BNMRZ Symposium, Nov 6-7, 2025, TUM IAS

Ultra-Highfield NMR and 4D Structural Biology – From Mechanisms to Therapies

Thursday Nov 6, 2025

13:00	**OPENING**
	Welcome **Michael Sattler**
	SESSION 1 Chair: Michael Sattler
13:05	**Angela Gronenborn** (University of Pittsburgh, USA) *How a question about plant-parasite interactions led to a marriage between AlphaFold and ^{19}F NMR*
13:30	**Teresa Carlomagno** (U Birmingham, UK) *NMR-detected dynamics reveals the mechanism of communication between substrates' binding sites in a complex enzymatic machinery*
13:55	**Sebastian Hiller** (Biozentrum, U Basel, Switzerland) *The dynamic chaperone network in the endoplasmatic reticulum*
14:20	**Rina Rosenzweig** (Weizmann, Rehovot, Israel) *Molecular Mechanisms of the 800 kDa DNAJC12 Chaperone – from Structure and Dynamics to Disease*
14:45	**Stephan Grzesiek** (Biozentrum Basel, Switzerland) *G protein-coupled receptor function described in 4D by a very large number of ^{1}H-^{15}N NMR probes*
15:10	*Coffee Break*
	SESSION 2 Chair: Anne Schütz
15:45	**Harald Schwalbe** (JWG University Frankfurt, Germany) *4D-SB: Time-resolved NMR spectroscopy to study folding and refolding of proteins, RNA and DNA*
16:10	**Giovanni Bussi** (SISSA, Trieste, Italy) *RNA in Motion: Integrating Cryo-EM, NMR, and Molecular Simulations*
16:35	**TRR267 Lecture: Alisha Jones** (NYU, New York, USA) *Investigating RNA-Protein Interactions using Integrative Approaches*
17:00	**Fred Allain** (ETH Zürich, Switzerland) *Molecular Basis for Primer Synthesis Initiation by DNA Primase*
17:25	**Julie Feigon** (UCLA, Los Angeles, USA) *Structural biology of 7SK RNP, a dynamic regulator of eukaryotic transcription*
17:50	**Free evening**

Friday, Nov 7, 2025

	SESSION 3 Chair: Steffen Glaser
09:00	**Lucia Banci** (CERM, U Florence, Italy) *in-cell NMR for unraveling functional processes at atomic resolution*
09:25	**Hartmut Oschkinat** (FMP Berlin, Germany) *Proteins in native membranes at 1.2 GHz*
09:50	**Nadia Izadi-Pruneyre** (Institut Pasteur, Paris, France) *Integrative Structural Biology of Bacterial MembraneTransport Nanomachines*
10:15	**Marion Jasnin** (Helmholtz Munich, Germany) *The potential of cryo-electron tomography for in situ structural biology*
10:40	*Coffee Break*
	SESSION 4 Chair: Bernd Reif
11:15	**Janosch Hennig** (University of Bayreuth, Germany) *4D structural biology of translation repression*
11:40	**Martin Blackledge** (IBS Grenoble, France) *NMR provides unique insight into the role of intrinsic disorder in the replication of important viral pathogens*
12:05	**Tobias Madl** (Medical University of Graz, Austria) *NMR-Driven Strategies to Target Intrinsically Disordered Regions of Transcription Factors*
12:30	*LUNCH Break*
	13:30 Optional tour to the BNMRZ with NMR hall and 1.2 GHz NMR spectrometer
	SESSION 5 Chair: Reid Alderson
14:15	**Steffen Glaser** (Technical University of Munich, Garching, Germany) *Optimal control, machine learning and visualization of spin dynamics in NMR*
14:40	**Hari Arthanari** (Harvard Medical School, Boston, USA) *The Synergistic Role of NMR to Illuminate Blind Spots in Mechanistic Biology*
15:05	**Art Palmer** (Columbia U, New York, USA) *Protein conformational dynamics in molecular recognition: Lessons old and new from NMR spin relaxation*
15:30	**Don Lamb** (LMU, Munich, Germany) *Probing Protein Dynamics using Single-Molecule FRET*
15:55	**Christian Griesinger** (MPI Göttingen) *Fast kinetics from NMR and structure-based mechanism towards therapy in neurodegeneration*
16:20	*Coffee Break*
	SESSION 6 Chair: Franz Hagn
17:00	**Gerhard Wagner** (Harvard Medical School, Boston, USA) *From NMR structures of translation initiation factors to discovering a crucial mechanism of cancer malignancy yielding a high potential for cancer diagnosis, imaging and therapy.*
17:25	**Rebecca Wade** (HITS and Uni Heidelberg, Germany) *The Dynamics of Protein Binding: Insights from Molecular Simulation*
17:50	**Kevin Gardner** (CUNY, New York, USA) *Solution NMR: Roles for biomedical discovery for the next decade and beyond*
18:15	**Steve Fesik** (Vanderbilt U, Nashville, USA) *Cancer drug discovery using NMR-based fragment screening*
18:40	**Concluding Remarks**
	End of Symposium
19:00	**Get-together** Location: TUM-IAS, 4th floor **Dinner speech:**
	Giles Yeo (University of Cambridge, UK *In the post-Ozempic world, have we cured obesity?*
	Party