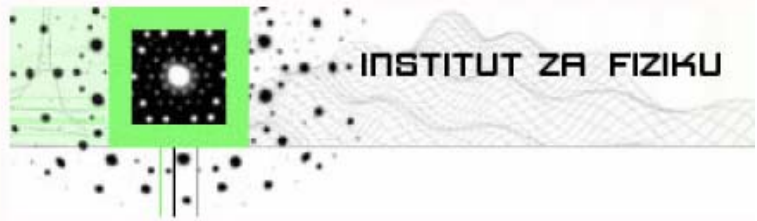




PMF
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SEMINAR

na **Institutu za fiziku**, Bijenička cesta 46, predavaonica u zgradi Mladena Paića
u četvrtak, **14. veljače 2008. u 14:00 sati**.

Novel States in Frustrated Antiferromagnets

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Frustration and degeneracy are at the heart of much important science, from protein folding to emergent electromagnetism, but reach their purest manifestation in magnetic materials.

Highly Frustrated Magnetism yields novel quantum and classical states where frustration of interactions and macroscopic degeneracy play a leading role. The field has been constantly growing for the past two decades after the seminal proposal of an interpretation of High Temperature Superconductivity in terms of a resonating valence bond state, first proposed in the context of triangular frustrated antiferromagnets in the 70's by P.W. Anderson.

In the first part of my talk, I'll introduce frustrated antiferromagnets and some of the important parameters which lead to novel fundamental states such as spin ice, spin liquids... I'll review some of the key experimental systems and experiments.

In the second part, I'll focus on spin liquids and will review in more details the relevance of the dynamical and static information brought by local techniques such as Nuclear Magnetic Resonance and Muon Spin Rotation.

I'll finally give a brief overview on a recently synthesized mineral, Herbertsmithite, $\text{ZnCu}_3(\text{OH})_6\text{Cl}_2$ which is the most promising candidate for a quantum spin liquid [Physics Today, February 2007].

Voditelji seminara:
Hrvoje Buljan i Ticijana Ban