

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

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

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

Friday, Nov 7, 2025

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