## 2nd G-NMR School, 29.02. – 04.03.2016, Goethe-University Frankfurt Campus Riedberg, N100

## Lecture Hall N100-B1: General part for all participants

| | Monday, 29.2. | Tuesday, 1.3. | Wednesday, 2.3. |
|---|---|---|---|
| 8:30 – 10:30 | **Product Operators I**<br><br>Steffen Glaser | **Anisotropic Interactions**<br><br>Bernd Reif | **Solid-state NMR I**<br><br>Clemens Glaubitz |
| 10:30 – 11:00 | | **Coffee Break** | |
| 11:00 – 13:00 | **Product Operators II**<br><br>Christian Griesinger | **Relaxation I**<br><br>Harald Schwalbe | **Solid-state NMR II**<br><br>Clemens Glaubitz |
| 13:00 – 14:00 | | **Lunch** | |
| 14:00 – 16:00 | **Exercise I in groups**<br><br>Monika Beerbaum, Elke Duchardt-Ferner, Boris Fürtig, Julia Wirmer-Bartoschek | **Exersise II in groups**<br><br>Monika Beerbaum, Elke Duchardt-Ferner, Boris Fürtig, Julia Wirmer-Bartoschek | **Exercise III**<br><br>Johanna Becker-Baldus |
| 16:00 – 16:30 | | **Coffee Break** | |
| 16:30 – 18:30 | **Phase Cycling / Gradients / Quadrature**<br><br>Peter Schmieder | **Relaxation II**<br><br>Harald Schwalbe | **TROSY & Cross-Correlated Relaxation**<br><br>Christian Griesinger |
| 18:30 | | **Bier & Snacks** | **Dinner Mensa** |
| 19:30 - | **Discussion of the Exercise I & II** | | |

Exercise I + II: Lecture hall N100-B1, -B2, -B3 and seminar room N100-114

Exercise III: Beilstein Computer Center (BCC), N100-012a, -012b, -012c

## Lecture Hall N100-B1: Parallel Session: Bio-NMR

| | Thursday, 3.3. | Friday, 4.3. |
|---|---|---|
| 8:30 – 9:30 | **2D and 3D NMR**<br><br>Michael Sattler | **Pulse sequence programming**<br><br>Wolfgang Bermel |
| 9:30 – 10:30 | **NMR on Proteins**<br><br>Michael Sattler | |
| 10:30 – 11:00 | **Coffee Break** | |
| 11:00 – 13:00 | **RDCs & PRE**<br><br>Markus Zweckstetter | **Relaxation Dispersion Experiments**<br><br>Philipp Neudecker |
| | | **NMR on RNA**<br><br>Jens Wöhnert |
| 13:00 – 14:00 | **Lunch** | |
| 14:00 – 16:00 | **NMR in drug design**<br><br>Teresa Carlomagno | **Structural Analysis**<br><br>Peter Güntert |
| 16:00 – 16:30 | **Coffee Break** | |
| 16:30 – 18:30 | **A: Exercise at Spectrometer in 3 groups**<br><br>Wolfgang Bermel, Gerd Gemmecker, Christian Richter<br><br>**B: Introduction to NMR spectra analysis**<br><br>Henry Jonker | **A: Exercise at Spectrometer in 3 groups**<br><br>Wolfgang Bermel, Gerd Gemmecker, Christian Richter<br><br>**B: Exercise structure calculation**<br><br>Henry Jonker |

**Exercise Spectrometer:**

**Meeting point in front of coffee bar Alfredo**

## Lecture Hall N100-B2: Parallel Session: Solid State NMR

| | Thursday, 3.3. | Friday, 4.3. |
|---|---|---|
| 9:00 – 10:30<br>9:30 – 10:30 | **Protons in solid-state NMR**<br>Bernd Reif | **Theory of Dynamic Nuclear Polarisation**<br>Björn Corzilius |
| 10:30 – 11:00 | **Coffee Break** | |
| 11:00 – 12:30 | **Transversal Relaxation in solid-state NMR**<br>Kay Saalwächter | **AHT and Symmetries: C and R Sequence**<br>Jörn Schmedt auf der Günne |
| 12:30 – 13:30 | **Lunch** | |
| 13:30 – 15:00 | **Quantitative Distance Measurements**<br>Gerd Buntkowsky | **13:30 – 14:30**<br>**Praxis of DNP and further tricks to reduce NMR time**<br>Jiafei Mao / Glaubitz Lab |
| 15:00 – 15:15 | **Short break** | |
| 15:15 – 16:45 | **Protein solid-state NMR: Resonance assignment and detection of distance restraints**<br>Adam Lange | **14:45 – 15:30**<br>**Lab Demo: DNP-enhanced MAS**<br>Jiafei Mao / Glaubitz Lab |
| 16:45 – 17:00 | Short break | **END** |
| 17:00 – 18:00 | **Introduction to Quadropole solid-state NMR**<br>Gerd Buntkowsky | |

## Lecture Hall N100-B3: Parallel Session: small Molecules

| | Thursday, 3.3. | Friday, 4.3. |
|---|---|---|
| 8:30 – 9:30 | **Overview: NMR-Experiments for Small Molecules**<br><br>Johannes Liermann | **Sequential assignment of peptides**<br><br>Monika Beerbaum |
| 9:30 – 10:30 | **Homonuclear decoupling**<br><br>Wolfgang Bermel | **Metabolomics**<br><br>Thomas Hackl |
| 10:30 – 11:00 | **Coffee Break** | |
| 11:00 – 13:00 | **Exercise at Spectrometer in 3 groups** Wolfgang Bermel, Johannes Liermann, Christian Richter | **Exercise at Spectrometer in 3 groups** Wolfgang Bermel, Johannes Liermann, Christian Richter |
| 13:00 – 14:00 | **Lunch** | |
| 14:00 – 15:00 | **2D Experiments (coupling constants /Fast 2D Experiments)**<br><br>Burkhard Luy | **NMR database for assignment control**<br><br>Nils Schlörer |
| 15:00 – 16:00 | **RDCs**<br><br>Christina Thiele | **Polymere**<br><br>Ulrich Scheler |
| 16:00 – 16:30 | **Coffee Break** | |
| 16:30 – 18:30 | **Natural products / structure elucidation 1 (incl. exercise)**<br><br>Matthias Köck | **Natural products / structure elucidation 2 (incl. exercise)**<br><br>Matthias Köck |

**Exercise Spectrometer:**

**Meeting point in front of coffee bar Alfredo**