



Foundations of probability and physics-2:
2nd – 7th of June, 2002.

International Center for Mathematical
Modeling in physics, engineering and
cognitive sciences, Växjö University,
Sweden.

This is the second conference on probabilistic foundations of classical and quantum physics organized by the International Center (the first one took place in November 2000 and we would also like to mention the closely related conferences “Bohmian Mechanics-2000” and “Quantum Theory: Reconsideration of Foundations”-2001).

Växjö University is a new university (1999) with near 14.000 students and a new nice campus.
Location: south/middle Sweden (Småland); Lund: 2 h (train), Stockholm: 3,5 h (train), 25 min (air);
Copenhagen: 3,5 h (train), 25 min (air).

One of the main aims of these conferences is to understand the role that PROBABILITY plays in foundations of physics, theoretical as well as experimental. During previous conferences we were lucky to collect fruitful mixtures of physicists (including experimenters) and mathematicians interested in foundations.

Organizing committee:

A. Khrennikov (Växjö University),
M. Ohya (Science University of Tokyo),
I. Volovich (Steklov Mathematical, Institute, Moscow).

Invited Speakers:

L. Accardi (University of Rome-2, Italy)
V. Belavkin (Nottingham University)
K.F. Berggren (Linköping University)
R. Gill (University of Eindhoven)
K. Gustafsson (University of Boulder)
I. Helland (Oslo University)
B. Helsing (Chalmers, Gothenburg)
B. Hiley (University of London)
G. Hooft (University of Utrecht)
G. Jaeger (Boston University)
A. Khrennikov (Växjö University)
Y.S. Kim (University of Maryland)
B. Nilsson (Växjö University)
M. Ohya (Science University of Tokyo)
A. Plotnitsky (Purdue University)
H. Rauch (Atominstitute, Vienna)
E. Sjöqvist (Uppsala University)
J. Summhammer (Atominstitut, Vienna)
I. Volovich (Steklov Mathematical, Institute, Moscow)

Speakers:

M. Bozejko (University of Wroclaw)
T.A. Brun (Institute for Advanced Study)
G.G. Emch (University of Florida)
S-M. Fei (Bonn University)
S. Kozyrev (Steklov Mathematical, Institute, Moscow)
V. Lindberg (Växjö university)
O. Smolyanow (Moscow University)
J. Volovich (Moscow University)

The following problems will be discussed during this Conference:

1. Interpretations of probability (including frequency probability theory, complexity, randomness and so on...;negative, complex and p-adic generalisations of probability and other non-Kolmogorovean probabilistic models).
2. Probabilistic foundations of quantum mechanics.
3. Probability in statistical physics; Entropy; quantum-like models in classical statistical physics.
4. Quantum Probability
5. Einstein-Podolsky-Rosen paradox, Bell's inequality, locality, reality, probability.
6. Probability and Quantum computers.
7. Quantum Information and Entropy.
8. Probability and Quantum Cryptography.
9. Paradoxes of probability theory and Paradoxes of quantum mechanics.
10. Probability and relation between Micro and Macro. "Quantum"-interference for macroscopic systems.

Presentations

We plan to have a few 'long presentations' (30-40 min) and a number of short talks (15-25 min) as well as posters and round table.

Start and finish:

The conference will start at 2 June (Sunday), arrival 1 June; and lectures will finish at 16.00, 7 June.

Abstract

½-1 page should be included in the application form, we recommend (if possible) to use just textfiles without mathematical formulas

It would be nice to get abstract: before 1 May. They will be distributed at the conference.

Application

Application form: <http://www.masda.vxu.se/reg/form.html>

Org. Fee:

Variant-1: 700 kr (abstracts, coffee breaks, logistic, excursion);

Variant-2: 1300 kr (abstracts, coffee breaks, logistic, excursion and lunches);

Variant-3: 1700 kr (abstracts, coffee breaks, logistic, excursion , lunches and banquet).

Financial Support:

Unfortunately, we could 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).

Hotel:

Participants of the Conference will stay at "Hotel Statt " in Växjö.
Please contact our secretary: Cecilia Eriksson cecilia.eriksson@msi.vxu.se
to make your hotel reservation as soon as possible (she can also find cheaper variants).

Transportation:

There is the international Airport in Växjö. It is possible to use two ways:

- 1) via Stockholm;
- 2) via Copenhagen.

It is also possible to arrive by train from Stockholm or Copenhagen.