

DFG-JSPS workshop: Multiphysics Coupling in Complex Quantum Materials

Date: 2nd -3rd September 2026

Place: IFW Dresden

Address: Helmholtzstraße 20, 01069 Dresden

Day: 02/09/2026

Seminar Room: B.3E.26

Time	Name	Title	Remarks
Session I: Acoustic waves and magnetoelastic coupling Chair: Prof. Dr. Nicola Poccia			
9:00 – 9:15	Prof. Dr. Nicola Poccia (IFW Dresden)	Opening remarks	
9:15 – 10:00	Prof. Jorge Puebla (Kyoto University)	Surface acoustic wave spectroscopy for magnetoelastic coupling in van der Waals materials	Invited
10:00 – 10:45	Dr. Andreas Winkler and Dr. Hagen Schmidt (IFW Dresden)	Development of SAW sensors for quantum mechanical effects and interpretation of their complex signals	Invited
Coffee break			
Session II: Spectroscopy of layered quantum materials Chair: Dr. Jorge Puebla			
11:15 – 12:00	Prof. Robert H. Blick (Universität Hamburg)	Electron Spin Resonance in Graphene	Invited
12:00 – 12:45	Dr. Shreya Kumbhakar (TU/IFW Dresden)	Dynamics of Charge-Density-Wave puddles in 2H-NbSe ₂	Invited
Lunch break			
Session III: Growth, superconducting devices and spin-orbit phenomena Chair: Dr. Golam Haider			
14:00 – 14:45	Dr. Amin Bahrami (IFW Dresden)	Atomic layer deposition as an interface engineering tool for advanced thermoelectric materials	Invited
14:45 – 15:05	Ms. Vasilisa Gerega (IFW Dresden)	Nanofabrication of complex superconducting quantum devices	Contributed
15:05 – 15:25	Mr. Piyush Parakh (IFW Dresden)	Exfoliation of 2D materials under ultra-high vacuum	Contributed
Coffee break			
Session IV: Hybrid magnonics and coupled excitations Chair: Dr. Ohshima Ryo			
16:00 – 16:35	Dr. Shugo Yoshii (Kyoto University)	Hybrid magnonic systems based on thin ferromagnetic films	Invited
16:35 – 16:50	Mr. Saku Hashimoto (Kyoto University)	Toward ultrastrong coupling in magnon-phonon hybrid system	Contributed
Dinner at Restaurant Platzhirsch am Schlosseck (Schloßstraße 10, 01067 Dresden)			
End of Day 1			

DFG-JSPS workshop: Multiphysics Coupling in Complex Quantum Materials

Day: 03/09/2026

Seminar Room: D.2E.27

Time	Name	Title	Remarks
Session V: Superconductivity and spin-orbital physics Chair: Dr. Ahmad Omar			
9:00 – 9:45	Prof. Masashi Shiraishi (Kyoto University)	Detection of spin polarization as a possible p-wave superconducting state at the surface of FeTeSe	Invited
9:45 – 10:30	Dr. Ohshima Ryo (Kyoto University)	Orbital torque in ferromagnet/semiconductor bilayers	Invited
10:30 – 10:50	Ms. Flavia Lo-Sardo (IFW Dresden)	Raman spectroscopy of cuprate superconductors	Contributed
Coffee break			
Session VI: Quantum-matter growth and superconducting transport Chair: Prof. Masashi Shiraishi			
11:20 – 12:00	Dr. Ahmad Omar (IFW Dresden)	Crystal growth of layered quantum materials	Invited
12:00 – 12:15	Mr. Utane Nagata (Kyoto University)	Superconducting diode effect in iron-based superconductors	Contributed
12:15 – 12:30	Mr. Makoto Igarashi (Kyoto University)	Anisotropic supercurrent flow in Corbino disk consisting of Nb and [Nb/V/Ta] _n superconductors	Contributed
Lunch			

Lab visits and discussion

Labs	Responsible person for the visit	Time
Superpuddles lab	Prof. Nicola Poccia, Dr. Golam Haider	13:30 – 14:00
SAW Labs	Dr. Andreas Winkler	14:00 – 15:00
ALD labs	Dr. Amin Bahrami & Dr. Sebastian Lehmann	
Crystal growth lab	Dr. Ahmad Omar & Dr. Sabine Wurmehl	
Coffee		
Closed-door discussion (1 h 30 min.)		

Organizers:

1. Dr. Golam Haider
2. Prof. Jorge Puebla
3. Prof. Nicola Poccia
4. Mrs. Jessica Herfurth
5. Ms. Kristina Bräuer

How to Reach the Workshop Venue

Workshop venue:

Leibniz Institute for Solid State and Materials Research Dresden (IFW Dresden)
Helmholtzstraße 20
01069 Dresden, Germany

From Dresden Airport (Dresden Flughafen)

1. From **Dresden Airport**, take the **S-Bahn S2** towards Dresden city centre / Dresden Hauptbahnhof.
2. Get off at **Dresden Hauptbahnhof (Dresden Hbf)**.
3. From Dresden Hbf, take **tram 3** (direction *Coschütz*) or **tram 8** (direction *Südvorstadt*).
4. Get off after **2 stops at Nürnberger Platz**.
5. From Nürnberger Platz, walk along **Münchner Straße**, turn into **Helmholtzstraße**, and continue to the end of the street.
6. IFW Dresden is located at the corner of **Helmholtzstraße and Nöthnitzer Straße**.

Total travel time: approximately **45–60 minutes**, depending on the connection.

From Dresden Hauptbahnhof (Main Railway Station)

Take **tram 3** (direction *Coschütz*) or **tram 8** (direction *Südvorstadt*) from Dresden Hauptbahnhof.

Get off after **2 stops at Nürnberger Platz**.

From Nürnberger Platz, IFW Dresden is approximately a **7–10 minute walk**. Follow Münchner Straße and turn into Helmholtzstraße. Continue along Helmholtzstraße until you reach IFW Dresden at **Helmholtzstraße 20**.

Travel time from Dresden Hbf: approximately **15 minutes including the walk**.

Public Transport Information

For up-to-date connections and possible timetable changes, participants are advised to use the **DVB/VVO journey planner** or the **DB Navigator** app.

Destination: *IFW Dresden, Helmholtzstraße 20, 01069 Dresden*

Practical Information for International Participants

Public Transport & Tickets

Dresden has an extensive network of trams, buses and S-Bahn trains. Public transport within Dresden operates under the **VVO/DVB** network.

- A standard single ticket for the Dresden fare zone costs **€3.60** and is valid for up to **1 hour**, including transfers.
- If you purchase a **paper ticket in advance**, please remember to **validate (stamp) it immediately when starting your journey**. Tickets purchased directly inside a tram or bus are already validated.
- Mobile tickets can be purchased using the **DVB mobil** app and are valid immediately after purchase.
- For participants making several journeys during the day, a **Dresden day ticket (€9.50)** may be more convenient.
- Ticket inspections are common, so please make sure you have a valid ticket before travelling.

Payment

Germany uses the **Euro (€)**. Credit/debit cards and contactless payment are widely accepted, although carrying a small amount of cash can still be useful.

Mobile Phones & Internet

Germany uses the **EU roaming system**. Participants with EU mobile contracts can normally use their phones without additional roaming charges. Visitors from outside the EU should check roaming conditions with their mobile provider before travelling.

Electricity

Germany uses **Type F (Schuko) electrical sockets**, with a supply voltage of **230 V / 50 Hz**. Participants travelling from countries using different plugs should bring an appropriate adapter.

Weather

Early October in Dresden is typically cool and variable. Participants are advised to bring a **light/warm jacket and an umbrella**, particularly for walking between the hotel, public transport and the workshop venue.

Language

The workshop will be conducted in **English**. English is generally understood at hotels, Dresden Airport, Dresden Hauptbahnhof and most restaurants in the city centre.

Emergency

The European emergency number in Germany is **112** for ambulance and fire emergencies.