

International Conference in Quantum Theory: Reconsideration of Foundations-2. June 1-6, 2003¹

ICMM

International Center for Mathematical Modeling
[in physics, technique and cognitive sciences]
Växjö University, Sweden

Conference homepage: <http://www.msi.vxu.se/aktuellt/konferens>

Organising committee:

H. Barnum, Los-Alamos Nat. Laboratory, USA
C. Fuchs, Bell Laboratory, Lucent Technology, USA

R. Hudson, Nottingham University, UK
A. Khrennikov, Växjö University, Sweden

Invited speakers:

L. Accardi, University Rome-2, Italy
S. Aaronson, University California, Berkeley, USA
G. Bacciagaluppi, University California, Berkeley, USA
L. Ballentine, Simon Fraser University, Canada
H. Barnum, Los-Alamos Nat. Laboratory, USA
S. Bartlett, Macquarie University, Australia
V. Belavkin, Nottingham University, UK
V. Belokurov, Moscow University, Russia
M. Bozejko, Wroclaw, Poland
P. Busch, University of Hull, UK
B. Coecke, Oxford University, UK
G.G. Emch, University of Florida, USA
A. Ezhov, Inst. of Nuclear Fusion., Russia
C. Fuchs, Bell Laboratory, Lucent Technology, USA
H. Halvorson, Princeton University, USA
L. Hardy, Perimeter Inst., Canada

I. Helland, Oslo University, Norway
B. Hellsings, Chalmers, Gothenburg, Sweden
K. Hess, Beckman Inst., Urbana-Champaign, USA
B. Hiley, University of London, UK
R. Hudson, Nottingham, UK
A. Khrennikov, Växjö University, Sweden
E. Loubents, Moscow Inst. of Electr. and Math., Russia
S. Molotkov, Inst. of Solid State Ph., Chernogo, Russia
O. Nanasiova, Bratislava University, Slovakia
R. Schack, Royal Holloway, UK
J. Smolin, IBM Research, USA
R. Spekkens, Perimeter Inst., Canada
S. Stenholm, KTH, Stockholm, Sweden
A. Wilce, Susquehanna University, USA
I. Volovich, Steklov Inst., Moscow, Russia

The main aim of this Conference is to reconsider foundations of quantum theory. There will be organised a special session "Quantum Logic meets Quantum Information". The following problems will be discussed during the Conference:

- ◆ Analysis of the creation of the quantum formalism: quantum probability; quantum logic, quantum information.
- ◆ Interpretations of wave function, relation to foundations of probability theory. Superposition principle.
- ◆ Einstein-Podolsky-Rosen experiment. Bell's inequality: realism/nonlocality/contextualism?
- ◆ Quantum information and teleportation, computing and cryptography
- ◆ Pilot-wave theory, nonlocality. De Broglie double-solution theory.
- ◆ Local realistic models, hidden variables.
- ◆ Quantum mechanics: a peculiarity of nature or just a special statistical method of the description of nature?
- ◆ Evidences of violations of quantum mechanical description?
- ◆ Contextual approach to quantum probability
- ◆ Discrete deterministic quantum models.

The conference starts on Sunday June 1st 2003, (arrival May 31st), and ends the following Friday June 6th. The first day (Sunday) the conference is located to Royal Corner Sweden Hotels. Please note that the conference takes place on Växjö University Campus the rest of the week, Monday to Friday. Conference room: Myrdal. Lectures will finish at 13.00, June 6.

Abstract, 1 page + the application form can be found on the conference homepage. All possible questions will be answered by our secretary: <mailto:Cecilia.Eriksson@msi.vxu.se>. It would be nice to get abstract/application form before April 1.

Org. Fee: Variant 1: 800 kr, Abstracts, coffee breaks, logistics, excursion;
Variant 2: 1500 kr, Abstracts, coffee breaks, logistics, excursion and lunches;
Variant 3: 2000 kr, Abstracts, coffee breaks, logistics, excursion, lunches and banquet.

Financial support: Unfortunately, we can not consider new applications for financial support (the main idea was to provide financial support to the good team of invited speakers varying from year to year)

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