

FOREWORD

Our Symposia of Physicists at the University of Maribor, or shortly Christmas Symposia, already have a tradition, as this year it is already the 9th one. The purpose is the scientific socializing of Slovenian physicists along with the participation of some distinguished colleagues from abroad as our honorary guests. The Symposium in 2006 has already grown large by exceeding the regional boundaries and became a national meeting. This year almost one third of invited speakers come from abroad, from some best research groups, so that our meetings are becoming international indeed. The meeting is only one of the many activities of CAMTP, Center for Applied Mathematics and Theoretical Physics of the University of Maribor, which organizes five series of international scientific meetings. See www.camtp.uni-mb.si

We would like to stress that our meeting is devoted to the entire physics, theoretical and experimental, and also applied mathematics and to all other topics, for which physics is important, or they are important for physics.

All lectures are on the level of colloquia, thus understandable for a general physicist, and therefore particularly well suited for the undergraduate and graduate students. Such general meetings in the field of physics practically no longer exist in the world, although they are important for the widening of the intellectual horizon of all physicists. Our colleagues from abroad, the participants so far, confirm our view and appreciate our scientific programme. The meeting is also an opportunity for the young researchers to present their work and discuss it with the experienced scientists. With this activity we also contribute to the promotion and the popularization of physics in our society. We are convinced that it is quite urgent to care about the more intense popularization of natural sciences in our society, and physics plays a key role in this context.

All undergraduate students are welcome and can attend all the lectures of the conference free of charge. In this way we contribute to the popularization of physics and to the additional education in this field.

Our gathering can be an important contribution to the activities of the young and successful Faculty of natural sciences and mathematics of the University of Maribor under the leadership of the Dean Mrs. Prof.Dr. Nataša Vaupotič.

Professor Siegfried Grossmann - 80th Birthday



This year our meeting is dedicated to Professor Siegfried Grossmann from the University of Marburg, Germany, on the occasion of his 80th birthday. He was born on 28 February 1930 in Königsberg, East Prussia. The City of Marburg, where he is working since 1964, and Maribor are partner cities, and the two universities are partner universities, which gives an additional imprint to our relationship. Professor Siegfried Grossmann is one of the greatest theoretical physicists of the 20th and 21st century in the worldwide context. His scientific research work includes the following fields: nuclear physics, general statistical physics, transport theory, nonlinear dynamics, fluid dynamics and turbulence theory, phase transitions, laser physics, Bose-Einstein condensation. His work comprises more than 241 original papers. He is also extremely active in the domain of physics education at the university level and physics teaching at the high school level. He has written several text books, which are still indispensable source of knowledge in mathematical physics. He had and still has numerous advisory functions in Germany. He has done a great deal for the physics not only in Germany, but also worldwide, and in particular in Slovenia, since as a good friend of CAMTP he has faithfully supported activities and collaborations with the University of Marburg, and with other universities in Germany. Since 1994 he is a regular invited lecturer at our

international summer schools and conferences "Let's Face Chaos through Nonlinear Dynamics", organized by CAMTP, since 1999 he is also a honorary director. He is recipient of the Max-Planck Medal of the German Physical Society in the year 1995 and of many other awards and honours, among them the highest decoration of Germany (Großes Verdienstkreuz des Verdienstordens der Bundesrepublik Deutschland, 1996). He is a member of three academies of sciences and earned the Honorary Doctorate at the University of Essen-Duisburg. In the year 2005 he was awarded the Seal of the City of Maribor by the mayor of the city of Maribor, Mr. Boris Sovič.

It is our pleasure, that we have the opportunity to honour him in Maribor on occasion of his 80th birthday. He is still extremely active in the scientific research and publishes papers in elite physics journals, also jointly with younger colleagues. It is our special privilege and pleasure that he will present to us his most recent scientific work in his plenary and opening one-hour lecture.

His scientific life and work is described in detail at the web page:

<http://www.physik.uni-marburg.de/de/personal/grossmann-siegfried/startseite.html>

At the end of this Programme Book we attach his more detailed scientific biography, written by his former students Professors Peter Richter (University of Bremen, Germany) and Detlef Lohse (University of Twente, Enschede, The Netherlands)

Marko Robnik and Dean Korošak