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ICMP09  
PRAGUE



XVI International Congress on Mathematical Physics

August 3–8, 2009 Prague, Czech Republic

*Welcome to the ICMP09!*

*On behalf of both the International Association of Mathematical Physics and the Congress Committees we invite you to become participants of the XVI International Congress on Mathematical Physics to be held in Prague, Czech Republic, from 3 to 8 August, 2009. The information bulletin on the following pages will provide you with the basic data about the meeting; more information can be found at <http://www.icmp09.com/>*

*Following the tradition formed over several decades, the triennial congresses are the largest mathematical-physics conventions.*

*The ICMP09 will be a major event: new results in the field and future challenges will be discussed, illustrating the richness and vitality of this branch of the science.*

*We hope that you will be able to attend and contribute to the success of the meeting.*

*We are looking forward to seeing you in Prague.*

*Giovanni Gallavotti*

*IAMP President*

*Int'l Scientific Committee Chair*

*Pavel Exner*

*Local Org. Committee Chair*



# The first ICMP09 Bulletin

## Basic information

**Place:** Prague, Czech Republic

**Dates:** August 3–8, 2009, with the YRS on July 31–August 1

**Congress site:** Clarion Congress Hotel Prague, <http://www.cchp.cz/pages/en/>

**URL:** <http://www.icmp09.com/>

**E-mail:** [icmp@ujf.cas.cz](mailto:icmp@ujf.cas.cz), [icmp09@cbttravel.cz](mailto:icmp09@cbttravel.cz)

**Registration:** will be open in the beginning of the next year. If you wish to receive further information, we ask you to **preregister kindly at** <http://www.icmp09.com/indication-of-interest>

**Auspices:** Mayor of Prague, President of the Czech Academy of Sciences  
Rectors of the Charles and Czech Technical Universities

**Sponsors:** IUPAP, ESF, ICIAM, IMU, etc., as well as several Czech  
academic and private institutions

**Scientific committee:** Michael Aizenman, Ingrid Daubechies,  
Pavel Exner, Juerg Fröhlich, Giovanni Gallavotti (chair),  
Yakov Sinai, Jan Philip Solovej

## Scientific Programme

Traditionally, it consists of *plenary lectures* and *topical sessions* with the speakers invited by their organizers. It is not all top-down, however, and you can leave your footprint: the programme will also contain *contributed talks* selected by the session organizers from proposals of the participants.

The organizer goal is to reach beyond the usual ICMP scope and to look also for prospective topics and problems. There will be a session devoted to *new frontiers in mathematical physics*, another opportunity to reflect about the future of the discipline will be offered by a *round table discussion*.

The main contributions will be summarized in a *proceedings volume*. The organizers are committed to publish it in a reasonably short time.

## Confirmed plenary speakers

Vladimir Bazhanov (*Australian National University, Canberra*)  
Demetrios Christodoulou (*ETH Zurich*)  
Lance Dixon (*SLAC*)  
László Erdős (*Ludwig-Maximilian Universität München*)  
Bertrand Duplantier (*CEA Saclay*)  
Alice Guionnet (*Ecole Normale Supérieure de Lyon*)  
Philip Holmes (*Princeton University*)  
Roberto Longo (*Università di Roma "Tor Vergata"*)  
Jens Marklof (*University of Bristol*)  
Vieri Mastropietro (*Università di Roma "Tor Vergata"*)  
Nikita Nekrasov (*IHÉS, Bures-sur-Yvette*)  
Alessandro Pizzo (*ETH Zurich*)  
Petr Šeba (*Czech Academy of Sciences*)  
Robert Seiringer (*Princeton University*)  
Sylvia Serfaty (*Courant Institute*)

## Topical sessions

MECHANICS AND DYNAMICAL SYSTEMS (INCLUDING INTEGRABLE SYSTEMS AND HAMILTONIAN STABILITY)  
*Organizers:* Igor Krichever (*Columbia University*) and Lai-Sang Young (*Courant Institute*)

EQUILIBRIUM STATISTICAL MECHANICS (CLASSICAL AND QUANTUM)  
*Organizers:* Marek Biskup (*UCLA*) and David Brydges (*University of British Columbia*)

NON-EQUILIBRIUM STATISTICAL MECHANICS (INCLUDING STOCHASTIC EVOLUTIONS EXCEPT SLE AND BOLTZMANN EQUATION)  
*Organizers:* Herbert Spohn (*TU München*) and Horng-Tzer Yau (*Harvard University*)

PDE'S (FLUID DYNAMICS, WAVE EQUATION AND NLSE, BOLTZMANN EQUATION, GENERAL RELATIVITY, AND ELASTICITY)  
*Organizers:* Sergiu Klainerman (*Princeton University*) and Grigory Seregin (*Steklov Institute Sankt Petersburg*)

PROBABILITY THEORY (INCLUDING RANDOM MATRICES AND SLE)  
*Organizers:* Yuval Peres (*UC Berkeley*) and Wendelin Werner (*Université Paris-Sud, Orsay*)

OPERATOR ALGEBRAS (INCLUDING NONCOMMUTATIVE GEOMETRY)

*Organizers:* Detlev Buchholz (*Universität Göttingen*) and Masaki Izumi (*Kyoto University*)

NONRELATIVISTIC QUANTUM MECHANICS (INCLUDING QUANTUM INFORMATION)

*Organizers:* Nilanjana Datta (*Cambridge University*) and Peter Kuchment (*Texas A&M University*)

STRING THEORY AND QUANTUM GRAVITY

*Organizers:* Gary Gibbons (*Trinity College, Cambridge*) and Hermann Nicolai (*Max-Planck-Institut für Gravitationsphysik, Potsdam*)

QUANTUM FIELD THEORY (INCLUDING FIELD THEORETIC METHODS IN CONDENSED MATTER)

*Organizers:* Krzysztof Gawedzki (*ENS Lyon*) and Manfred Salmhofer (*Max-Planck-Institut für Mathematik, Leipzig*)

MANY-BODY QUANTUM MECHANICS (CONDENSED MATTER, NANOSCALE, ELASTICITY)

*Organizers:* Gian Michele Graf (*ETH Zurich*) and Jakob Yngvason (*Universität Wien*)

NEW FRONTIERS IN MATHEMATICAL PHYSICS

*Organizers:* Joseph Avron (*Technion, Haifa*), Ruth Durrer (*Université de Genève*), and Israel Michael Sigal (*University of Toronto*)

## Young Researcher Symposium

In the last decade, the ICMP is traditionally preceded by a two-day *Young Researcher Symposium*. This will be also the case in Prague where this meeting will convene on July 31 – August 1. The main talks will be given by the following colleagues:

Rafael Benguria (*P. Universidad Católica de Chile*)

Anna De Masi (*Universita di L'Aquila*)

Helmut Hofer (*Courant Institute*)

Wei-Min Wang (*Université Paris-Sud, Orsay*)

Reinhard Werner (*TU Braunschweig*)

Traditionally, the programme will include also talks by the winners of the the *Poincaré Prize*, and seminar talks of the young participants.

## Other activities

### Prizes

The congress and the YRS are an opportunity to appreciate outstanding results. The main IAMP award will be handed there, as well as two new ones aiming at young researchers:

*The Henri Poincaré Prize* sponsored by the *Daniel Iagolnitzer Foundation*  
<http://www.iamp.org/poincare/>

*The IAMP Early Career Award*, [http://www.iamp.org/iamp\\_eca.html](http://www.iamp.org/iamp_eca.html)

*The IUPAP Young Scientist Prize in Mathematical Physics*  
<http://www.iupap.org/commissions/c18/website/index.html>

### IAMP General Assembly

Once in three years the IAMP members can get together *en masse* to discuss the matters of their professional organization. One of the questions addressed will be certainly the site of the next ICMP in 2012.

### Social and cultural activities

In addition to the welcome party and the conference dinner, a variety of activities will be available to the participants, and even more to their partners

### Practical information

**Accommodation:** *will be offered in a wide range, from first-rate hotels to student hostels. A menu will be given in the next bulletin*

**Travel:** *Prague has a good air and train connection with most parts of the world. The city transport is inexpensive and reliable*

**Climate:** *Typical for central Europe. The afternoon temperatures may be around 25-30°C, with an occasional rain*

**Visa:** *Czech Republic is a part of the Schengen space. Those who need visa can get them at the nearest Czech consulate, or that of another EU country. If you are not sure please check the visa waiver information at <http://www.mzv.cz/wwwo/mzv/default.asp?id=25931&ido=7306&idj=2&amb=1>*

## Satellite conferences

Several satellite meetings are under preparation, for instance

“**Mathematical Aspects of Quantum Transport and Applications in Nanophysics**”, Aalborg University, August 9–15; organized by Horia Cornean, [http://people.math.aau.dk/~cornean/ICMP09\\_satellite/](http://people.math.aau.dk/~cornean/ICMP09_satellite/)

“**Constructive and Multiscale Methods in Quantum Theory**”, Heidelberg University, July 28–30; organized by V. Bach, Ch. Kopper, and M. Salmhofer

“**Algebraic QFT - The first 50 years**”, Göttingen University, July 29–31; organized by D. Bahns, D. Buchholz, P. Martinetti, and K.-H. Rehren

“**14th Summer School in Global Analysis and Mathematical Physics**”, Palacký University Olomouc, August 10–14; organized by D. Krupka, O. Krupková, D.J. Saunders

## About the IAMP

The *International Association of Mathematical Physics (IAMP)* is a worldwide organization founded in 1976 with the aim to promote research in mathematical physics.

### Why to become an IAMP member?

An IAMP membership serves the general purpose stated above and helps the community communication and cooperation. At the same time, it is associated with various individual benefits:

- the membership is cheap, for students the first year is free
- reduced registration fees for the triennial ICMP
- four times a year a bulletin with news about mathematical physics
- discounts on books and journals from major publishers, etc.

### How to join the IAMP

It is done easily through the interactive web form, <http://www.iamp.org/>