

	Oct 27 - Tuesday (USP Law School Auditorium - Ribeirão Preto)	Oct 28 - Wednesday (USP Law School Auditorium - Ribeirão Preto)	Oct 29 - Thursday (USP Law School Auditorium - Ribeirão Preto)	Duration
Session	Session 1: Digital Porous Media & NMR (Chair: Everton Lucas-Oliveira - CNPEM/LNLS)	Session 3: Human Health, Environmental Science, Food & Biomaterials (Chair: Carlos E. G. Salmon - FFCLRP/USP)	Session 5: Mobile NMR (Chair: Leonardo Brizi - Unibo)	---
9h00 – 9h25	Christoph Arns (UNSW - Australia) "Dual-Scale Simulation of NMR Responses in Chalk"	Yi-Qiao Song (Harvard University & MGH - USA) "Diffusion Dynamics in Axons and the understanding of diffusion MRI in Brain"	Bernhard Blümich (ITMC - Germany) "Compact and Mobile NMR: A personal review and recent developments"	25 min
9h25 – 9h45	Yi-Qiao Song (Harvard University & MGH - USA) "Characterization of magnetic rocks: a challenge for NMR"	Claudia Testa (Unibo - Italy) "Diffusion MRI in cerebral small vessel disease: characterization of longitudinal microstructural decline with advanced markers"	Leonardo Brizi (Unibo - Italy) "Single-Sided NMR Relaxometry and Diffusometry Across Porous Media Applications"	20 min
9h45 – 10h05	Mathias Steiner (KUNUMI) - Brazil "Quantum Computing and Porous Media: Applications in CO ₂ Capture & Storage"	Bruce Balcom (UNB - Canada) "Magnetic Resonance and Magnetic Resonance Imaging with a Variable Field Cryogen Free Superconducting Magnet"	Yamila G. Linck (UNC - Argentina) "Drug-Assisted Network Formation in Biopolymeric Wound Dressing Membranes Revealed by Single-Sided and Benchtop NMR"	20 min
10h05 – 10h25	Everton Lucas-Oliveira (CNPEM/Sirius) "NMR and High-Resolution imaging on the MOGNO Beamline for dynamic system analysis on Porous Media"	Dimitrios Sakellariou (KU Leuven - Belgium) "A Low-Field MRI scanner for Multimodal Preclinical Imaging: Gamma detected-MRI"	Willian A. Trevizan (Cenpes/Petrobras - Brazil) "Understanding NMR Signal Behavior Under Sample Motion: Implications for Logging While Drilling Operations"	20 min
10h25 – 10h45	Georgiy Baroncha (Universität Leipzig - Germany) "Towards a connection between geometry, phase transition and relaxation in mesoporous materials"	Manuel I. Velasco (UNC - Argentina) "Characterization of 3D-Printed Biomimetic Scaffolds by Low-Field NMR: Relaxation and Diffusion Studies in Soft Porous Media"	Hamed Derakhshandeh (OULU - Finland) "Facility-scale NMR studies of complex mining tailing materials"	20 min
10h45 – 11h15	Coffee Break (30min)	Coffee Break (30min)	Coffee Break (30min)	30 min
11h15 – 11h30	Luiz Fernando Bez (UFF - Brazil) "Using Approximate Bayesian Computation (ABC) to analyze uncertainties in relaxometry experiments and their consequences in permeability estimation."	Daniel Huster (LU - Germany) "The Pore Size of PLGA Bone Implants Determines the De Novo Formation of Bone Tissue in Tibial Head Defects in Rats"	Agide G. Marassi (USP - Brazil) "Diffusion coefficient measurements for moving samples under strong magnetic field gradients"	15 min
11h30 – 11h45	Andre Maues Brabo Pereira (UFF - Brazil) "Estimating surface relaxivity as a function of pore size via conditional diffusion models"	Armin Afrough (AU - Denmark) "Determining the Crystallite Size of Organic Solids with 1H NMR T1 Relaxation"	Emanuel G. Bertizzolo (UWA - Australia) "Probing Solid-Liquid Separation Dynamics in Anaerobic Digestate via 1D and 2D Low-Field NMR Relaxometry"	15 min
11h45 – 12h00	Alexsandro S. E. Cruz (CBPF - Brazil) "Dual high-field NMR approach to oil-water quantification in porous rocks"	Leonardo Conti (Unibo - Italy) "Low-Field NMR Relaxometry for GAG Assessment: A Multimodal Investigation of Articular Cartilage"	Andrew McDowell (NUEVOMR - USA) "3D printed passive shims for permanent magnets: Application to iron-pole, Halbach arrays, and a unique tilted field magnet"	15 min
12h00 – 12h45	Lunch & Satellite Meetings (45min)	<i>Niumag Talk (20min): Low-Field NMR Relaxometry System Solutions: Rapid Quantification of Pore and Fluid Properties in Porous Media - Zhang Yingli (Chair: André Sanches - dpUnion) - Lunch & Satellite Meetings (30min)</i>	Lunch & Satellite Meetings (45min)	45 min
12h45 – 13h45	Lunch	Lunch	Lunch	60 min
Session	Session 2: NMR Methods & Instrumentation (Chair: Antonio A. O. Carneiro - FFCLRP/USP)	Session 4: Natural and Artificial Porous Media & Cultural Heritage (Chair: Jair C. C. de Freitas - DF/UFES)	Session 6: Integration with Interpore Community - Advances in Mathematics, Engineering, AI, & Quantum Computing (Chair: Ivan S. Oliveira - CBPF)	---
13h45 – 14h10	Matthew P. Augustine (UC Davis - USA) "Robust Methods and Durable Devices for NMR in Harsh, Non-laboratory Conditions"	Jørgen Skibsted (AU - Denmark) "Development of Portland Cement Binders with Low CO ₂ Footprint Utilizing Solid-State NMR spectroscopy"	Márcio Murad (LNCC - Brazil) "Physics-Based Multiscale Modeling of Coal Swelling from NMR Cryoporometry to Reservoir Injectivity"	25 min
14h10 – 14h30	Marc Fleury (IFPEN - France) "CO ₂ -hydrate formation and dissociation study using an innovative NMR probe at low field."	Lucia Ferrari (Unibo - Italy) "Application of Proton Time-Domain NMR to Investigate Water Distribution and Pore Structure Development in Low-Carbon Cements"	Caetano R. Miranda (IFUSP - Brazil) "Study of the effect of porosity on transport properties in carbonate reservoirs using the Lattice Boltzmann Method"	20 min
14h30 – 14h50	Esteban Anoardo (UNC - Argentina) "Frequency domain NMR Relaxometry: the relevance of time scale and noise in data fitting"	Pedro C. R. A. Abrão (EP/USP & IFSC/USP - Brazil) "Monitoring the Hydration of Brazilian Commercial Cements Using Low-Field NMR"	Marcio Carvalho (PUC-Rio - Brazil) "Microfluidics as a Tool to Study Pore-Scale Phenomena in Complex Multiphase Flow in Porous Media"	20 min
14h50 – 15h10	Rodolfo H. Acosta (UNC - Argentina) "Development of NMR methodologies for the characterization of source rocks from unconventional oil and gas reservoirs. Applications in the Vaca Muerta formation."	Einar Fridjonsson (UWA - Australia) "Enhancing magnesium mineral carbonation in Western Australia for sustainable carbon storage"	Martin A. D. Viera (IMP - Mexico) "A Comparative Study of Effective Surface Relaxation Estimation Using Two NMR Relaxometry Inverse Modeling Approaches"	20 min
15h10 – 15h30	Eduardo R. Azevedo (IFSC/USP - Brazil) "Dipolar-Based Low-Field TD-NMR: From Soft Matter to Porous Media"	Leo Pel (TUE - Netherlands) "Combined quantitative ¹ H, ²³ Na and ³⁵ Cl NMR to study the salt crystallization of NaCl–NaNO ₃ mixtures in sandstone during drying"	Grigori Chapiro (UFJF - Brazil) "Mapping local foam mobility in porous media from computed tomography data"	20 min
15h30 – 16h00	Coffee Break (30min)	Coffee Break (30min)	Coffee Break (30min)	30 min
16h00 – 16h20	Petrik Galvosas (VUW - New Zealand) "Magnetic Resonance Pore Imaging with Extended Echo Times and Cartesian q-Space Mapping"	Benjamin Maillet (UGE - France) "Fluid transfers through versatile dynamic NMR relaxometry"	Ivan S. Oliveira Jr. (CBPF - Brazil) "Quantum computing applied to Oil & Gas problems"	20 min
16h20 – 16h35	Rodrigo O. Silva (KU Leuven - Belgium) "Development of a benchtop high-resolution Magic Angle Spinning NMR"	Etelvino Novotny (Embrapa - Brazil) "Soil Pore Size Distribution and Water Retention Curves by Low-Field NMR"	Adolfo P. Pires (UENF - Brazil) "A Two-Stage Galerkin Physics-Informed Neural Network Approach for Forward and Inverse Nuclear Magnetic Resonance Modeling at the Pore Scale"	15 min
16h35 – 16h50	Teddy Cai (NIH - USA) "Localization-driven exchange contrast in diffusion exchange spectroscopy"	Pedro T. P. Aum (UFPA - Brazil) "3D MRI of Wormhole Patterns Generated by Acid Systems in Carbonate Porous Media"	Moacyr Nascimento (Cenpes/Petrobras - Brazil) "Categorical Diversity Optimization: A framework for inversion and component analysis of NMR data"	15 min
General Talks	General Talk 1	General Talk 2	General Talk 3	---
16h50 – 17h10	Willian A. Trevisan (Cenpes/Petrobras - Brazil) "CO ₂ Storage Strategies in the Oil Sector – Perspectives in Petrobras" (Chair: Moacyr Nascimento - Cenpes/Petrobras - Brazil)	Vanderley M. John (EP/USP - Brazil) "Reducing CO ₂ Emissions in the Cement Industry" (Chair: Pedro C. R. A. Abrão EP/USP & IFSC/USP - Brazil)	Ladislaw Martin-Neto (EMBRAPA - Brazil) "Soil Strategic Role in Global Food Production and CO ₂ emissions mitigation" (Chair: Luiz Alberto Colnago - EMBRAPA - Brazil)	20 min
17h10 - 18h30	Odd-numbered Posters	Even-numbered Posters	General Assembly	80 min
Extra Activities	Free Time & Conference Dinner (19h30)	Free Time & USP/Philharmonic (Pedro II Theater)	Free Time	---