

# Mid-term Report Colloquium

Dresden, March 21 – 23, 2022

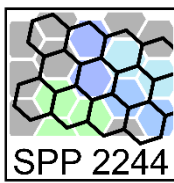
## Event Locations:

- Meeting venue: Penck Hotel Dresden (Ostra-Allee 33, 01067 Dresden)
- Hotel: Penck Hotel Dresden (rooms booked for all registered participants)
- Dinner Tuesday: Ballhaus Watzke (Kötzschenbroder Straße 1, 01139 Dresden)

## Comments:

- The time slots for your talks are 5 minutes for single PI projects and 10 minutes for consortia. Each presentation is followed by a 5-minute discussion.
- The posters presented during the poster sessions can be found in the book of abstracts (see meeting website). Posters 1 – 17 will present in session A on Tuesday afternoon, posters 18 – 38 in session B on Wednesday morning.
- The closest train station to the meeting venue is “Dresden Mitte” within 6 minutes walking time.
- Ballhaus Watzke can be reached from the meeting venue by foot (walking distance ~3.5 km) or by public transport. For example, you can take tram nr. 11 from station “Dresden Kongresszentrum/Haus der Presse” to “Dresden Anton-/Leipziger Straße” and then tram nr. 4 or 9 to station “Dresden Altpieschen”.

	Monday	Tuesday	Wednesday
09:00		Opening	Session 4
10:00		Session 1	
11:00		Coffee break	Coffee break
12:00		Session 2	Poster session 2
13:00		Lunch	Closing
14:00		Poster session 1	Lunch
15:00		Coffee break	Departure
16:00		Session 3	
17:00	Closing day 1		
18:00	Arrival + Registration		
19:00		Dinner Penck Hotel	Dinner Ballhaus Watzke

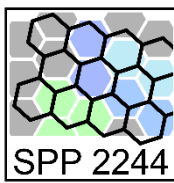


## Monday, March 21

<b>From 16:00</b>	<b>Arrival + Registration</b>
<b>19:00</b>	<b>Dinner (Penck Hotel) and individual discussions</b>

## Tuesday, March 22

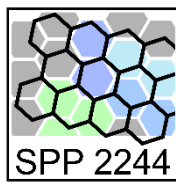
<b>9:00</b>	<b>Opening (Thomas Heine)</b>		
<b>9:05 – 11:00</b>	<b>Session 1 (Chair: Oisín Garrity)</b>		
	9:05 – 9:25	Jurgen Smet	<i>[Invited talk] Odd Integer Quantum Hall States with Interlayer Coherence in Twisted Bilayer Graphene</i>
	9:35 – 9:45	Hannah Nerl Katja Höflich	<i>Tuning and mapping hybrid polaritons at the nanoscale</i>
	9:50 – 10:00	Christopher Gies Christian Schneider Stephan Reitzenstein	<i>Light-matter coupling and cavity-QED with moiré excitons in van der Waals heterostructures</i>
	10:05 – 10:10	Stuart Parkin	<i>Artificial multiferroic van der Waals heterostructures</i>
	10:15 – 10:25	Kai-Qiang Lin Sebastian Bange	<i>Tuning excitonic quantum optics in stacked van-der-Waals semiconductors</i>
	10:30 – 10:35	Agnieszka Kuc	<i>Modelling TMDC/2D perovskite heterostructures for charge and energy transfer</i>
	10:40 – 10:45	Gabriel Bester	<i>Atomistic theory of excited states in van der Waals heterostructures: Moiré confinement strain and electric field effect</i>
<b>11:00 – 11:30</b>	<b>Coffee break</b>		
<b>11:30 – 13:00</b>	<b>Session 2 (Chair: Hossein Ostovar)</b>		
	11:30 – 11:50	Dante Kennes	<i>[Invited talk] Moiré metrology of energy landscapes in van der Waals heterostructures</i>
	12:00 – 12:10	Angelo Di Bernardo Hadar Steinberg Wolfgang Belzig Elke Scheer	<i>Towards 2D superconducting spintronics</i>
	12:15 – 12:25	Christoph Kastl Marko Burghard Alexander Holleitner	<i>Electronic control of spin-orbit and magnetic exchange coupling in graphene vdW-heterostructures (SOControl)</i>
	12:30 – 12:40	Xinliang Feng Thomas Heine Thomas Weitz	<i>Topological effects in graphene/2D polymer superlattices</i> (Speaker: Francesca Falorsi)
<b>13:00 – 14:00</b>	<b>Lunch</b>		
<b>14:00 – 15:45</b>	<b>Poster session 1</b>		
<b>15:45 – 16:00</b>	<b>Coffee break</b>		



<b>16:00 – 18:00</b>	<b>Session 3 (Chair: Jonas Bauer)</b>		
	16:00 – 16:05	Ermin Malic	<i>Light-matter interaction at TMDC-based interfaces</i>
	16:10 – 16:15	Jaroslav Fabian	<i>Proximity effects in 2D magnetic vdW (hetero)multilayers</i>
	16:20 – 16:30	Alexander Steinhoff Alexey Chernikov Alexander Högele	<i>Quantum gases in semiconductor van der Waals heterostructures</i>
	16:35 – 16:45	Tobias Korn Christian Schüller Andrey Turchanin	<i>Interlayer excitons in advanced, CVD-based van der Waals heterostructures with controlled moiré wavelength</i>
	16:50 – 17:00	Benoit Hackens Rebeca Ribeiro-Palau Christoph Stampfer	<i>Tunable twistrionics: local tuning and probing of topological edge states and superconductivity in bilayer graphene</i>
	17:05 – 17:15	Markus Ternes Samir Lounis	<i>Subnanoscale engineering of 2D magnetism in van der Waals heterostructures</i>
	17:20 – 17:30	Tim Wehling Ursula Wurstbauer	<i>Correlated miniband and multivalley physics in twisted transition metal dichalcogenides</i>
17:35 – 17:40	Felix Lüpke	<i>Topological superconductivity and Majorana states in van der Waals heterostructures characterized by scanning probe microscopy (Speaker: Tobias Wichmann)</i>	
<b>18:00</b>	<b>Closing</b>		
<b>19:00</b>	<b>Dinner (Ballhaus Watzke)</b>		

### Wednesday, March 23

<b>9:00 – 11:00</b>	<b>Session 4 (Chair: Francesca Falorsi)</b>		
	9:00 – 9:10	Rudolf Bratschitsch Michael Rohlfing	<i>Optical excitations in transition metal dichalcogenide heterostructures under pressure (Speaker: Steffen Michaelis de Vasconcellos)</i>
	9:15 – 9:20	Thomas Brumme	<i>Corrugation in twisted transition metal dichalcogenide heterostructures</i>
	9:25 – 9:30	Roland Bennewitz	<i>Compressive strain in stacked 2D materials: from proximity to metastable hybridization (Speaker: Zhao Liu)</i>
9:35 – 9:40	Sergey Ganichev	<i>Terahertz nonlinear transport in twisted graphene and van der Waals heterostructures</i>	



	9:45 – 9:55	Patryk Kusch Stephanie Reich	<i>Chasing polaritons: A pathway to investigate the optoelectronic properties of van der Waals heterostructures</i>
	10:00 – 10:10	Dante Kennes Carsten Honerkamp	<i>Microscopic understanding of correlation effects in twisted van der Waals [hetero]structures</i>
	10:15 – 10:25	Samuel Beaulieu Ralph Ernstorfer	<i>Tailoring electronic correlations, excitonics and topological properties in van der Waals heterostructures on ultrafast timescales</i>
	10:30 – 10:40	Jonathan Finley Fei Ding Rolf Haug	<i>Tunable moiré potentials in 2D-heterostructures using anisotropic strain</i>
<b>11:00 – 11:30</b>	<b>Coffee Break</b>		
<b>11:30 – 13:15</b>	<b>Poster session 2</b>		
<b>13:15 – 13:30</b>	<b>Closing (Thomas Heine)</b>		
<b>13:30</b>	<b>Lunch</b>		
<b>14:30</b>	<b>Departure</b>		