

# History of the Chicago Area NMR Discussion Group

Year	Location	Host	Keynote Speaker	Topic
1970	Northwestern Univ.	Joe Lambert	Adam Allerhand	Fourier Transform NMR
1971	Purdue Univ.	John Grutzner	Jiri Jonas	Relaxation Phenomena
1972	Standard Oil, Naperville IL	Bruce Wenzel	Jake Schaefer	FT NMR Methods & Problems
1973	Univ. of Illinois at Chicago Circle	Ben Bangerter	Paul Fagerness John Markley	Relaxation Times Protein Proton NMR
1974	G.D. Searle & Co., Chicago	Roy Bible	David Natusch Gerhard Closs	Overhauser Effect Triplet Lifetimes
1975	Notre Dame	Kenner Christiansen	Eric Oldfield	T <sub>1</sub> Measurement & Application
1976	Abbott Labs, North Chicago IL	Rich Egan	Tobin Marks	Organometallic NMR
1977	Univ. of Illinois Urbana-Champaign	Eric Oldfield	Eric Oldfield	Superconducting Spectrometers
1978	Amoco Research Center, Naperville	Joe Ray	None – Seventeen Local Speakers	
1979	Upjohn Co., Kalamazoo, MI	George Slomp	Ed Stejskal	Solid-State NMR
1980	Purdue Univ.	John Grutzner	Joe Lambert	Modern Assignment Techniques
1981	Loyola Univ., Chicago	Ken Kopple & David Crumrine	Michael Albright	High Resolution Multinuclear NMR of Solids
1982	G.D. Searle & Co., Skokie, IL	Roy Bible	Hans Post	Introduction to NMR Imaging
1983	Univ. of Illinois, Urbana-Champaign	Eric Oldfield	Stan Smith	NMR Imaging
1984	Argonne National Labs	Robert Botto	Nino Yannoni Laurie Hall Dave VanderHart	Structure & Dynamics in Organic Solids Chemical Microscopy Polymer Fiber Morphology
1985	Northwestern Univ.	Joe Lambert	Paul Lauterbur	Microscopic and Spectroscopic NMR Images
1986	Northwestern Univ.  Northwestern NMR Symposium	Tobin Marks	Gary Maciel  (Bax, Lauterbur, Jelinski, Maciel,	MAS for Surface Studies

<b>Year</b>	<b>Location</b>	<b>Host</b>	<b>Keynote Speaker</b>	<b>Topic</b>
			Oldfield, Ian Smith)	
1987	Abbott Labs	Rich Stephens	Gerhard Wagner Joe Ackerman Ed Stejskal	Use of Heteronuclear Experiments for the Analysis of Protein Structure Metabolic Pathways and Blood Flow by NMR in Situ Solid State NMR of Macromolecules and Metabolism
1988	Loyola Univ., Chicago	David Crumrine	Adam Allerhand Bob Bryant	C-13 and P-31 Ultra High Resolution NMR Magnetic Relaxation in Solids and Liquids
1989	Univ. of Illinois, Chicago	Cynthia Jameson	Dennis Torchia	Assignment, Structure, and Dynamics of Staphylococcal Nuclease
1990	Upjohn Co., Kalamazoo, MI	Paul Fagerness	Ad Bax Bernie Gerstein Mark Conradi	Multinuclear NMR of Proteins Multiple Quantum Coherence in Dipolar Coupled Solids Cross Relaxation Experiments in Metal Hydrides
1991	G.D. Searle Co. Skokie IL	Roy Bible	Naresh Sethi Jiri Jonas Merrill Nuss	NMR in Rotating Solids; Dynamics of Fluids in Confined Geometries MRI and In-vivo Spectroscopy in the Pharmaceutical Industry
1992	Notre Dame	Tony Serianni	Bernhard Blümich David LeMaster	NMR Imaging of Solid Polymers: Methods and Applications Assignment and Dynamics of Proteins Using Alternating Carbon Enrichment
1993	Amoco Research Center, Naperville	Joe Ray	Lucio Frydman Thatcher Root Colin Fyfe	Non-Cartesian Sampling Schemes in Multidimensional NMR Deuterium NMR Studies of Acid Sites in Zeolites Background and Examples of NMR Microscopy
1994	Purdue Univ. (IUPUI)	John Grutzner (B.D.N.Rao)	Adam Allerhand Mike Melchior	Reminiscing by an Old F..t Silicon/Aluminum Ordering and Zeolite Chemistry(Biochemical NMR Symposium)
1995	Baxter Healthcare, Deerfield IL	Walter Smith	Kurt Wüthrich	Recent Advances in NMR Structure Determination of Proteins and Nucleic Acids
1996	Univ. of Illinois at Chicago	Cynthia Jameson & Lucio Frydman	Alex Pines	Born in '45

Year	Location	Host	Keynote Speaker	Topic
1997	Argonne National Labs, Argonne IL	Robert Botto	Jim Prestegard  Paul Lauterbur  Kurt Zilm	Measurement of Dipolar Couplings in Field Oriented Systems: Experimental Hazards and Structural Potential  NMR Microscopy: Up, Down, and Sideways  Solids NMR of Uniformly C-13 Labeled Macromolecular Building Block: Assignment Strategies and Problems at High Fields
1998	Northwestern Univ.	Ed Rivera Joe Lambert	Gary Drobny	Solid State NMR Methods for the Study of Biomaterials
1999	Searle Co.	Roy Bible	Melinda Duer  Harry Dorn	Multiple Quantum NMR for the Study of Dipolar Couplings Between Quadrupolar Nuclei  Magnetic Resonance Studies of Empty-Cage and Metal Encapsulated Fullerenes
2000	Univ. of Illinois, Urbana-Champaign	Vera Mainz	Jonathan Sweedler  A.J. Shaka  Lucio Frydman	Small Volume NMR for Mass Limited Samples  Extracting the Most Information from your NMR Experiments: Recent Work with the Filter Diagonalization Method  NMR Experiments on Spinning and Static Samples: Something Old, Something New
2001	Abbott Labs, Abbott Park, IL	Steve Hollis  Milt Levenburg	Ann McDermott  Mike Summers	A Dynamic View of Enzyme Function: Solid State NMR Studies of TIM and other Proteins  New Insights into Retroviral Genome Recognition and Packaging
2002	Notre Dame	Bradley Smith  Tony Serianni	Nico Tjandra  Charles Johnson  Mike Shapiro	Recent Advances in High Resolution NMR to Study Protein Structure and Dynamics  Why Chemists Need to make Pulsed Field Gradient NMR Diffusion Measurements  Epitope Mapping of Ligand-Target Interaction by NMR
2003	BP Naperville Complex	Steve McKenna	Peter Rinaldi  Lewis Kay	Multidimensional NMR Studies of Synthetic Macromolecules  Looking Towards the Future with New NMR Probes of Protein Structure and Dynamics
2004	Loyola Univ. , Chicago	David Crumrine	Art Palmer  Ruth Stark	New Approaches for Characterizing Microsecond-Millisecond Timescale Dynamics in Proteins  NMR Structural Studies of Intractable Plant Biopolymers

Year	Location	Host	Keynote Speaker	Topic
2005	Abbott Labs, Abbott Park, IL	David Whittern	David Grant  Art Pardi	Combined Solid State NMR and Powder Diffraction Study of Natural Products. Synergism Provides a Method for Molecular X-Ray Structural Analysis  Structure and Dynamics of RNA and Protein-RNA Systems
2006	Univ. of Wisconsin, Madison	Tom Stringfellow	Mark Conradi  Jeremy Nicholson	Restricted Diffusion of Gases in Lungs  Statistical Spectroscopy in Top-Down Systems Biology: From Personalized Healthcare to Molecular Epidemiology
2007	Argonne National Labs, Argonne IL	Rex Gerald II	Ed Samulski  David Weliky	Insights into Structure and Symmetry of Liquid Crystals via Deuterium NMR.  Nuclear Magnetic Resonance Studies of: (1) Viral Fusion Peptides and Proteins and (2) High Temperature Metal Chalcophosphate Syntheses.
2008	Washington Univ., St. Louis MO	Sophia Hayes	Lucio Frydman	Citius, Altius and Fortis - at the Interface of NMR, MRI and EPR.
2009	Baxter Healthcare, Deerfield IL	Joe Ray and Christina Szabo	J. Prestegard  Cynthia Larive	New Assignment Strategies for Large and Glycosylated Proteins .  Adventures in Mixture Analysis by NMR.
2010	Univ. of Illinois, Urbana-Champaign	Chad Rienstra	Len Mueller  Hashim Al-Hashimi	Solid-State NMR as a Probe of Protein Structure and Function. 3D Atomic Resolution Visualization of Nucleic Acid Dynamics by NMR.
2011	Baxter Healthcare, Round Lake IL	Joe Ray and  Christina Szabo	Daron Freedberg  Bob Griffin  Klaus Schmidt-Rohr	NMR of Carbohydrates On & Off Cells  Dynamic Nuclear Polarization at High Magnetic Fields.  Spectral Editing in Solid State <sup>13</sup> C NMR: Analysis of Complex Organic Matter and Nanocrystal Bound Citrate in Bone.
2012	Purdue Univ.	John Grutzner	Ed Olejniczak  Robert Tycko	Cancer Drug Discovery Using Fragment Based Approaches and Structure Based Design.  Biomolecular Solid State NMR with Dynamic Nuclear Polarization at Very Low Temperatures.

	<b>Location:</b>	<b>Meeting Host:</b>	<b>Meeting Chair:</b>	<b>Keynote Speakers:</b>	<b>Topics</b>
2013	TCS Conference Center at Argonne National Lab	John V. Muntean	Yoshitaka Ishii	Ad Bax  Chris Jaroniec  Rod Wasylshen	"Homocoupling and residual dipolar coupling: How they can help us study folded and intrinsically disordered proteins"  "Solid-state NMR structural studies of proteins using paramagnetic probes"  "Progress in studying protons in transition metal hydrides and quadrupolar nuclei in solid materials."
2014	Northwestern Univ.	Ishwar Radhakrishnan	Chad Rienstra	Charalampos (Babis) Kalodimos  Gianluigi Veglia	"Molecular Chaperones in Action"  "Solid-State NMR of Membrane Protein Complexes"
2015	AbbVie, Inc.	Ian Marsden	Christina Szabo	Rafael Brüschweiler  Katherine Henzler-Wildman  Eric Munson	"NMR of Complex Biomolecular Systems: from Allostery of Glucokinase to the Analysis of Metabolomics Mixtures"  "(A)Symmetry and Exchange: Testing the Multidrug Transport Mechanism of EmrE"  "Solid-State NMR Studies of Pharmaceuticals"
2016	Medical College of Wisconsin, Inc.	Brian Volkman (MCW)	Nikolai Skrynnikov (Purdue)	Jeffrey C. Hoch  Richard Kriwacki  Tatyana Polenova	"Beyond Fourier"  "Phase Separation in Biology: Insights into Mechanism from NMR"  "Structure and Dynamics of HIV-1 Protein Assemblies by Integrated MAS NMR, MD, and Density Functional Theory"
2017	Pfizer Lake Forest Campus	Justin Lorieau and Yoshitaka Ishii	Edward Zartler	Song-I Han  Andy Byrd	"The Effect of Spin Dynamics in Dynamic Nuclear Polarization"  "Allostery and Dynamics Create Processivity in Ubiquitination"

<b>Year</b>	<b>Location:</b>	<b>Meeting Host:</b>	<b>Meeting Chair:</b>	<b>Keynote Speakers:</b>	<b>Topics</b>
2019	Univ. of Wisconsin Madison	John Markley and Katherine Henzler-Wildman	Joe Ray	Frank Delaglio Ann McDermott	“Antibody Therapeutics” “Protein Structure and Dynamics”