



PRELIMINARY PROGRAM

Wednesday June 5th

9:00-10:30 Registration + STELAR Tutorial (P. Sebastiao, M. Pasin) + LATE BREAKFAST
11:00-11:10 OPENING

Session 1: Evolution and prospects of Field Cycling NMR

11:10-11:50 **Keynote lecture by R. Kimmich**
ON TIME AND FREQUENCY SCALES OF MOLECULAR DYNAMICS TO BE PROBED BY NMR TECHNIQUES

11:50-12:20 **Invited lecture by C. Luchinat**
RELAXOMETRY AND OVERHAUSER DYNAMIC NUCLEAR POLARIZATION

12:20-12:40 **Lecture by H. M. Vieth**
MAGNETIC FIELD CYCLING OVER ULTRA-WIDE RANGE FOR NMR RELAXATION DISPERSION AND HYPERPOLARIZATION

12:40-13:00 **Lecture by S. Sykora**
FIELD CYCLING RELAXOMETRY OF POLYDISPERSED SAMPLES: SOME SPECIAL ASPECTS

13:00-13:30 **Invited lecture by L. Broche**
FIRST CLINICAL STUDIES WITH FFC-MRI: EARLY RESULTS

13:30-14:30 LUNCH

Session 2: Instrumentation and methods

14:30-15:00 **Invited lecture by L. De Rochefort**
FAST-FIELD CYCLING MAGNETIC RESONANCE IMAGING AROUND 1.5T TO MAP NMR RELAXATION DISPERSION IN VIVO

15:00-15:20 **Lecture by G. Rodriguez**
FFC-MRI AT LOW MAGNETIC FIELD HOMOGENEITY

15:20-15:40 **Lecture by G. Galuppini**
TOWARDS A MODEL-BASED FIELD-FREQUENCY LOCK FOR FAST FIELD CYCLING NMR

15:40-16:00 **Lecture by B. Gizatullin**
DIFFERENCE APPROACH TO ELIMINATING RADICAL RELAXIVITY IN DNP FFC RELAXATION STUDY

16:00-16:20 **Lecture by A. Yurkovskaya**
FIELD-CYCLING STUDY OF EXCHANGE INTERACTION IN SHORT-LIVED BIRADICALS BY LIGHT-INDUCED NUCLEAR HYPERPOLARIZATION IN RIGID D-X-A DYADS

16:20-16:40 **Lecture by R. Francischello**
THE USE OF LOW RANK APPROXIMATION FOR NOISE REDUCTION IN LOW FIELD NMR: A FLEXIBLE METHOD FOR THE ACCELERATION OF MULTIDIMENSIONAL STUDIES AND THE IMPROVEMENT OF TIME RESOLUTION IN REACTION MONITORING

16:40-17:20 COFFEE BREAK AND POSTER SESSION

Session 3: Applications to life sciences II

17:20-17:50 **Invited lecture by R. Muller**
FFC, A LOOK TO THE PAST

17:50-18:10 **Lecture by F. Carniato**
RELAXOMETRIC CHARACTERIZATION OF POTENTIAL Mn^{2+} -BASED MRI CONTRAST AGENTS

18:10-18:30 **Lecture by C. Henoumont**
SYNTHESIS AND RELAXOMETRIC CHARACTERIZATION OF MRI CONTRAST AGENTS BASED ON PYCLEN STRUCTURE AND COMPLEXED WITH MANGANESE

18:30-18:50 **Lecture Q. L. Vuong**
SIMULATION OF THE NUCLEAR MAGNETIC RELAXATION INDUCED BY SUPERPARAMAGNETIC NANOPARTICLES TRAPPED IN A BIOLOGICAL TISSUE

18:50-19:20 **Invited lecture by S. Geninatti Crich**
EVIDENCE FOR THE ROLE OF INTRACELLULAR WATER LIFETIME AS A TUMOUR BIOMARKER OBTAINED BY IN VIVO FIELD-CYCLING RELAXOMETRY



Thursday June 6th

Session 4: Theory and Modelling

- 8:30-9:10** **Keynote lecture by R. Bryant**
PROTEIN AGGREGATION AND RELAXATION DISPERSION
- 9:10-9:30** **Lecture by E. Masiewicz**
WHAT DO WE KNOW ABOUT ^{14}N QUADRUPOLE RELAXATION ENHANCEMENT?
- 9:30-9:50** **Lecture by P. Levitz**
NMRD OF WATER IN CONFINED NANOPOROUS NETWORK: INTERMITTENT DYNAMICS VERSUS PORE SURFACE CURVATURE
- 9:50-10:10** **Lecture D. Faux**
GETTING THE MOST FROM A FFC-NMR DISPERSION CURVE FROM A POROUS MATERIAL
- 10:10-10:40** **Invited lecture by P. Fries**
ANALYTICAL EXPRESSIONS AND SIMULATION OF NUCLEAR SPIN RELAXATION IN 3D LIQUID SYSTEMS

10:40-11:20 COFFEE BREAK AND POSTER SESSION

Session 5: Applications in materials science I

- 11:20-11:50** **Invited lecture by J.P. Korb**
APPLICATIONS OF FFC-NMR RELAXOMETRY TO PETROLEUM POROUS MATERIALS
- 11:50-12:10** **Lecture by J. B. Pigot**
ROLE OF PORE INTERCONNECTIVITY ON MOLECULAR DIFFUSION WITHIN FAUJASITE ZEOLITE INVESTIGATED BY NMR RELAXOMETRY
- 12:10-12:30** **Lecture by J. Ward-Williams**
PROBING INTERACTION STRENGTH AND LIQUID DYNAMICS IN NANOPOROUS OXIDES USING FAST FIELD CYCLING NMR
- 12:30-12:50** **Lecture by Y. Gossuin**
NMR RELAXOMETRY FOR ADSORPTION STUDIES: PROOF OF CONCEPT WITH COPPER ADSORPTION ON ACTIVATED ALUMINA
- 12:50-13:20** **Invited lecture by I. Ardelean**
SURFACE EFFECT ON THE MOLECULAR DYNAMICS INSIDE CARBON XEROGEL MESOPORES

13:20-14:20 LUNCH

Session 6: Applications to Life Sciences

- 14:20-15:00** **Keynote lecture by T. Scholl**
MOLECULAR IMAGING OF CANCER USING FIELD CYCLING
- 15:00-15:20** **Lecture by J. Ross**
FAST FIELD-CYCLING MRI IDENTIFIES ISCHAEMIC STROKE AT ULTRA-LOW MAGNETIC FIELD STRENGTH
- 15:20-15:40** **Lecture by G. Duhamel**
MULTICOMPONENT DIPOLAR RELAXATION TIME (T_{1D}) ASSESSMENT IN MYELIN USING INHOMOGENEOUS MAGNETIZATION TRANSFER (ihMT) MRI
- 15:40-16:00** **Lecture by G. Ferrauto**
FFC-NMRD RELAXOMETRY FOR EARLY DETECTION AND CHARACTERIZATION OF *EX-VIVO* MURINE BREAST CANCER
- 16:00-16:20** **Lecture by A. Cretu**
NMR RELAXOMETRY EXPERIMENTS IN BOVINE AND HUMAN CARTILAGE – SIMULATING EFFECTS OF OSTEOARTHRITIS
- 16:20-16:40** **Lecture by S. Baroni**
IN VIVO FFC-NMR OF TUMOR-ASSOCIATED MACROPHAGES (TAMs) IN MURINE MELANOMA WITH ASSESSEMENT OF INTRA-CELLULAR LOCALIZATION OF IRON OXIDE PARTICLES

16:40-17:20 COFFEE BREAK

- 17:30-20:30** **Excursion to the Miracles Square**
20:30 **Social Dinner**

Friday June 7th

Session 7: Applications in materials science II

- 8:30-9:10** **Keynote lecture by S. Stapf**
IMPROVING SELECTIVITY IN FAST FIELD CYCLING: MULTIDIMENSIONAL EXPERIMENTS AND TAILORED PROBES
- 9:10-9:30** **Lecture by M. Beira**
MOLECULAR DYNAMICS STUDY OF PEG-BASED MIXTURES WITH GADOLINIUM, MANGANESE AND COBALT METALIC COMPLEXES BY NMR RELAXOMETRY, DIFFUSOMETRY AND X-RAY DIFFRACTION
- 9:30-9:50** **Lecture by C. Fraenza**
NMR RELAXOMETRY STUDIES OF ELECTROLYTES MODEL COMPOUNDS
- 9:50-10:10** **Lecture by M. Pasin**
FAST FIELD CYCLING RELAXOMETRY OF A UNIQUE IONIC COMPOUND
- 10:10-10:30** **Lecture by M. Flämig**
PLASTICALLY CRYSTALLINE PHASES STUDIED BY FIELD-CYCLING NMR RELAXOMETRY
- 10:30-11:00** **Invited lecture by P. Sebastiao**
¹H NMR STUDY OF MOLECULAR ORDER AND DYNAMICS IN CBC9CB LIQUID CRYSTAL

11:00-11:30 COFFEE BREAK AND POSTER SESSION

Session 5: Applications in food, environment and cultural heritage

- 11:30-12:00** **Invited lecture by P. Conte**
FAST FIELD CYCLING NMR RELAXOMETRY IN ENVIRONMENTAL SCIENCE
- 12:00-12:20** **Lecture by A. L. Rollet**
TEMPERA PAINTINGS: THE EYE OF NMR RELAXOMETRY ON AN ANCIENT RECIPE
- 12:20-12:40** **Lecture by M. Oztop**
¹H RELAXATION DISPERSION OF COMPOSITE WHEY PROTEIN ISOLATE HYDROGELS
- 12:40-13:10** **Invited lecture by C. Rondeau-Mouro**
TEMPERATURE AND WATER-ASSOCIATED CHANGES OF CEREAL PRODUCTS MONITORED BY TD-NMR

13:10-14:10 LUNCH

Session 9: Applications to life sciences III

- 14:10-14:40** **Invited lecture by F. Ferrage**
NANOSECOND PROTEIN MOTIONS IN PROTEINS REVEALED BY HIGH-RESOLUTION RELAXOMETRY
- 14:40-15:00** **Lecture by G. Parigi**
LOCAL AND GLOBAL DYNAMICS IN INTRINSICALLY DISORDERED PROTEINS
- 15:00-15:20** **Lecture by T. Janc**
SALT SPECIFIC EFFECTS ON NMRD PROFILES OF PROTEIN SOLUTIONS
- 15:20-15:40** **Lecture by E. Anoardo**
FIELD-CYCLING NMR RELAXOMETRY AS A TOOL FOR THE CHARACTERIZATION OF THE ELASTIC PROPERTIES OF LIPOSOMES
- 15:40-16:00** **Lecture by T. Apih**
UTILITY OF FAST FIELD CYCLING RELAXOMETRY AND NUCLEAR QUADRUPOLE RESONANCE STUDIES OF ACTIVE PHARMACEUTICAL INGREDIENTS (FFCR AND NQR OF API)
- 16:00** **Closing remarks**