



PROVISIONAL PROGRAMME

NMR School – Saturday 8th February

13.00 – 18.00	Registration Desk Open	RH Mezzanine Foyer
14.15 – 15.45	NMR-1: Compact NMR: Hardware, Methods and Applications Bernhard Bluemich	RHLT3
15.45 – 16.30	Afternoon Tea	RH Mezzanine Foyer
16.30 – 18.00	NMR-2: NMR Diffusion Measurements in Porous Media: An Introduction Bill Price	RHLT3

NMR School – Sunday 9th February

08.30 – 12.00	Registration Desk Open	RH Mezzanine Foyer
08.45 – 10.15	NMR-3: Imaging, flow MRI, Compressed Sensing and Data Analysis Andy Sederman	RHLT1
10.15 – 10.45	Morning Tea	RH Mezzanine Foyer
10.45 – 12.15	NMR-4: NMR Responses from Pore Fluids in Micro and Mesoporous Materials Frank Stallmach	RHLT1

Conference Programme

Sunday 9th February 2014

12.00 – 19.30	Registration Desk Open	RH Mezzanine Foyer
13.30 – 15.30	Tutorial Session – Chair: Andy Sederman	RHLT1
	13.30 – 14.10	T-01: NMR Diffusion Measurements in Practice Bill Price
	14.10 – 14.50	T-02: MRI and PFG: An Introduction and Some Practical Observations Michael Johns
	14.50 – 15.30	T-03: NMR and MRI Application to the Environmental Sciences Dagmar van Dusschoten
15.30 – 16.00	Afternoon Tea	RH Mezzanine Foyer
16.00 – 16.15	Conference Welcome & Opening – Petrik Galvosas & Mike Wilson, Pro Vice-Chancellor & Dean of Science, Victoria University of Wellington	RHLT1
16.15 – 17.45	Invited Talks – Chair: Christoph Arns	RHLT1
	16.15 – 17.00	I-1: Probing Diffusion on, of and in Spheres Melanie Britton
	17.00 – 17.45	I-2: Multi-modal Imaging at 9.4T in Humans: Recent Advances N. Jon Shah
17.45 – 19.30	Welcome Reception sponsored by Bruker	RH Mezzanine Foyer

Monday 10th February 2014

08.30 – 17.00	Registration Desk Open	RH Mezzanine Foyer
09.00 – 10.30	Connected porous systems/multidimensional NMR approaches/Petrophysics – Session 1 – Chair: Kathryn Washburn	RHLT1
	09.00 – 09.30	I-3: Petrophysical Applications of NMR : Tools for Understanding Transport in Porous Rock Materials Mattias Appel

	09.30 – 09.50	O-4: Fluorine Tracers for the Identification of Molecular Interaction with Porous Asphaltene Aggregates in Crude Oil Siegfried Stapf	
	09.50 – 10.10	O-5: Measurement and Modeling of Super-Dispersion in Unsaturated Porous Media Using NMR Propagators Marc Fleury	
	10.10 – 10.30	O-6: Big Analytics for De-Convoluting Size and Chemical Dispersity Effects – A Systems Approach to Colloid and Interface Science Magnus Nyden	
10.30 – 11.00	Morning Tea		RH Mezzanine Foyer
11.00 – 12.20	Bio-Materials, Pharmaceuticals, Medicine and Food – Chair: N. Jon Shah		RHLT1
	11.00 – 11.20	O-7: T_1 μ MRI Study of the Diffusion and Equilibrium Distribution of a MRI Contrast Agent in a Polyelectrolyte Solution; a Model for Cartilage Jenny Algotsson	
	11.20 – 11.40	O-8: Sensitive Detection of Axonal Injury Using Double Pulsed Field Gradient MRI Michal E. Komolosh	
	11.40 – 12.00	O-9: Changes in Anomalous Diffusion during Aging in the Rat Brain Richard Magin	
	12.00 – 12.20	O-10: Nanoparticle Diffusometry in Biopolymer Gels Daan de Kort	
12.20 – 13.30	Lunch		RH Mezzanine Foyer
12.30 – 13.30	MRPM Steering Committee Meeting SRMR Executive Committee Meeting		RHMZ05 RHMZ05
13.30 – 15.00	Poster Viewing Session I (odd numbers)		RH Mezzanine Foyer
15.00 – 15.30	Afternoon Tea		RH Mezzanine Foyer
15.30 – 17.00	Advances in Methodology and Novel Techniques, Session I – Chair: Ravinath Kausik		RHLT1
	15.30 – 16.00	I-4: Design and Implementation of NMR Systems for Downhole Extreme Conditions Lizhi Xiao	
	16.00 – 16.20	O-12: Coherent Dynamical Recoupling of Diffusion-Driven Decoherence in Magnetic Resonance Gonzalo A. Alvarez	
	16.20 – 16.40	O-13: Single-Shot Diffusion Measurements Using 2nd Order Magnetic Fields for Parallel Acquisition of q -Space Wilfred Kittler	
	16.40 – 17.00	O-14: NMR detection of acoustic waves in fluid-saturated rocks Marcus Donaldson	

Tuesday 11th February

08.30 – 15.30	Registration Desk Open		RH Mezzanine Foyer
09.00 – 10.30	Plant, Soil Environmental Sciences – Chair: Dagmar van Dusschoten		RHLT1
	09.00 – 09.30	I-5: Biochar Surface Properties as Assessed by Fast Field Cycling NMR Relaxometry Pellegrino Conte	
	09.30 – 09.50	O-16: Hydrodynamics Mediates Structure During Abiotic Growth of a Calcite Precipitate Barrier: A Combined MRI/CT Study Sarah Codd	
	09.50 – 10.10	O-17: NMR Study of the Evolution of Palisadic and Spongy Parenchyma in Oilseed Rape Leaves Through Senescence Maja Musse	
	10.10 – 10.30	O-18: The Effect Of Ferrocyanide Ions on Sodium Chloride Crystallization in Salt Mixtures: A NMR Study Leo Pel	
10.30 – 11.00	Morning Tea		RH Mezzanine Foyer
11.00 – 12.20	MRI/PFG NMR – Chair: Daniel Topgaard		RHLT1
	11.00 – 11.20	O-19: Magnetic Resonance Pore Imaging: Overcoming the Resolution Limit of MRI for Closed Pore Systems	

		Stefan Hertel
	11.20 – 11.40	O-20: Imaging Microscopic Anisotropy and Order Parameter Using Diffusion NMR with Magic-Angle Spinning of the q -vector Stefanie Eriksson
	11.40 – 12.00	O-21: Sample, Hardware, and Sequence Limitations for Pure Velocity PFG Measurements in Porous Systems Stéphane Rodts
	12.00 – 12.20	O-22: Transition of Stage I to Stage II Evaporation Regime in the Topmost Soil: High Resolution NMR Imaging, Profiling and Numerical Simulation Stefen Merz
12.20 – 13.30	Lunch	
12.30 – 13.30	MRPM International Scientific Advisory Committee Meeting	
13.30 – 15.00	Poster Viewing Session II (even numbers)	
15.45 – 18.00	Excursion – Zealandia Wildlife Sanctuary Buses depart from Rutherford House at 15.45	

Wednesday 12th February

08.30 – 15.30	Registration Desk Open	
09.00 – 10.30	Micro and Nano-structured Materials – Chair: Sergey Vasenkov	
	09.00 – 09.30	I-6: Access of molecular mobility under the influence of inner surfaces of high-tec nanoporous materials by NMR Frank Stallmach
	09.30 – 09.50	O-24: NMR Shielding of Helium-3 in the Micropores of Zeolites Karol Jackowski
	09.50 – 10.10	O-25 Investigation of Molecular Motion of CO ₂ in the MOF Zn ₂ (bdc) ₂ (dabco) by ¹³ C NMR and MD Mikulas Peksa
	10.10 – 10.30	O-26: NMR Relaxometry of Metal-Organic Frameworks for Surface Area Screening Joseph Chen
10.30 – 11.00	Morning Tea	
11.00 – 12.20	Chemical Engineering – Chair: Mike Johns	
	11.00 – 11.20	O-27: Diesel Particulate Filters: Investigating their Manufacture and Operation using Magnetic Resonance Techniques Andrew York
	11.20 – 11.40	O-28: Implementation of Ultra-short Echo Time Magnetic Resonance Imaging in Short T_2 and T_2^* Systems Hilary Fabich
	11.40 – 12.00	O-29: Investigations of CTAB Reverse Micelles using Diffusion NMR and Molecular Dynamics Amanda Mills
	12.00 – 12.20	O-30: Online Analysis of Discharge Water Using Low-Field NMR Einar Fridjonsson
12.20 – 13.30	Lunch	
13.30 – 15.00	CMMR – Chair: Robin Dykstra	
	13.30 – 14.00	I-7: Compact NMR Sensors for On-line Monitoring: Applications in Industry, Chemistry, and Medicine Ernesto Danieli
	14.00 – 14.20	O-32: Drying and Film Formation in Polymer Dispersions - Novel Insights from Parallel Profile NMR and Gravimetric Experiments Nikolaus Nestle
	14.20 – 14.40	O-33: Compact NMR Spectroscopy Bernhard Blümich
	14.40 – 15.00	O-34: DxT_2 Correlation Using the Inhomogeneity of Single Sided NMR Devices Marcel Nogueira d'Eurydice

15.00 – 15.30	Afternoon Tea		RH Mezzanine Foyer
15.30 – 17.00	Energy and Related Materials – Chair: Peter McDonald		RHLT1
	15.30 – 16.00	O-35: T_2 - T_2 Correlations in Mixed Porosity Systems: Is There a Link to Diffusive Exchange? David Johnson	
	16.00 – 16.20	O-36: Emulsion Characterization Using Low Field NMR Agnes Haber	
	16.20 – 16.40	O-37: Understanding Transport from Molecular to Micron Scales in Nanoporous Polymer Membranes Louis A. Madsen	
	16.40 – 17.00	O-38: NMR of Natural Gas in Nano-Porous Media Ravinath Kausik	
19.00 – Late	Conference Dinner Sponsored by Magritek and Poster Prize Poster Prize		Mac's Brewery Function Centre

Thursday 13th February

08.30 – 15.30	Registration Desk Open		RH Mezzanine Foyer
09.00 – 10.30	DNP/Hyperpolarisation – Chair: Marcel Nogueira d'Eurydice		RHLT1
	09.00 – 09.30	O-39: Strategies for the Acquisition of J-Spectra Using Parahydrogen Induced Polarization Rodolfo Acosta	
	09.30 – 09.50	O-40: Parahydrogen Enhanced NMR Studies of Hydrogenation Reaction Dynamics on Oxide-Supported Ir Nanoparticles Clifford Bowers	
	09.50 – 10.10	O-41: An Alderman-Grant Resonator for DNP at 73mT and its Application for DNP-Enhanced Fast Field Cycling Relaxometry Oliver Neudert	
	10.10 – 10.30	O-42: Hyperpolarization of Nuclear Spins in Heterogeneous Hydrogenations and Beyond Igor Koptug	
10.30 – 11.00	Morning Tea		RH Mezzanine Foyer
11.00 – 12.20	Advances in Methodology and Novel Techniques – Session II – Chair: Nikolaus Nestle		RHLT1
	11.00 – 11.20	O-43: Variable-angle Spinning of the q -vector in Diffusion MRI Daniel Topgaard	
	11.20 – 11.40	O-44: Distinguishing Effects from Fluid Type, Pore Size and More in Heterogeneous Samples: The Diffusion Time Correlation Experiment. Jeffrey Paulsen	
	11.40 – 12.00	O-45: Half a Dozen Ways to Compute Restricted Diffusion Propagators: Are Some Better than Others? Konstantin Momot	
	12.00 – 12.20	O-46: NMR Diffusometry Through the Eye of Electrostatics Matias Nordin	
12.20 – 13.30	Lunch		RH Mezzanine Foyer
13.30 – 15.00	Connected porous systems/multidimensional NMR approaches/ Petrophysics - Session II – Chair: Siegfried Stapf		RHLT1
	13.30 – 13.50	O-47: Paramagnetic Mechanism of NMR Relaxation of Fluids in Silicates Alexander Perepukhov	
	13.50 – 14.10	O-48: Gas-Gas (CO ₂ -CH ₄) Dispersion Measurements Using Low-Field MRI Sarah J. Vogt	
	14.10 – 14.30	O-49: Overcoming New Challenges of NMR Shale Characterisation Kathryn Washburn	
	14.30 – 14.50	O-50: Non-Newtonian Fluid Dynamics in Porous Media Jennifer R Brown	
14.50 – 15.20	Afternoon Tea		RH Mezzanine Foyer
15.20 – 16.30	Hardware Development – Chair: Carlos Mattea		RHLT1
	15.20 – 15.50	O-51: Advances in NMR Hardware Technologies	

		Robin Dykstra
	15.50 – 16.10	O-52: High-throughput NMR System For Screening of Haploid Kernels of Maize (Corn) Wang Hongzhi
	16.10 – 16.30	O-53: Water Content and Water Phase Transitions in Black Spruce Wood Materials Bruce Balcom
16.30 – 17.00	Giulio Cesare Borgia Award and General MRPM Assembly Closing remarks	
		RHLT1