topic no later than three to four weeks before your talk!
- try to read the material before the first meeting with your advisor

**List of possible topics:**

tJ model for cuprates	M. Ogata, H. Fukuyama, Rep.Prog. Phys. 71, 036501 (2008)	theo
D-wave superconductivity in cuprates: theory	D. Scalapino, Physics Reports 250, 329-365 (1995)	theo (hard)
RVB and high-Tc	P.W. Anderson, Science 235, 1196 (1987)	theo
single hole problem	Kane, Lee, Read, Phys. Rev. B 39, 6880 (1989)	theo (hard)
pseudogap: opt. conduct., carrier dens.	Uchida, Physica C 282, 12 (1997); Badoux, Nature 531, 210 (2016)	exp
pseudogap: ARPES, FS reconstruction	A. Damascelli et al., Rev. Mod. Phys. 75, 473 (2003)	exp
Hubbard model: numerical results	Gull, Parcollet, Millis, Phys. Rev. Lett. 110, 216405 (2013)	theo
vortex core states, STM	Hoffman et al, Science 295, 466 (2002)	exp
CDW, quantum oscillations	Harrison, Sebastian, Phys. Rev. Lett. 106, 226402 (2011)	theo
twisted bilayer graphene	Y. Cao <i>et al.</i> , Nature 556, 43 (2018)	exp
heavy fermion superconductivity	F. Steglich, S. Wirth, Rep. Prog. Phys. 79, 084502 (2016)	exp