

# Frontiers of Electronic Structure Theory: New Concepts and Developments in Density Functional Theory and Beyond

Focussed Session at the DPG Spring Meeting 2017 in Dresden

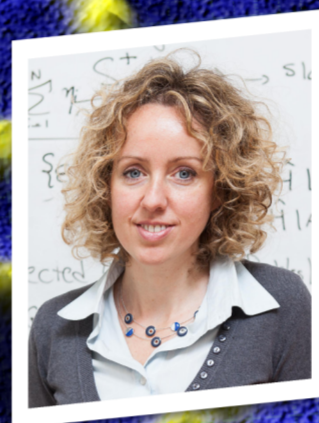
<http://th.fhi-berlin.mpg.de/meetings/DPGSym2017/>



**Arun  
Bansil**



**Kieron  
Burke**



**Paola  
Gori-Giorgi**



**Neepa  
Maitra**



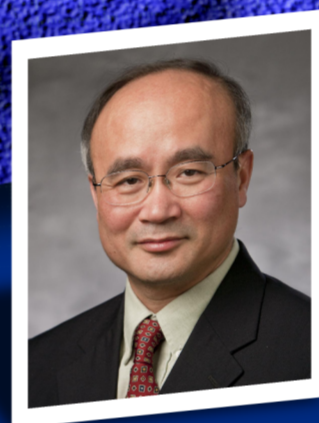
**Fred  
Manby**



**Andreas  
Savin**



**Kristian S.  
Thygesen**



**Weitao  
Yang**



**Igor Ying  
Zhang**

## March 19 - 24, 2017 • Dresden

Poster sessions, invited, and contributed talks

Monday, March 20 O 6 10:30 – 13:00 (GER 38)  
Monday, March 20 O 13 15:00 – 18:15 (GER 38)  
Tuesday, March 21 O 30 10:30 – 13:00 (GER 38)  
Wednesday, March 22 O 71 10:30 – 13:00 (GER 38)

Wednesday, March 22 O 78 15:00 – 18:15 (GER 38)  
Thursday, March 23 O 71 10:30 – 13:45 (GER 38)  
Thursday, March 23 O 78 16:00 – 18:30 (GER 38)  
Friday, March 24 SYES 1 10:30 – 13:00 (HSZ 02)

**Igor Ying Zhang:** Towards efficient orbital-dependent density functionals for weak and strong correlation (Monday 15:00, GER 38) • **Paola Gori-Giorgi:** Including spin effects in the strong-coupling limit of DFT (Tuesday 10:30, GER 38) • **Kristian Sommer Thygesen:** Electronic excitations in 2D materials and heterostructures (Wednesday 10:30, GER 38) • **Arun Bansil:** Spectacular success of DFT in predicting novel topological phases (Thursday 16:00, GER 38) • **Weitao Yang:** Going beyond conventional functionals with scaling corrections and pairing fluctuations (Friday 10:30, HSZ 02) • **Andreas Savin:** Multi-reference density functional theory (Friday 11:00, HSZ 02) • **Kieron Burke:** Density functionals from machine learning (Friday 11:30, HSZ 02) • **Neepa Maitra:** Taming memory-dependence in time-dependent density functional theory (Friday 12:00, HSZ 02) • **Fred Manby:** Quantum embedding theories (Friday 12:30, HSZ 02)

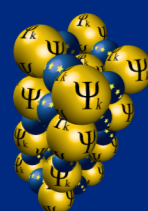
Posters related to the focussed session will be presented at the poster session O65:  
Tuesday, March 21, 18:30–20:30 in poster area P2 - OG4

Organized by John Perdew<sup>1)</sup>, Angel Rubio<sup>2)</sup>, and Matthias Scheffler<sup>3)</sup>

<sup>1)</sup> Temple University, Philadelphia, USA

<sup>2)</sup> Max-Planck-Institut für Struktur und Dynamik der Materie, Hamburg, Germany

<sup>3)</sup> Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, Germany



The Psi-k Network for electronic-structure calculations  
invites all *ab initio* scientists to a

**"Psi-k Scientific Get-Together"**  
Tuesday, 21 March 2017, 19:00 – 22:00.  
Alte Mensa, Mommsenstraße 13  
Food and beer will be served, sponsored by Psi-k