IMPORTANT REMINDER: If you have an accepted contribution to the conference, please check the appropriate list of oral and/or poster presentations to be sure that your paper has been included in the schedule. If your paper is missing, please contact David Ailion (nmr@physics.utah.edu) immediately.

The ICMRM program of oral presentations can be found by scrolling down to the next page. Poster presentations can be found here.
ICMRM PROGRAM

MONDAY, SEPT. 22 - MORNING

8:00 - 9:00 AM  WELCOME AND KEYNOTE

8:00-8:15  WELCOME

8:15-9:00  KEYNOTE LECTURE (Chair: David C. Ailion)

9:00 - 10:51 AM  SESSION I: SOLID STATE NMR/NQR
Chair: David C. Ailion

INVITED LECTURES
9:00-9:30  Robert Blinc, Disorder in BaTiO₃ and SrTiO₃.
9:30-10:00  Sean E. Barrett, Optically Pumped NMR of Quantum Wells Using a Bottoms Up Approach to Study Electron Spin Physics on Sub-Micron Length Scales.

CONTRIBUTED LECTURES
10:17-10:34  Stephanie Vierkötter, Catherine Ward, David Gregory, Quadrupole Resonance: A Different “Spin” on Nondestructive Inspection of Polymeric Fiber-Reinforced Composite Structures.

10:51 - 11:15 AM  COFFEE BREAK

11:15 - 12:55 PM  SESSION II: NOVEL NMR TECHNIQUES I
Chair: Paul T. Callaghan

INVITED LECTURES
11:15-11:45  Michael V. Romalis, High Resolution Atomic Magnetometers.
11:45-12:15  Gil Navon, ²H DQF Spectroscopic MRI as a Tool for the Study of the Microstructure and Biomechanics of Articular Cartilage.

CONTRIBUTED LECTURES
12:15-12:35  Bruce J. Balcom, Meghan Halse, Bryce MacMillan, Centric Scan SPRITE MRI.
MONDAY, SEPT. 22 - AFTERNOON

12:55 - 2:20 PM  LUNCH

2:20 - 3:58 PM  SESSION III: MATERIALS NMR
Chair: Karen L. Anderson

INVITED LECTURE

CONTRIBUTED LECTURES
3:24-3:41  Farida Grinberg, Günter Majer, Long-Time Scale Molecular Dynamics of Ordered Fluids.
3:41-3:58  David Last, Ludovic De Rochefort, Françoise Peyrin, Geneviève Guillot, 3D MR Microscopy of Trabecular Bone: Architecture Parameters by Reference to High Resolution Microtomography (Synchrotron Radiation) on Matched ROIs.

3:58 - 4:20 PM  COFFEE BREAK

4:20 - 5:58 PM  SESSION IV: NMR IN GASES
Chair: Gernot Laicher

INVITED LECTURE
4:20-4:50  Mark S. Conradi, Probing Lung Microstructure With Laser-Polarized 3He Gas Diffusion.

CONTRIBUTED LECTURES
5:24-5:41  Dean O. Kuethe, Rebecca Montano, Natalie Adolphi, Imaging Lung Tissue is Not So Difficult
5:41-5:58  Natalie Adolphi, Dean O. Kuethe, First T1 Images of Inert Fluorinated Gases in Lungs.
6:00 - 8:00 PM  POSTER SESSION I
(Snacks will be served during the poster sessions.)

TUESDAY, SEPT. 23 - MORNING

8:30 - 10:28 AM  SESSION V: BIOMEDICAL MAGNETIC RESONANCE I
Chair: G. Allan Johnson

INVITED LECTURES
8:30-9:00  R. Mark Henkelman, MR Microscopy for High Throughput Mouse Phenotyping.
9:00-9:20  Robert A. Wind, In vivo High-resolution Proton NMR Spectroscopy in a Rotating Mouse.

CONTRIBUTED LECTURES
9:37-9:54  Y. Seo, A. Takamata, T. Ogino, H. Morita, M. Murakami, Water Permeability of Capillaries in the SFO of Rats Determined by T1 Relaxation Time Measured by 1H MRI.
9:54-10:11 Yoshimasa Matsuda, Shinya Ono, Tomoyuki Haishi, Katsumi Kose, MR Microscopy of a Large Human Embryo Collection (Kyoto Collection) Using a Four-Channel Super-Parallel MR Microscope at 2.34 T.

10:28 - 10:55 AM  COFFEE BREAK

10:55 - 12:55 PM  SESSION VI: YOUNG INVESTIGATORS
Chair: Robert E. Botto

11:55-12:25  Song-I Han, Amplification of Xenon NMR and MRI by Remote Detection.

12:55 PM  GROUP PHOTO
TUESDAY, SEPT. 23 - AFTERNOON

1:30PM - ??  CONFERENCE EXCURSION (optional)

There will be an additional charge for the excursion, which will include a box lunch for each participant.

WEDNESDAY, SEPT. 24 – MORNING

8:30 - 10:21 AM  SESSION VII: NOVEL NMR TECHNIQUES II
Chair: Charles H. Pennington

INVITED LECTURES
8:30-9:00  G. Allan Johnson, Image Based Phenotyping.
9:00-9:30  Russell E. Jacobs, Looking Deeper into Development Applications of High Resolution MRI in Developmental Biology.

CONTRIBUTED LECTURES
9:30-9:47  Henk Van As, Daniel Polders, P. Adrie de Jager, Frank J. Vergeldt, Diffusion and Displacement Analysis in Heterogeneous, Multicompartiment (Bio-) Systems by PFG-Multi-Echo NMR/MRI.
10:04-10:21  Pablo J. Prado, Serge Bobroff, Exo-MRI.

10:21 - 10:45AM  COFFEE BREAK

10:45AM - 12:36 PM  SESSION VIII: BIOLOGICAL NMR
Chair: Kimberlee Potter

INVITED LECTURES
10:45-11:15  Charles H. Pennington, Magnetic Resonance Microscopy at the Micron Scale, and “DESIRE”.
11:15-11:45  Edward W. Hsu, Diffusion Tensor Microscopy: From Molecules to Organs.
CONTRIBUTED LECTURES

11:45-12:02  Davide Santoro, Walter Köckenberger, *Optimization of Indirect Detected $^{13}$C Spectroscopy and Micro Imaging Experiments for In-Vivo Applications in Plants.*


WEDNESDAY, SEPT. 24 – AFTERNOON

12:36 - 2:10 PM  LUNCH

2:10 - 3:48 PM  SESSION IX: DIFFUSION/FLOW  
Chair: Joseph D. Seymour

INVITED LECTURE

2:10-2:40  Rainer Kimmich, *Probing into Transport of Fluids in Porous Media on Length Scales from Millimeters to Nanometers by NMR.*

CONTRIBUTED LECTURES


3:48 - 4:20 PM  COFFEE BREAK

4:20 - 6:00 PM  SESSION X: NOVEL NMR TECHNIQUES III  
Chair: Robert A. Wind

INVITED LECTURES

4:20-4:50  Bernhard Blümich, *Unilateral NMR: Concepts and Applications of the NMR-MOUSE.*

**CONTRIBUTED LECTURES**

5:20-5:40  **Yang Xia, Paul T Callaghan**, *Imaging the Tubeless Siphon by NMR Microscopy*

5:20-6:00  **Markus Küppers, Siegfried Stapf, Bernhard Blümich**, *NMR Velocity Studies on a Falling Liquid Film.*

6:00 - 8:00 PM  **POSTER SESSION II**
(Snacks will be served during the poster sessions.)

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**THURSDAY, SEPT. 25 – MORNING**

8:30 - 10:11 AM  **SESSION XI: NMR HARDWARE/INDUSTRIAL APPLICATIONS**
Chair: *Eiichi Fukushima*

**INVITED LECTURES**

8:30-9:00  **Tomoyuki Haishi**, *Compact NMR/MRI Systems Using Permanent Magnetic Circuits.*

9:00-9:30  **Koji Saito**, *Industrial Application of NMR imaging to Steel Making Process.*

**CONTRIBUTED LECTURES**


10:11 - 10:35AM  **COFFEE BREAK**

10:35 - 11:25 AM  **SESSION XII: HYPERPOLARIZED NUCLEI**
Chair: *Gil Navon*

**INVITED LECTURE**

10:35-11:05  **Angelo Bifone**, *Hyperpolarized Nuclei: Beyond Helium and Xenon.*

11:25 AM - 12:33 PM  **SESSION XIII: CHEMICAL AND SOLID STATE APPLICATIONS**

*Chair: Robert Blinc*

**CONTRIBUTED LECTURES**


11:59-12:16  *K. Kumagai, K. Kakuyanagi, M. Matsuda, and M. Hasegawa, Magnetic Field Induced Antiferromagnetic Order in the Vortex Core of HTSC Studied by Spatially-Resolved NMR.*


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**THURSDAY, SEPT. 25 – AFTERNOON**

12:33 - 1:50 PM  **LUNCH**

1:50 - 3:31 PM  **SESSION XIV: BIOMEDICAL MAGNETIC RESONANCE II**

*Chair: R. Mark Henkelman*

**A. Symposium on Non-Clinical Functional Magnetic Resonance**

**INVITED LECTURES**

1:50-2:11  *Harold Swartz, Overview of the Use of Magnetic Resonance to Measure Function In Vivo.*

2:11-2:32  *Jeff Dunn, Physiological MRI (pMRI): Current Capabilities and Future Possibilities.*


B. Other Biomedical Applications

CONTRIBUTED LECTURE
3:14-3:31
Philipp Mörchel, Volker Herold, Cornelius Faber, Eberhard Rommel, Axel Haase, High field In-Vivo Quantitative 3D Motion Mapping of Murine Myocardium with Phase Contrast MRI.

3:31 – 3:55 PM  COFFEE BREAK

3:55 - 6:18 PM  SESSION XV: POROUS MEDIA
Chair: Peter J. McDonald

INVITED LECTURES
3:55-4:40  THE MR TECHNOLOGY LECTURE

4:40-5:10  Yi-Qiao Song, Novel Techniques for Porous Media Research.

CONTRIBUTED LECTURES


5:44-6:01  Quan Chen, Murray K. Gringas, and Bruce J. Balcom, Pore Filling Mechanism of Spontaneous Imbibition in Porous Media Determined by Internal Field Effect and Conical-SPRITE MRI.


6:18- 6:30 PM  CLOSING SESSION

7:30 - ?  BANQUET
(Winner of the Young Investigator’s Competition will be announced during the banquet.)