

EUROPEAN CONFERENCE

OTOČEC 12-15 OCTOBER 2001

“New Trends in Nonlinearity
and Noncommutativity”

The Castle Hotel of Otočec

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The Scope of the European Conference in Otočec

We have just passed the turn of the millenium and new interactions begin to start between scientists from different branches in order to focus their research identities on new common future-centered aims. The European Conference in Otočec shall establish such a new collaboration between scientists acting on nonlinear systems and scientists acting on noncommutative structures. Due to already existing collaborations between the various research institutions in Zagreb, Maribor, Ljubljana and Munich, it was quite natural to think of a common focus which shall be the border region between Nonlinearity and Noncommutativity.

Let us have a look back: When Wintner wrote down his famous theorem in 1929 - only four years after the baptism of quantum mechanics in the sense of Heisenberg and Pauli - he was perhaps the first to bring up a clear relation between bounded nonlinear operators in normed spaces on the one hand and representations of the celebrated Heisenberg commutation relations on the other. The spirit of Wintner has kept alive and can nowadays be recognized also in other applications: When introducing noncommutative function spaces, one is easily connected to quantum harmonic structures which in turn are closely related to Fourier methods in discrete analysis. Those methods help revealing unexpected new applications in signal analysis and become important to complex nonlinear problems in Biomathematics, one of the challenging mathematical branches with a strictly growing appeal.

All that shows that is necessary to create a discussion forum for carrying together new ideas and working methods from different directions in Theoretical Physics, Medicine, Biology and Mathematics. The European Conference in Otočec will focus on the mentioned methodical crossing point we are working in. Otočec shall reveal to what extent the already existing collaborations can be enlarged and be used for creating a scientific network. Otočec shall be a starting point for strengthening the spirit of such a network which might become the basis of common interactions, granted by the European Union. The interactions being started by the Otočec Conference shall be evaluated one year later in October 2002 in the newly conceived conference "Bexbach Colloquium on Science 2002" to take place in the Euregion "Saar-Lor-Lux" between France, Luxembourg and Germany.

Political Aspects

The European unification process shows a tremendous acceleration. Less than three months after the Otočec Conference, 300 million people in Europe will receive a common new currency. And only after a short period, Slovenia and later on Croatia will join the European Union. We are on the way to a marvellous common identity which might be completed in a common European constitution. Many people expect such a Magna Charta to be established during the next twenty years. Also on the scientific level, the common European identity creates an acceleration that could have never been seen before during the last decades. The spirit of Otočec shall precisely fit into this movement and catch quite an advantageous chance for realizing new scientific interactions, embedded in the challenging European unification.

The Invited Speakers and Participants are

- Ivan Andrić, Zagreb, Croatia
- Oriol Bohigas, Paris, France
- Tassos Bountis, Patras, Greece
- Giulio Casati, Como, Italy
- Harald Markum, Wien, Austria
- Mladen Martinis, Zagreb, Croatia
- Stjepan Meljanac, Zagreb, Croatia
- Tomaž Prosen, Ljubljana, Slovenia
- Rainer Pullirsch, Wien, Austria
- Marko Robnik, Maribor, Slovenia
- Valery Romanovski, Maribor, Slovenia
- Michael Rosenblum, Potsdam, Germany
- Andreas Ruffing, München, Germany
- Moritz Simon, München, Germany
- Aneta Stefanovska, Ljubljana, Slovenia
- Dragutin Svrtan, Zagreb, Croatia
- Peter Tass, Köln, Germany
- Selma Uhlig, München, Germany
- Gregor Veble, Maribor, Slovenia
- Marko Vraničar, Maribor, Slovenia

Directors of the Conference

- Marko Robnik, Maribor, Slovenia
- Andreas Ruffing, München, Germany

Organizing Committee

- Marko Robnik, Maribor, Slovenia
- Andreas Ruffing, München, Germany
- Moritz Simon, München, Germany
- Selma Uhlig, München, Germany