



NMR relaxometry for biomedicine and advanced materials
HORIZON-MSCA-DN-2021 — FC-RELAX 101072758

ITC3: NMR relaxometry and NMR contrast agents – 2-3/09/25

2nd September 2025

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Session 1 : Introduction to MRI

9.00 am : Sylvain Miraux (University of Bordeaux) : Physical Principles of MRI and Clinical Applications (without contrast agent)

10.30 am : Sébastien Boutry (University of Mons) : Pre-clinical MRI at high and low field, introducing the (pre-)clinical use of contrast agents

Session 2 : Alternative contrast methods for MRI

13.30 pm : Dario Longo (National Research Council of Italy - CNR) : CEST contrast agents

14.45 pm : Adriana Perles-Barbacaru (University of Aix-Marseille) : In-vivo applications of ¹⁹F-MRI

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Session 3 : Superparamagnetic nanoparticles as contrast agents for MRI

9.00 am : Anne-Laure Rollet (Sorbonne University) : Theoretical basis for assessing the NMR relaxation enhancement induced by superparamagnetic nanoparticles

10.15 am : Olivier Sandre (University of Bordeaux) : Structure-Function Relationship of ferrofluids



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Session 4 : Paramagnetic contrast agents for MRI

13.30 pm : Mauro Botta (Università del Piemonte Orientale "Amedeo Avogadro") :
Characterization of MRI contrast agents using NMR relaxometry

14.45 pm : Eva Toth (University of Orléans) : Contrast agents based on transition
metals

16.00 pm : Simonetta Geninatti Crich (University of Torino) : Gd-loaded nanoparticles
in T1-weighted MRI and theranostic applications