

**International Symposium on recent advances in NMR applications to materials**  
**(Alpine NMR seminar)**

**Hirschegg 2022, Sep 16-19**

Following please find the scientific program of this year's meeting. Talks are grouped roughly according to topic. Expect to have typically 20-25 minutes, plus discussion.

The meeting will take place at "Söllerhaus" in Hirschegg, Kleinwalsertal; all required information can be found here: <http://www.soellerhaus.de/>

Please read the information and recommendations on their homepage carefully. E.g., it says that dinner is at 18:30. Please arrive by 18:00 (latest!) on Friday, Sep 16. Evening session will begin after dinner. Morning session will begin about 9:30 after breakfast. Depending on the weather, we will decide about the afternoon hiking options on the spot.

Bring walking shoes, indoor shoes, swimming gear if you feel like it, and cash!

The following five sessions are planned, this year's motto is "titles of Star trek/TOS episodes".

<b>Session I (Fri evening)</b>	<b>All Our Yesterdays</b> <i>(historical introduction)</i>
Farida Grinberg	Diffusion MRI: Can We Spy On Our Brain Development?
Yang Xia	The first study of biological tissues by NMR

<b>Session II (Sat morning)</b>	<b>For the World is Hollow and I Have Touched the Sky</b> <i>(porous media)</i>
Andreas Pohlmeier	Salt in a magnet: transport and precipitation
David Nyul	Cryoporometry by means of MQ20 Minispec
Vanda Papp	Role of water in the curing process and structure formation of cement and metakaolin-based binders
Ioan Ardelean	Investigating the role of silica fume on early hydration of cement paste via Fast Field Cycling NMR relaxometry
Mihai Rusu	NMR and complementary studies of cement pastes with potential in 3D printing applications
Siegfried Stapf	Mt 9:17 – Ode to a Rod of Glass

**Session IIIa (Sat evening)****By Any Other Name***(materials)*

Rok Peklar

Lithium dendrite growth in narrow cells, connected in series"

Istvan Bányai

Application of alkali metal NMR relaxation  
for studying complex formation

Carlos Mattea

Protein folding in casted gelatin films  
detected by Magnetic Resonance**Session IIIb****What Are Little Girls Made Of?***(biology)*

Ursa Mikac

Influence of Mechanical Wounding on the Suppression  
of Invasive Plant Species studied by MRI

Rebeka Viltuznik

CT and MRI characterisation of artificial trombi

Igor Sersa

MR microscopy of median nerve ex vivo

**Session IV (Sun morning)****Space Seed***(polymers)*

Monika Kéri

Swelling properties and structure of biodegradable crosslinked polyurethanes by NMR

Levente Novák

High relaxivity metal complexes of carboxymethylamino-functionalized macromolecules: synthesis, characterization and what we can learn from them

Bernd Simon

Tropomyosin regulates kinesin mediated *oskar* RNA transport

Kevin Lindt

The NMR Hahn echo decay in polyethylene oxide melts

Nail Fatkullin

The frequency nature of the end effects in polymer dynamics and its NMR manifestations

Elke Kossel

Microplastics in the marine environment

**Session Va (Sun evening)****Is There in Truth No Beauty?***(methods)*

Wolfgang Caliebe

Is all good structure in a wiggly line? – EXAFS and chemical reactions

Janez Stepisnik

NMR insight into chemical kinetics

Ales Mohoric

MGSE and CPMG of a sucrose solution - diffusion and exchange

Bulat Gizatullin

Features of dynamics in viscous liquids with radicals revealed by DNP-FFC

**Session Vb****The Doomsday Machine***(hardware)*

Elmar Fischer

Update on the self-built 95-channel head array: What is the performance?

Thomas Wolfenstetter

Design of a DNP NMR-Spectrometer within a Halbach Array

Peter Blümler

Permanent magnets for NMR, MRI, MPI and guidance