

**14<sup>th</sup> National Magnetic Resonance Society Meeting  
&  
Special Symposium on “Advanced MR Applications”  
(January 16 to 19, 2008)**

*Scientific Programme*

**Special Symposium on “Advanced MR Applications”**

*Wednesday, 16<sup>th</sup> January, 2008*

<b>Session I</b> 1130 hrs – 1300 hrs	<b>Biomedical MR</b> <b>Chairpersons – Prof. A K Mahapatra &amp; Dr. R C Sawhney</b>	
1130 hrs – 1200 hrs <b>SS – 1</b>	<b>Prof. C L Khetrapal</b> <i>CBMR, Lucknow</i>	Developments of NMR with emphasis on Indian contributions.
1200 hrs – 1230 hrs <b>SS – 2</b>	<b>Prof. N R Jagannathan</b> <i>AIIMS, New Delhi</i>	An Overview of the Role of MR imaging and MR Spectroscopy in Medicine.
1230 hrs – 1300 hrs <b>SS – 3</b>	<b>Dr. R P Tripathi</b> <i>INMAS, Delhi</i>	Neuroimaging in CNS infections.
1300 hrs – 1400 hrs	<b>LUNCH</b>	
<b>Session II</b> 1400 hrs – 1530 hrs	<b>Clinical imaging - I</b> <b>Chairpersons – Prof. Veena Chaudhury &amp; Prof. A K Singh</b>	
1400 hrs – 1430 hrs <b>SS – 4</b>	<b>Surg. Cdr. Indrajit</b> <i>R&amp;R Hospital, New Delhi</i>	Neuroimaging with 3T MRI: Our experience.
1430 hrs – 1500 hrs <b>SS – 5</b>	<b>Dr. Kohkan Shamsi</b> <i>Acunova Life Sciences, USA &amp; Symbiotic Pharma Research, USA</i>	Newer developments in MR Contrast Media.
1500 hrs – 1530 hrs <b>SS – 6</b>	<b>Mr Franz Schmitt</b> <i>Siemens Medical Solutions, Germany</i>	State of the Art Ultra High Field Imaging.
1530 hrs – 1600 hrs	<b>TEA</b>	
<b>Session III</b> 1600 hrs – 1830 hrs	<b>High resolution Bio-Medical MR Spectroscopy</b> <b>Chairpersons – Prof. G Govil &amp; Prof. N R Jagannathan</b>	
1600 hrs – 1630 hrs <b>SS – 7</b>	<b>Prof. Elaine Holmes</b> <i>Imperial College London, UK</i>	The Role of NMR Spectroscopy in Biomedical Research.
1630 hrs – 1700 hrs <b>SS – 8</b>	<b>Prof. Raja Roy</b> <i>CBMR, Lucknow</i>	Lipid <sup>1</sup> H and <sup>13</sup> C NMR Spectroscopic Analysis of Human Intracranial Tuberculomas.
1700 hrs – 1730 hrs <b>SS – 9</b>	<b>Dr. Uma Sharma</b> <i>AIIMS, New Delhi</i>	In vivo Magnetic Resonance Spectroscopy (MRS) Study of Breast Carcinoma.

1730 hrs – 1800 hrs <b>SS – 10</b>	<b>Prof. H M Sonawat</b> <i>TIFR, Mumbai</i>	Metabonomics of Malarial Parasite based on <sup>1</sup> H NMR.
1800 hrs – 1830 hrs <b>SS – 11</b>	<b>Dr. A B Patel</b> <i>CCMB, Hyderabad</i>	Regulation and metabolism of inhibitory neurotransmitter: an NMR perspective.
1830 hrs – 1850 hrs	<b><i>TEA</i></b>	
<b>1930 hrs – 2200 hrs</b>	<b><i>Symposium Dinner, (DROMI, Timarpur)</i></b>	

## Special Symposium on “Advanced MR Applications”

Thursday, 17<sup>th</sup> January, 2008

<b>Session IV</b> 0915 hrs – 1115 hrs	<b>Functional MRI in Cognitive Neuroscience</b> <b>Chairpersons – Prof. Seiji Ogawa &amp; Dr. M K Mandal</b>	
0915 hrs – 0945 hrs <b>SS – 12</b>	<b>Prof. David G Gadian</b> <i>Radiology and Physics Unit,            UCL Institute of Child            Health, London, UK</i>	Magnetic resonance and brain structure- function relationships in childhood.
0945 hrs – 1015 hrs <b>SS – 13</b>	<b>Prof. T Sharma</b> <i>The Cognition Group,            Newark, USA</i>	Visualizing Cognitive Enhancement in Schizophrenia and Alzheimer’s Disease with functional MRI.
1015 hrs – 1045 hrs <b>SS – 14</b>	<b>Prof. Veena Kumari</b> <i>Institute of Psychiatry,            King’s College London            London, UK</i>	The Contribution of Functional MRI to Current Understanding of Cognition and Emotion in Humans: From Normal to Dysfunctional States.
1045 hrs – 1115 hrs <b>SS – 15</b>	<b>Dr. Senthil S Kumaran</b> <i>AIIMS, New Delhi</i>	Representation of different emotions in the brain from an fMRI study.
1115 hrs – 1130 hrs	<b>TEA</b>	
<b>Session V</b> 1130 hrs – 1330 hrs	<b>Clinical Imaging - II</b> <b>Chairpersons – Prof. Viney Jain &amp; Brig. Karni Singh</b>	
1130 hrs – 1200 hrs <b>SS – 16</b>	<b>Prof. A K Mahapatra</b> <i>SGPGIMS, Lucknow</i>	NMR in Clinical Medicine: Present and Future.
1200 hrs – 1230 hrs <b>SS – 17</b>	<b>Dr. Harsh Mahajan</b> <i>Mahajan Imaging Centre,            New Delhi</i>	Diffusion Tensor Imaging and MR Tractography.
1230 hrs – 1300 hrs <b>SS – 18</b>	<b>Dr. Praveen Gulati</b> <i>MRI Centre, New Delhi</i>	MR Perfusion Imaging.
1300 hrs – 1330 hrs <b>SS – 19</b>	<b>Dr. Marc van Cauteren</b> <i>Philips Medical Systems</i>	Advances in Functional MR.
1330 hrs – 1430 hrs	<b>LUNCH</b>	
<b>Session VI</b> 1430 hrs – 1600 hrs	<b>POSTER Presentation - Part I (with Tea)</b> <b>(P1 – P40)</b>	

<b>Session VII</b> 1600 hrs – 1800 hrs	<b>Latest Techniques &amp; Instrumentation</b> <b>Chairpersons – Prof. David G Gadian &amp; Prof. P Raghunathan</b>	
1600 hrs – 1630 hrs <b>SS – 20</b>	<b>Dr. Stefan Posse</b> <i>University of New Mexico, School of Medicine, USA</i>	High-speed <sup>1</sup> H MRSI at high field using large scale array coils and acceleration with parallel imaging.
1630 hrs – 1700 hrs <b>SS – 21</b>	<b>Dr. Michal Erb</b> <i>University of Tuebingen, Germany</i>	Cluster analysis of fMRI activation pattern in a visual and auditory naming task.
1700 hrs – 1730 hrs <b>SS – 22</b>	<b>Prof. Uwe Klose</b> <i>University Hospital Tübingen, Germany</i>	Stochastic diffusion fibre tracking as a tool to analyze regions with low fractional anisotropy.
1730 hrs – 1800 hrs <b>SS – 23</b>	<b>Dr Tony Stöcker</b> <i>Institute of Neuroscience and Biophysics - Medicine, Research Centre Jülich, Germany</i>	Extended Phase Graph Methods for improved structural brain imaging.
<b>1800 hrs – 1830 hrs</b>	<p align="center"><b>Prof. S. Subramanian's 60th Birth Day</b> <b>Lecture Award Presentation – 1</b></p> <p align="center"><b>Dr Siddhartha P. Sarma</b> <i>Molecular Biophysics Unit, Indian Institute of Science, Bangalore, India</i></p> <p align="center"><b>“Solution NMR Studies of Acetohydroxy Acid Synthase I: Identification of the Sites of Intersubunit Interactions Using Multidimensional NMR Methods”</b></p>	
<b>1830 hrs – 1900 hrs</b>	<p align="center"><b>Prof. S. Subramanian's 60th Birth Day</b> <b>Lecture Award Presentation – 2</b></p> <p align="center"><b>Dr B. Jagadeesh</b> <i>Centre for Nuclear Magnetic Resonance, Indian Institute of Chemical Technology, Hyderabad, INDIA</i></p> <p align="center"><b>“NMR studies of folds and dynamics in molecules and molecular assemblies: Secondary structures to surface induced order”</b></p>	
1900 hrs – 1915 hrs	<b>TEA</b>	
<b>1915 hrs – 2045 hrs</b>	<b>CULTURAL EVENING</b> <b>(Dr. S. Bhagwantam Auditorium, Metcalfe House)</b>	
<b>2045 hrs – 2230 hrs</b>	<b>Dinner, Metcalfe House</b>	

## 14<sup>th</sup> National Magnetic Resonance Society Meeting

Friday, 18<sup>th</sup> January, 2008

<b>Session I</b> 0915 hrs – 1100 hrs	<b>Bio-molecular NMR (Part I)</b> <b>Chairpersons – Prof. B C Gerstein &amp; Dr. S Ganapathy</b>	
0915 hrs – 0940 hrs <b>IT – 1</b>	<b>Prof. R V Hosur</b> <i>TIFR, Mumbai</i>	Protein Energy Landscapes by NMR.
0940 hrs – 1005 hrs <b>IT – 2</b>	<b>Dr. A C Kunwar</b> <i>IICT, Hyderabad</i>	Super-secondary Structures from Foldamers with $\beta$ -Helices (Mixed Helices).
1005 hrs – 1030 hrs <b>IT – 3</b>	<b>Dr. H S Atreya</b> <i>IISc, Bangalore</i>	A Novel Method for Estimation of Secondary Structure Content in Proteins from NMR Spectra.
1030 hrs – 1045 hrs <b>OP – 1</b>	<b>Dr. Vidya Raghunathan</b> <i>NII, New Delhi</i>	Investigation of the role of the C-terminal extension of PGKC from <i>Leishmania mexicana mexicana</i> .
1045 hrs – 1100 hrs <b>OP – 2</b>	<b>Mr Amit Kumar</b> <i>IIT, Roorkee</i>	Nuclear Magnetic Resonance spectral and quantum chemical studies on molecular properties and electronic structure of bioflavonoid luteolin and quercetin.
1100 hrs – 1130 hrs	<b>TEA</b>	
<b>Session II</b> 1130 hrs – 1305 hrs	<b>Solid State NMR and Theoretical Studies (Part I)</b> <b>Chairpersons – Prof. C L Khetrpal &amp; Dr. G Ilavazhagan</b>	
1130 hrs – 1155 hrs <b>IT – 4</b>	<b>Prof. Anil Kumar</b> <i>IISc, Bangalore</i>	Quantum Games by NMR.
1155 hrs – 1220 hrs <b>IT – 5</b>	<b>Dr. P K Madhu</b> <i>TIFR, Mumbai</i>	High-resolution proton spectroscopy in solid-state NMR and its ramifications.
1220 hrs – 1235 hrs <b>OP – 3</b>	<b>Dr. G J Krishna</b> <i>Indian Oil Corporation Ltd., Research &amp; Development Centre, Faridabad, Haryana</i>	Probing structure of Zeolites by Solid State NMR techniques.
1235 hrs – 1250 hrs <b>OP – 4</b>	<b>Mr Bibhuti B Das</b> <i>IISc, Bangalore</i>	Projection Reconstruction of 2D- Spectrum from 1D Experiments.
1250 hrs – 1305 hrs <b>OP – 5</b>	<b>Dr. T S Mahesh</b> <i>Indian Institute of Science Education and Research, Pune</i>	Designing NMR experiments using artificial intelligence.
1305 hrs – 1400 hrs	<b>LUNCH</b>	

<b>Session III</b> 1400 hrs – 1530 hrs	<b>POSTER Presentation – Part II (with Tea)</b> <b>(P41 – P79)</b>	
<b>Session IV</b> 1530 hrs – 1755 hrs	<b>Miscellaneous NMR Applications (Part I)</b> <b>Chairpersons – Prof. A S Brar &amp; Prof. K V R Chary</b>	
1530 hrs – 1555 hrs <b>IT – 6</b>	<b>Dr. R K Sharma</b> <i>INMAS, Delhi</i>	Exogenous Contrast Agents.
1555 hrs – 1620 hrs <b>IT – 7</b>	<b>Dr. Sudha Srivastava</b> <i>TIFR, Mumbai</i>	$\beta$ - Adrenergic antagonist propranolol as a novel, effective spermicide.
1620 hrs – 1645 hrs <b>IT – 8</b>	<b>Dr. Detlef Moskau</b> <i>Bruker BioSpin AG, Fällanden, Switzerland</i>	NMR for Modern Times.
1645 hrs – 1710 hrs <b>IT – 9</b>	<b>Mr Keiji Eguchi</b> <i>JEOL Limited</i>	Recent applications of 3D-Dosy and MICCS in NMR.
1710 hrs – 1725 hrs <b>OP - 6</b>	<b>Dr. Lakshmi Bala</b> <i>CBMR, Lucknow</i>	Effect of jaundice in pancreaticohepatobiliary cancer and benign patients: $^1\text{H}$ and $^{31}\text{P}$ NMR studies of bile.
1725 hrs – 1740 hrs <b>OP - 7</b>	<b>Dr. Anjani K Tiwari</b> <i>INMAS, Delhi</i>	2D-QSAR correlation of physico-chemical and relaxometric properties of various GADOLINIUM (III)-DTPA-BIS (AMIDE) derivative based MRI contrast agents.
1740 hrs – 1755 hrs <b>OP - 8</b>	<b>Mr Ravi Pratap Barnwal</b> <i>TIFR, Mumbai</i>	Rapid Measurement of $^3\text{J}(\text{H}^{\text{N}}-\text{H}^{\text{a}})$ and $^3\text{J}(\text{N}-\text{H}^{\text{b}})$ coupling constants in polypeptides.
1800 hrs – 1820 hrs	<b>TEA</b>	
<b>1930 hrs – 2200 hrs</b>	<b>Banquet Dinner (Gymkhana Club)</b>	

## 14<sup>th</sup> National Magnetic Resonance Society Meeting

Saturday, 19<sup>th</sup> January, 2008

<b>Session V</b> 0915 hrs – 1100 hrs	<b>Solid State NMR and Theoretical Studies (Part II)</b> <b>Chairpersons – Prof. Anil Kumar &amp; Prof. P C Jain</b>	
0915 hrs – 0940 hrs <b>IT – 10</b>	<b>Prof. B C Gerstein</b> <i>Iowa State University, Ames, Iowa</i>	VCT studies of minor constituents of Aspirin and coals.
0940 hrs – 1005 hrs <b>IT – 11</b>	<b>Prof. K V Ramanathan</b> <i>IISc, Bangalore</i>	Solid State NMR Methods: Some Recent Developments and Applications.
1005 hrs – 1030 hrs <b>IT – 12</b>	<b>Prof. N Suryaprakash</b> <i>IISc, Bangalore</i>	Chiral discrimination by NMR: our recent methodologies.
1030 hrs – 1045 hrs <b>OP – 9</b>	<b>Mr Manoj Kumar Pandey</b> <i>IIT, Madras</i>	Effective Floquet Hamiltonian for a Homonuclear Dipolar coupled two spin ( $I = 1$ ) system with first order Quadrupolar interaction using contact transformation method.
1045 hrs – 1100 hrs <b>OP – 10</b>	<b>Dr. Avik Mitra</b> <i>Varian Indian Pvt. Ltd., Pune / IISc, Bangalore</i>	NMR implementation of adiabatic SAT algorithm using strongly modulated pulses.
1100 hrs – 1120 hrs	<b>TEA</b>	
<b>Session VI</b> 1120 hrs – 1315 hrs	<b>Bio-molecular NMR (Part II)</b> <b>Chairpersons – Prof. R V Hosur &amp; Prof. K V Ramanathan</b>	
1120 hrs – 1145 hrs <b>IT – 13</b>	<b>Prof. K V R Chary</b> <i>TIFR, Mumbai</i>	In Search of Ancestral $\beta\gamma$ -crystallins in Archaea: An NMR Study.
1145 hrs – 1210 hrs <b>IT – 14</b>	<b>Dr. M V Deshmukh</b> <i>CCMB, Hyderabad</i>	Towards solution structure of RNAi initiator protein, RDE-4.
1210 hrs – 1235 hrs <b>IT – 15</b>	<b>Dr. S Ganapathy</b> <i>NCL, Pune</i>	$^{29}\text{Si}$ - $^{29}\text{Si}$ Homonuclear Dipolar Recoupling and Sensitivity Enhancement via Two-dimensional SR26 <sub>4</sub> <sup>11</sup> CPMG DQ Correlation Experiment.
1235 hrs – 1250 hrs <b>OP – 11</b>	<b>Mr Rajendra Singh Thakur</b> <i>TIFR, Mumbai</i>	Frequency-Swept TPPM: A novel approach to heteronuclear dipolar decoupling in solid-state NMR.
1300 hrs – 1400 hrs	<b>LUNCH</b>	

<b>Session VII</b> 1400 hrs – 1600 hrs	<b>Miscellaneous NMR Applications (Part II)</b> <b>Chairpersons – Dr. A C Kunwar &amp; Dr. A S Sarpal</b>	
1400 hrs – 1425 hrs <b>IT – 16</b>	<b>Dr. S Raghothama</b> <i>IISc, Bangalore</i>	Analysis of proline containing short peptide templates as conformational constraints.
1425 hrs – 1450 hrs <b>IT – 17</b>	<b>Dr. Neeraj Sinha</b> <i>CBMR, Lucknow</i>	Triple resonance experiments for aligned samples solid state NMR of $^{13}\text{C}$ and $^{15}\text{N}$ labeled proteins.
1450 hrs – 1515 hrs <b>IT – 18</b>	<b>Dr. Kavita Dorai</b> <i>Indian Institute of Science Education &amp; Research (IISER) Mohali, Chandigarh</i>	Exploring the limits of eigenbase quantum computing and the possibility of substantially increasing register size.
1515 hrs – 1530 hrs <b>OP – 12</b>	<b>Ms Samanwita Pal</b> <i>IIT, Madras</i>	NQR Exchange Spectroscopy with shaped radiofrequency pulses.
1530 hrs – 1545 hrs <b>OP – 13</b>	<b>Dr. B K Sarkar</b> <i>National Sun Yat-sen University, Kaohsiung, Taiwan</i>	Microscopic Magnetic Resonance Imaging investigation on the induction of hyperglycemia in ZEBRAFISH.
1545 hrs – 1600 hrs <b>OP – 14</b>	<b>Mr Bikash Baishya</b> <i>IISc, Bangalore</i>	Spin Selective Multiple Quantum NMR (SS-MQNMR): Determination of Signs and Magnitudes of Homo and Heteronuclear Scalar Couplings by Spin State Selection.
<b>1600 hrs – 1630 hrs</b>	<b><i>Concluding Remarks</i></b>	
1630 hrs – 1700 hrs	<b><i>TEA (with snacks)</i></b>	
<b>1700 hrs – 1730 hrs</b>	<b><i>NMRS General Body Meeting</i></b>	