

Program

Summer School III (Sun 10 - Sat 16 March 2024): "Solid-state NMR"

Youth hostel "Schloss Windischleuba", Pestalozziplatz 1, 04603 Windischleuba

Before you come:

- Read Malcolm Levitt: "Spin Dynamics" (Wiley) and K. Ivanov, P.K. Madhu & G. Rajalakshmi "Two-dimensional NMR methods" (Wiley) much as possible.
- Read books about Solid-state NMR: for example Melinda Duer "Solid-state NMR spectroscopy", Schmidt-Rohr & Spiess "Multidimensional solid-state NMR and polymers".
- Try to install the program SIMPSON from <http://nmr.au.dk/software/simpson/>.
- All info about SIMPSON installation and exercises will be on this webpage: www.natur.cuni.cz/nmr/windischleuba.html

Sunday 10 March 2024

- 16.00 Shuttle bus transfer from railway station "Bahnhof Altenburg"
- 18.00 Shuttle bus transfer from railway station "Bahnhof Altenburg"
- Arrival by individual travel, check-in, registration
- 19.00 Dinner & Get together
- 20.00-20.30 Opening remarks, Participants introduce each other, About the place
- 20.30-22.00 **Lecture 01: Amir Goldbourt: Quantum Mechanics I**

Monday 11 March 2024

- 07.30-08.30 Breakfast
- 09.15-10.30 **Lecture 02: Amir Goldbourt: Quantum Mechanics II**
- 10.30-11.00 Coffee/tea
- 11.00-12.30 **Lecture 03: Thomas Wiegand: Spin-Interactions**
- 12.30-13.00 Lunch
- 13.00-14.00 Break/visit of the castle/volleyball/garden & walk
- 14.00-15.30 **Lecture 04: Madhu: Spherical tensors, Euler angles, rotations**
- 15.30-16.00 Coffee/Tea
- 16.00-17.30 **Lecture 05: Madhu: SSNMR, Instrumentation, Static Case**
- 18.00-19.00 Dinner
- 19.00-20.30 **Exercise 1: Zdeněk Tošner: Starting Simpson & Static SSNMR**

Tuesday 12 March 2024

- 07.30-08.30 Breakfast
- 09.00-10.30 **Lecture 06: Madhu: MAS, CPMAS, Decoupling & Recoupling**
- 10.30-11.00 Break
- 11.00-12.30 **Lecture 07: Amir Goldbourt: Average Hamiltonian Theory and Magnus Expansion: Using interaction frames to understand pulse sequences**
- 12.30-13.00 Lunch
- 13.00-14.00 Break
- 14.00-15.30 **Exercise 2: Zdeněk Tošner: MAS and CP**
- 15.30-16.00 Coffee/Tea
- 16.00-17.30 **Lecture 08: Albert Smith: Decoupling, Recoupling**
- 18.00-19.00 Dinner
- 19.00-20.30 **Exercise 3: Zdeněk Tošner: Decoupling and recoupling**

Wednesday 13 March 2024

07.30-08.30 Breakfast
08:45 Starting by coach to Meißen
10:30-11:30 Meißen Porcelain Production & Museum
11:30-15:00 Visiting city, cathedral, Albrechtsburg
15:00 Return by coach
16:15-17:45 **Lecture 09: Albert Smith: Multi-dim experiments**
18.00-19.00 Dinner
19.00-20.30 **Exercise 4: Zdeněk Tošner: Multi-dim experiments**

Thursday 14 March 2024

07.30-08.30 Breakfast
09.00-10.30 **Lecture 10: Albert Smith: Molecular motion**
10.30-11.00 Break
11.00-12.30 **Lecture 11: Olivier Lafon: Quadrupolar nuclei I**

12.30-13.00 Lunch
13.00-14.00 Break
14.00-15.30 **Lecture 12: Olivier Lafon: Quadrupolar nuclei II**
15.30-16.00 Coffee/Tea
16.00-17.30 **Exercise 5: Zdeněk Tošner: Quadrupolar nuclei**
18.00-19.00 Dinner
19.00-20.30 **Lecture 13: Kay Saalwächter: Polymers I**

Friday 15 March 2024

07.30-08.30 Breakfast
09.00-10.30 **Lecture 14: Kay Saalwächter: Polymers II**
10.30-11.00 Break
11.00-12.30 **Lecture 15: Thomas Wiegand: SSNMR of large biological macromolecules**

12.30-13.00 Lunch
13.00-14.00 Break
14.00-15.30 **Lecture 16: Kay Saalwächter: Polymers III**
15.30-16.00 Coffee/Tea
16.00-17.30 **Lecture 17: Thomas Wiegand: Proton-detected solid-state NMR at fast magic-angle spinning**
Feedback by students, Final remarks

19.00-22.00 Conference Dinner

Saturday 16 March 2024

07.00-10.00 Breakfast
10:15 Travelling home (direct bus transfer to Leipzig central station/Hbf)