CONTENTS

GENERAL INFORMATION	2
SCIENTIFIC PROGRAMME OF EPS-12	8
SOCIAL PROGRAMME	17
PRACTICAL HINTS	19
MAPS	24

GENERAL INFORMATION

CONFERENCE VENUE:

Eötvös Loránd University (ELTE), TTK Campus, Physics-Chemistry Building Address: H-1117 Budapest, Pázmány Péter sétány 1/A Phone/fax number: +36 1 372 2575.

ORGANIZERS

European Physical Society

Roland Eötvös Physical Society

Hungarian Academy of Sciences

The Section of Physical Sciences of the Hungarian Academy of Sciences

The Physics Departments of:

- the Eötvös Loránd University, Budapest
- the Budapest University of Technology and Economics, Budapest
- the University of Debrecen
- the University of Szeged

KFKI Research Institute for Particle and Nuclear Physics

Institute of Nuclear Research, Debrecen

INTERNATIONAL ADVISORY COMMITTEE

A. W. Wolfendale (Chair), Durham	M. Ducloy, Paris	D. Weaire, Dublin		
Representatives of all				
EPS Divisions EPS Sections		S Sections		

EPS Groups

- EPS Sections
- EPS National Physical Societies

INTERNATIONAL PROGRAMME COMMITTEE

- N. Kroó (Chair), Budapest
- G. Baribaud, Geneva
- F. Bourgeois, Geneva
- P. Brenni, Firenze
- M. Ducloy, Paris
- J. Gyulai, Budapest
- P. Helfenstein, Mulhouse
- J. Kertész, Budapest
- A. Kleyn, Leiden
- R. Koch, Jülich
- D. Lee, Mulhouse
- G. Leuchs, Erlangen

- J. Lewis, Malvern
- N. J. Mason, London
- D. L. Nagy, Budapest
- W. von Oertzen, Berlin
- L. Rivkin, Villigen
- M. San Miguel, Balearic Islands
- M. Spiro, Gif-sur-Yvette
- A. Suzor-Weiner, Paris
- J. P. Swings, Liège
- D. Weaire, Dublin
- A. W. Wolfendale, Durham
- P. Wyder, Grenoble

INTERNATIONAL ORGANISING COMMITTEE

D. L. Nagy (Chair), Budapest M. Lázár, Budapest P. Helfenstein, Mulhouse D. Lee, Mulhouse G. Battistig, Budapest J. Lendvai, Budapest Sz. Borsányi, Budapest P. Lévai, Budapest J. Gyulai, Budapest S. Lippmann, London C. Hajdu, Budapest M. Major, Budapest Á. Horváth, Budapest M. Nagy, Budapest Z. Horváth, Budapest P. Petrik, Budapest R. Pick, Paris L. Jenik, Budapest P. Reineker, Ulm Zs. Kajcsos, Budapest Á. Kovách, Debrecen E. Szilágyi, Budapest N. Kroó, Budapest M. Zimányi, Budapest

SPONSORS

European Commission, High-Level Scientific Conferences European Physical Society Eötvös Loránd University, Budapest UNESCO Ministry of Education, Hungary Open Society Institute INTAS Paks Nuclear Power Plant Rt. Institute of Biophysics, Biological Research Center, Szeged General Electric Hungary Corp. Hungarian Academy of Sciences Egis Rt. KFKI Computer Systems Corp.

CONFERENCE SECRETARIAT, REGISTRATION

The Physics-Chemistry Building has three entrances. Conference participants are suggested to use the Southern Entrance, which is the farthest one from the tram stop. The Conference Secretariat with the Registration Desk is located in the basement (Level -1) of the Physics-Chemistry Building. Stairs lead down to the Registration Desk directly at the Southern Entrance. Our staff will be glad to help you with your problems during the whole conference.

The Registration Desk is open 8:00–18:30 every day, except on Wednesday, 28 August, when it works until 15:00, the departure time of the excursion.

Participants are kindly requested to wear their name badges during all events of the meeting.

BOOKING OFFICE FOR CONFERENCE TOURS

A Booking Office will be sited next to the Registration Desk. At this desk you may order tickets for the accompanying guests' tours, the ICPS Barbecue Party and the Conference Banquet (not later than two days before they start).

LECTURE ROOMS

Six lecture rooms, i.e., the main lecture hall ("Globe Hall") and five smaller Rooms A–E will be available for oral presentations; all of them are at Level 0. The whole plenary programme will take place in the Globe Hall.

Parallel symposia will be held in the Globe Hall and in Rooms A-E:

On Tuesday, 27 August from 14:40 to 17:30:

 European research infrastructure (neutron, muon and photon sources, low-energy ion accelerators) 	Globe Hall
sources, low-energy for accelerators	Gibbe Hall
2. Education	Room A
3. Physics in Biology	Room B
4. Physics of Conjugated Polymers and their Applications	Room C
5. Quantum Gases	Room D
6. Computational Physics: Interdisciplinary Applications	Room E
On Thursday, 29 August from 16:10 to 19:00:	
7. High-Energy Accelerators and the Future of High-Energy Physics	Globe Hall
8. Nanostructures	Room A
9. Quantum and Quantum-Optics Devices	Room B
10. Approaching the Dripline for Unstable Nuclei	Room C
11. Physics in Space	Room D
12. Physics for Development (Round Table Discussion)	Room E

CONFERENCE ASSISTANTS

Conference assistants shall wear a special "Staff" badge. They will help you in all matters of conference participation. They will assist speakers and chairpersons in the lecture rooms and will be at your service at the Registration Desk.

ROOM NUMBERING IN THE PHYSICS-CHEMISTRY BUILDING

In the Physics-Chemistry Building there are two numbers on each office door: a small vertical and a large horizontal number. Below we refer always to the horizontal numbering. The first digit of the room numbers indicates the corresponding level of the Building.

SPEAKER'S LOUNGE

Speakers may prepare their talks in Room 3.85 (Virgo Computational Astrophysics Lab.). The room is equipped with 5 laptop connections and 9 PC's, 7 of them running under Linux and 2 under Windows. The room is open from 8:00 till 19:00 every working day during the conference.

TERMINAL AREAS

Terminals with Linux or Windows environment are available in the following rooms:

Location	Number of terminals	Operating system	Opening hours
0.116	10 notebook connections		8:00–19:00
0.117	10 PC's	Windows	8:00–19:00

On the Windows PC's telnet, ssh and web browser are installed. The notebooks should have a UTP slot. Dynamic IP addressing is offered.

The restricted speed of the printers connected allows printing only short (not longer than one page) messages.

Refreshments

Refreshments are included in the registration fee and will be available at set times as shown in the Conference Programme. The coffee breaks on Monday and Thursday afternoon overlap with the attended poster sessions. Refreshments will be served in Levels –1 and 1.

LUNCH ON SITE

The organised lunch ordered in advance will be served near the main building of the Conference. You should have a lunch ticket to get your meal. The place of the lunch is marked on the campus map at the end of this booklet. Our assistants will help you to get there.

Lunch tickets for the Conference period can be purchased only prior to 26 August. Prepurchased tickets are not refundable.

Restaurants can be found within about 10–15 minutes walking distance (2–3 tram stops) from the site both on the Pest and Buda sides.

We strongly advise you to have lunch on site. Besides the organised lunch, you may also use the two cafeterias open in the Conference building to buy warm and cold sandwiches, coffee, tea, and pastry.

INCOMING MESSAGES AND MESSAGE BOARD

Messages received by the desk will be posted on the message board located at the Southern Entrance next to the stairs leading down to the Registration Desk. Participants may also use this board to leave messages to other delegates.

A telephone/fax message passing service is working during the conference.

Phone/fax number: +36 1 372 2575.

POST OFFICE (CARDS, STAMPS AND PHONE CARDS)

A well-equipped small post office is working on Monday, Tuesday and Thursday from 10:00 to 14:00 next to the Registration Desk. In the office you may buy post cards, telephone cards, envelopes, stamps and also you may dispatch your cards, as well as small parcels.

SMOKING AND CHATTING

Hungarian law strictly forbids smoking in buildings of educational and scientific institutions. Smoking is allowed only on the Terrace of Level 2 and outside the building.

You are kindly requested to use these areas also for longer and louder chats.

INSTRUCTIONS FOR SPEAKERS

All oral speakers are kindly requested to contact the Speakers' Assistant immediately upon registration in order to discuss the technical conditions of their presentation. Speakers will receive a special sheet on registration informing them on some technical constrains that they may wish to observe. Speakers are supposed to fill out a questionnaire to finalise with the Speakers' Assistant the technique of their presentation as well as the way of copying their transparencies and/or their files of electronic presentation.

Prior to their presentation, speakers should contact their Session Chairperson. Local assistants will be present in the lecture rooms to help solving all problems concerning the presentations.

INSTRUCTION FOR POSTER PRESENTERS

Two poster sessions, viz., Session 1 and Session 2 are organised. Poster Session 1 will take place on Monday, 26 August 14:20–15:50 (the last 30 minutes with coffee) and on Tuesday, 27 August 14:40–17:30. On Monday, the presenting author should be available at the poster. Poster Session 2 will take place on Thursday, 29 August 14:40–16:10 (the last 30 minutes with coffee) and immediately afterwards, i.e., 16:10–19:00. The presenting author should be available at the poster available at the poster from 14:40 to 16:10.

Please consult the EPS-12 Abstract Book to find out the day of your poster presentation. Authors are responsible for displaying and removing their posters. All posters of Poster Session 1 should be on display not later than Monday at 14:00 and should be removed by 19:00 on Tuesday. Posters of Poster Session 2 should be on display not later than Thursday at 14:20 and should be removed by 14:00 on Friday. Posters not removed by the authors will be removed by the organisers and stored at the Registration Desk until the end of the Conference.

INTERNATIONAL CONFERENCE FOR PHYSICS STUDENTS

The 17th International Conference for Physics Students ICPS2002 takes place in the Physics-Chemistry Building of the TTK Campus from 21 to 27 August, i.e., there is a two-day overlap with EPS-12. The programme of these two days, viz., 26 and 27 August is part of both conferences. All poster presentations submitted to ICPS2002 will be on display on 26–27 August.

POSTER COMPETITION, YOUNG PHYSICISTS' DAY

A special feature of the common programme of EPS-12 and ICPS2002 is the young physicists' poster competition. Poster contributions submitted by participants below 35 for the poster competition will be on display on Monday and Tuesday. On Monday, 16 August afternoon a panel of judges will select the prize-winners including ten posters for oral presentation at the Young Physicists' Day on Tuesday morning. The ICPS2002 participants will select another two oral speakers of the Young Physicists' Day from the student speakers of their own conference. The posters taking part in the competition are denoted with a letter C.

THE CONFERENCE WEBSITE

The Internet homepage of the Conference (**www.eps12.kfki.hu**) will be kept up-to-date during the meeting. After the meeting, transparencies and electronic presentation files will be made available at this website, provided that the authors will agree signing the corresponding Copyright Form to the European Physical Society.

Also the conference website will host the final list of participants.

THE EUROTRON CONFERENCE

For the first time in the history of EPS conferences, a so-called EUROTRON conference will be accompanied with the main event. This means that the whole program in the Globe Hall, i.e., the plenary program of the conference as well as Parallel Symposia #1 and #7 will be transmitted in real time through the Internet (www.eps12.kfki.hu/eurotron/). At the same web address, it will also be possible to review the whole EUROTRON program later on.

PLENARY ROUND-TABLE DISCUSSION

A new initiative in the history of EPS conferences is the round-table discussion about the future of European research and development. Experts and scientific policy makers will take part in the discussion that will focus primarily on views from the side of physics research and education. During the round-table discussion, not only the audience present on spot, but also anyone in the world will be able to participate in the discussion through the Internet and to ask the participants. Questions and comments to the round-table participants should be sent to the address **eps12-roundtable@lists.kfki.hu** before or during the round table discussion.

EXHIBITIONS

A few small exhibitions will join the conference. An exhibition is organised by the European Fusion Development Agreement (EFDA) on the plans of the construction of an experimental fusion power plant. Another exhibition displays the plans of the European Spallation Source (ESS). Scientific publishing houses are also present at the conference.

The Exhibition Area is located on Level 0, between the Globe Hall and the gallery of the Harmony Hall.

SCIENTIFIC PROGRAMME OF EPS-12*

Sund	ay, 2	5 August 2002
15:00 -	21:30	Registration (Level –1)
19:00 -	21:30	Welcome Reception (Harmony Hall, Level –1)

Monday, 26 August 2002			
Globe Hall – Le	Globe Hall – Level 0		
9:00 - 9:30	Opening [†]		
9:30 – 10:10	Cecil Powell Memorial Lecture D. Weaire (Trinity College, Dublin, Ireland): The value of useless studies		
10:10 – 10:50	Z. Alferov (loffe Physico-Technical Institute, St Petersburg, Russia): Semiconductor heterostructures: State-of-art and future trends		
10:50 – 11:20	Coffee break		
11:20 – 12:00	<i>F. Capasso</i> (Bell Laboratories, Lucent Technologies, Murray Hill, USA): Teaching electrons and photons new tricks with state-of-the-art technology: Quantum Cascade Lasers, optical microbilliards, and QED-based nanomechanics		
12:00 - 12:40	<i>T. Dietl</i> (Institute of Physics, Warszawa, Poland): Semiconductor Spintronics		
12:40 - 12:50	<i>J. Lendvai</i> (Eötvös Loránd University, Budapest, Hungary): The Central European Journal of Physics		
	Lunch		
Poster Hall – Level 0 and Globe Hall Gallery – Level 1			
14:20 – 15:50	Poster Session 1 — ICPS2002 and EPS-12 poster presentations (attended)		
15:20 – 15:50	Coffee break		

^{*} There have been a few changes in the programme after the Book of Abstracts was printed. Whenever a difference between the two versions of the programme is found, the present version is the valid one.

Participants of EPS-12 will be addressed by: M. Ducloy (President, European Physical Society),
 N. Kroó (Secretary General, Hungarian Academy of Sciences and Chairman, EPS-12 International Programme Committee), I. Hiller (Under-Secretary of State, Hungarian Ministry of Education), H. Bruhns (Head of Unit, European Commission), D.L. Nagy (Chairman, EPS-12 International Organising Committee).

Monday, 26 August 2002		
Globe Hall – Le	evel 0	
15:50 – 16:50	Agilent Technologies Europhysics Prize [*] Lecture <i>R. Sessoli</i> (University of Florence, Italy), <i>J. Friedman</i> (Amherst College, Amherst, USA), <i>B. Barbara</i> (CNRS, Grenoble, France): Quantum dynamics of nanomagnets	
16:50 – 17:30	E.N. Economou (FORTH & Univ. of Crete Heraklion, Crete, Greece): Photons and phonons in mesoscopic systems	
17:30 – 17:35	Announcement of the result of the Poster Competition	
Matthias Church		
19:15 – 20:00	Organ Concert	

Tuesday, 27 August 2002		
Globe Hall – Le	evel 0	
9:00 – 10:55	Young Physicists' Day — 7 talks	
10:55 – 11:25	Coffee break	
11:25 – 12:40	Young Physicists' Day — 5 talks	
	Lunch	
Globe Hall, Ro	oms A, B, C, D, E – Level 0, Poster Hall – Level 0 and Globe Hall Gallery – Level 1	
	Parallel Symposia 1–6	
14:40 – 17:30	Poster Session 1 — ICPS2002 and EPS-12 poster presentations (unattended)	
17:30 - 18:00	Coffee break	
Globe Hall – Level 0		
18:00 – 20:00	Round-Table Discussion — The Future of Research and Development in Europe [†]	
Margaret Island, Europe Grill Garden		
20:00 -	ICPS2002 Barbecue Party (not included in the EPS-12 registration fee)	

The Laureates of the 2002 Agilent Technologies Europhysics Prize are **B. Barbara** (CNRS, Grenoble, France), **J. Friedman** (Amhearst College, USA), **D. Gatteschi** (University of Florence, Italy), **R. Sessoli** (University of Florence, Italy) and **W. Wernsdorfer** (CNRS, Grenoble, France) for developing the field of quantum dynamics of nanomagnets, including the discovery of quantum tunnelling and interference in dynamics of magnetisation.

[†] Participants: Z. Alferov (Russian Academy of Sciences, St. Petersburg), H. Bruhns (European Commission, Brussels), M. Ducloy (European Physical Society, Paris), J. Gyulai (Roland Eötvös Physical Society, Budapest), M.C.E. Huber (ISSI, Bern), N. Kroó (Hungarian Academy of Sciences, Budapest), D.L. Nagy (Roland Eötvös Physical Society, Budapest), Y. Petroff (LBNL, Berkeley), A. Siegler (Ministry of Education, Budapest). Discussion leader: G. Morrison (European Physical Society, Birmingham).

PARALLEL SYMPOSIA 1–6

Globe Hall - Level 0 - from 14:40 to 17:30

SYMPOSIUM 1: EUROPEAN RESEARCH INFRASTRUCTURE (NEUTRON, MUON AND PHOTON SOURCES, LOW-ENERGY ION ACCELERATORS)

Convener: Y. Petroff (Lawrence Berkeley National Laboratory, Berkeley, USA)

- 14:45 *F. Sette* (*ESRF, Grenoble, France*): X-ray science at the European Synchrotron Radiation Facility: recent results and future challenges
- 15:13 *M. Altarelli* (Sincrotrone Trieste, Italy): Science with VUV and soft X-ray synchrotron light sources
- 15:41 **F. Schluenzen** (Max-Planck-Arbeitsgruppen für strukturelle Molekularbiologie Hamburg, Germany): Antibiotics targeting ribosomes
- 16:09 *F. Mezei* (Hahn-Meitner Institut, Berlin, Germany): ESS: a quantum leap in research opportunities
- 16:37 **R.Cywinski** (University of Leeds, UK): Muon beam research in condensed matter science: achievements and prospects
- 17:05 *F. Pászti* (*KFKI* Research Institute for Particle and Nuclear Physics, Budapest, Hungary): Ion beam analysis today and tomorrow

Room A – Level 0 – from 14:40 to 17:30

SYMPOSIUM 2: EDUCATION

Convener: A.W. Kleyn (Leiden University, The Netherlands)

- 14:40 **A.W. Kleyn** (Leiden University, The Netherlands): The Physics Education Division of EPS
- 14:45 *E. Johansson (Stockholm University, Sweden)*: School projects at the physics frontline
- 15:30 *H. Ferdinande* (Universiteit Gent, EUPEN Consortium, Gent, Belgium): EUPEN's ongoing contribution to European physics education
- 15:50 V. Urumov (Institut za Fizika, Skopje, Macedonia) Physics in a small country
- 16:10 Break
- 16:30 *R. Lambourne* (*Open University, Milton Keynes, UK*) Teaching physics at a distance: challenges and solutions
- 16:50 **G. Tibell** (Uppsala University, Sweden): Physics competitions a way to promote the discipline in schools
- 17:10 **Zs. Rajkovits** (Eötvös Loránd University, Budapest, Hungary) New types of physics competitions for secondary school students

Room B – Level 0 – from 14:40 to 17:30

SYMPOSIUM 3: PHYSICS IN BIOLOGY

Convener: **P. Ormos** (Research Center for Biology, HAS, Szeged, Hungary)

- 14:40 **J. Howard** (Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany): Coupling microtubule depolymerization to ATP hydrolysis by the Kin I kinesin MCAK
- 15:10 *U. Nienhaus* (*University of Ulm, Germany*): Exploring the rugged conformational energy landscape of proteins
- 15:40 **A. Dér** (Biological Research Centre HAS, Szeged, Hungary): The role of environmental fluctuations in the function of proton pumps
- 16:10 Break
- 16:30 T. Duke (University of Cambridge, UK): Active detection of sound in the inner ear
- 17:00 *R.H. Austin (Princeton University, USA)*: Micro to nanoscale machinery to unravel the code of life

Room C – Level 0 – from 14:40 to 17:30

SYMPOSIUM 4: PHYSICS OF CONJUGATED POLYMERS AND THEIR APPLICATIONS

Convener: W.R. Salaneck (IFM Linköping University, Sweden)

- 14:45 W.R. Salaneck (IFM Linköping University, Sweden): Introduction
- 15:00 **J.L. Brédas** (University of Arizona, Tucson, USA): Characterization of the charge transport and energy transfer processes in organic semiconductors
- 15:30 **W.R. Salaneck** (Linköping University, Linköping, Sweden): Photoelectron spectroscopy of conjugated polymers
- 16:00 *C. Taliani* (*CNR*, *Bologna*, *Italy*): Organic spintronics: a new perspective for organic semiconductors
- 16:30 R. Friend (University of Cambridge, UK): Polymer electronics
- 17:00 *H. Hofstraat* (*Philips Research, Department Polymers & Organic Chemistry, and University of Amsterdam, Eindhoven, The Netherlands*): Application of conjugated polymers We are just at the beginning

Room D – Level 0 – from 14:40 to 17:30

SYMPOSIUM 5: QUANTUM GASES

Convener: N.J. Mason (University College London, UK)

Co-convener: *E. Hinds* (University of Sussex, Brighton, UK)

- 14:40 **C.I. Westbrook** (Lab. Charles Fabry de l'Inst. d'Optique, Orsay, France): Studies of Penning ionizing collisions in Bose-Einstein condensates
- 15:15 *M. Inguscio* (Universita' di Firenze, Sesto Fiorentino, Italy): Fermi-Bose and Bose-Bose quantum degenerate K-Rb mixtures
- 15:50 *F. Masnou-Seeuws* (*Laboratoire Aime Cotton, Orsay, France*): Formation of ultracold molecules via photoassociation of laser-cooled atoms

- 16:25 **J. Dalibard** (Laboratoire Kastler Brossel, Ecole Normale Superieure, Paris, France): Rotating Bose-Einstein condensates and quantum vortices
- 17:00 *E. Hinds* (University of Sussex, Brighton, UK): Taming the wild atom

Room E – Level 0 – from 14:40 to 17:30

SYMPOSIUM 6: COMPUTATIONAL PHYSICS: INTERDISCIPLINARY APPLICATIONS

Convener: D. Stauffer (Universität zu Köln, Germany)

- 14:40 R.E. Ansorge (University of Cambridge, UK): Physics in medical imaging
- 15:30 *F. Kun (University of Debrecen, Hungary)*: Fracture and Fragmentation of Disordered Solids
- 16:15 Break
- 16:45 **D. Stauffer** (Universität zu Köln, Germany): How to convince others simulations of Sznajd models

Wednesday, 28 August 2002		
Globe Hall – Level 0		
9:00 – 9:40	S. Solomon (Hebrew University of Jerusalem, Israel): The importance of being discrete: The emergence of complex social dynamics from simple individual interactions	
9:40 - 10:20	T. Vicsek (Eötvös University, Budapest, Hungary): Crowd control	
10:20 - 11:00	P. Barabaschi (ITER Garching, Germany): ITER: Realizing the promise of fusion energy	
11:00 - 11:30	Coffee break	
11:30 – 13:00	EPS President's Address and General Meeting, Gero Thomas Memorial Medal [*]	
	Lunch	
15:00 – 22:30	EPS-12 Conference Excursion including dinner	

The 2002 EPS Gero Thomas Memorial Medal has been awarded to **E.W.A. Lingeman** for his many important and valuable contributions to the EPS.

Thursday, 29 August 2002			
Globe Hall – Level 0			
9:00 - 9:40	G. Schäfer (<i>Friedrich-Schiller-Universität, Jena, Germany</i>): Recent progress and future developments in gravitational physics		
9:40 - 10:20	A. Wolfendale (University of Durham, UK): The origin of cosmic rays		
10:20 – 10:40	EPS Public Understanding of Physics Prize [*] Joint EPS-BPU Prize for Environmental Physics [†]		
10:40 - 11:10	Coffee break		
11:10 – 11:50	<i>J. Stachel</i> (University of Heidelberg, Germany): Deconfined nuclear matter, what have we learnt from the SPS?		
11:50 – 12:30	H. Nifenecker (ISN Grenoble, France): How much could nuclear power contribute to the mitigation of CO_2 emissions?		
12:30 - 12:40	Lise Meitner Prize [‡]		
12:40 – 12:50	Outreach Prize [§]		
	Lunch		
Poster Hall – Level 0 and Globe Hall Gallery – Level 1			
14:40 – 16:10	Poster Session 2 — EPS-12 presentations (attended)		
15:40 – 16:10	Coffee break		
Globe Hall, Rooms A, B, C, D, E – Level 0, Poster Hall – Level 0, and Globe Hall Gallery – Level 1			
	Parallel Symposia 7–12		
16:10 – 19:00	Poster Session 2 — EPS-12 presentations (unattended)		
Stefánia Palace (Budapest, XIV. Stefánia út 34.)			
20:15 – 22:45	Conference Dinner (not included in the EPS-12 registration fee)		

^{*} The 2002 EPS Public Understanding of Physics Prize has been awarded to **R. Carreras** (CERN) for his outstanding contributions to the popularization of Physics.

[†] The 2002 Joint EPS-BPU Prize for Environmental Physics has been awarded to **I. Isaksen** (University of Oslo, Norway), **G.-P. Brasseur** (MPI for Meteorology, Germany) and **W.C. Wang** (State University of New York at Albany, USA) for their outstanding contributions to environmental physics.

[‡] The 2002 Lise Meitner Prize sponsored by Canberra Eurysis has been awarded to **J.P. Elliott** (*University of Sussex, UK*) and **F. lachello** (*Yale University, USA*) for their innovative applications of group theoretical methods to the understanding of atomic nuclei.

[§] The 2002 Outreach Prize has been awarded to **M. Kobel** (University of Bonn, Germany) for his work in bringing high-energy particle physics into schools in Germany.

PARALLEL SYMPOSIA 7–12

Globe Hall - Level 0 - from 16:10 to 19:00

SYMPOSIUM 7: HIGH-ENERGY ACCELERATORS AND THE FUTURE OF HIGH-ENERGY PHYSICS

Convener: A. Wagner (DESY, Hamburg, Germany)

- 16:10 *W. Buchmüller (DESY, Hamburg, Germany)*: Theoretical perspectives of Particle Physics
- 16:38 L. Rolandi (CERN, Geneva, Switzerland): What have experiments taught us?
- 17:06 **B. Foster** (University of Bristol, UK, DESY, Hamburg, Germany): The scientific Roadmap of Particle Physics in the coming 20 Years
- 17:34 K. Hübner (CERN, Geneva, Switzerland): Challenges for accelerators
- 18:02 *J. Carr* (*Centre de Physique de Particules de Marseille, France*): Particle Physics without accelerators
- 18:30 *I.F. Corbett (ESO, Garching, Germany)*: Challenges of going global: new paradigms for Particle Physics?

Room A – *Level 0* – from 16:10 to 19:00

SYMPOSIUM 8: NANOSTRUCTURES

Convener: *L. Pavesi* (Universita' di Trento, Italy)

- 16:10 *L. Tiefenauer* (*Paul Scherrer Institut, Villigen PSI, Switzerland*): Nanotechnology for Life Sciences
- 16:50 *U. Woggon* (Universität Dortmund, Germany): Ultrafast spectroscopy of quantum dots
- 17:30 **D.L. Beke** (University of Debrecen, Hungary): Non-linear effects in diffusion on nanoscale
- 18:10 *F. lacona* (*CNR-IMM, Catania, Italy*): Photoluminescence and electroluminescence properties of undoped and Er-doped Si nanocrystals

Room B – *Level 0* – from 16:10 to 19:00

SYMPOSIUM 9: QUANTUM AND QUANTUM-OPTICS DEVICES

Convener: M. Ducloy (Université Paris Nord, Villetaneuse, France)

Co-conveners: **G. Leuchs** (Universität Erlangen-Nürnberg, Erlangen, Germany) **J.-M. Raimond** (Université Pierre et Marie Curie, Paris, France)

- 16:10 **J.A. Jones** (Clarendon Laboratory, Oxford, UK): Quantum computing and Nuclear Magnetic Resonance
- 16:35 **J.I. Cirac** (Max-Planck-Institut für Quantenoptik, Garching, Germany): Entangling atomic ensembles
- 17:00 **N. Gisin** (Université de Geneve, Switzerland): Quantum communication at telecom wavelengths

- 17:25 **G. Rempe** (Max-Planck-Institut für Quantenoptik, Garching, Germany): Optical cavity quantum electrodynamics
- 17:50 **B. Lounis** (CNRS & Universite Bordeaux, Talence, France): Quantum optics with single nanoobjects
- 18:15 *P. Joyez (CEA-Saclay, Gif-sur-Yvette, France)*: Operation of a solid-state quantum bit circuit

Room C – *Level 0* – from 16:10 to 19:00

SYMPOSIUM 10: APPROACHING THE DRIPLINE FOR UNSTABLE NUCLEI

Convener: B. Jonson (Chalmers/GU, Göteborg, Sweden)

- 16:10 *T. Nilsson (CERN, Geneva, Switzerland)*: Exotic nuclei and radioactive beams at low energy
- 16:50 H. Fynbo (University of Aarhus, Denmark): Multi-particle emission
- 17:10 F. Herfurth (CERN, Geneva, Switzerland): Masses of dripline nuclei
- 17:30 **T. Aumann** (GSI, Darmstadt, Germany): Exotic nuclei and radioactive beams at high energy
- 18:00 M. Freer (University of Birmingham, UK): Clustering in neutron-rich nuclei
- 18:35 H. Simon (TU Darmstadt, Germany): Unbound nuclei

Room D – *Level 0* – from 16:10 to 19:00

SYMPOSIUM 11: PHYSICS IN SPACE

Conveners: J.P. Swings (Université de Liège, Belgium)

Co-conveners: **M.C.E. Huber** (International Space Science Institute, Bern, Switzerland) **J. Kuijpers** (University of Nijmegen, The Netherlands)

- 16:10 **C. Aerts** (Katholieke Universiteit, Leuven, Belgium): Asteroseismology: from the Sun to stars
- 17:00 *I. Lehmann* (*Max Planck Institute for Extraterrestrial Physics, Garching, Germany*): Recent results from the X-ray Satellites Chandra and XMM-Newton
- 18:10 **J.L. Puget** (Institut d'Astrophysique Spatiale, Orsay, France): Cosmic Microwave Background measurements: status and future

Room E – *Level 0* – from 16:10 to 19:00

SYMPOSIUM 12: PHYSICS FOR DEVELOPMENT

Convener: L. Wöste (Freie Universität, Berlin, Germany)

Round Table Discussion Speakers:

- Z. Ben Lakhdar (University of Tunis, El Manar-Tunis, Tunisia)
- J.-L. Morán López (Instituto Potosino de Investigación Científica y Tecnológica, San Luis Potosí, Mexico)
- A. Suzor-Weiner (University Paris-Sud, Orsay, France)
- L. Wöste (Freie Universität, Berlin, Germany)

- **N. Hounkonnou** (National University of Abomey-Calavi, Porto-Novo, Republic of Benin)
- A. Baig (Quaid-i-Azam University, Islamabad, Pakistan)
- F. Piuzzi (Laboratoire Francis Perrin, Gif sur Yvette, France)
- E. Lillethun (University of Bergen, Norway)

Friday, 30 August 2002		
Globe Hall – Le	evel 0	
9:00 - 9:40	C. Joshi (UCLA, Los Angeles, USA): High energy density plasma science with ultrarelativistic electron beams	
9:40 – 10:20	D. Treille (CERN, Geneva, Switzerland): What have we learnt with the LEP machine?	
10:20 – 11:00	M.J.G. Veltman (NIKHEF, Amsterdam, The Netherlands): The Higgs particle: fact and speculation	
11:00 - 11:30	Coffee break	
11:30 – 12:10	JL. Morán-López (Institute for Scientific and Technological Research of San Luis Potosí, México): Is physics the privilege of developed countries?	
12:10 – 12:50	G. Rikken (Grenoble High Magnetic Field Laboratory, Grenoble, France): New effects of symmetry breaking in magnetic fields	
	Lunch	
14:50 – 15:30	<i>L. Hau (Harvard University, Cambridge, USA)</i> : Ultra-slow and stopped light and superfluid shock waves at the 'light roadblock'	
15:30 – 16:10	A. Zeilinger (University of Vienna, Austria): Quantum interference of individual quantum systems	
16:10 - 16:40	Coffee break	
16:40 – 17:20	<i>H. Walther</i> (Sektion Physik der Universität München and Max-Planck-Institut für Quantenoptik, Garching, Germany): Single atom experiments and the test of Quantum Physics	
17:20 – 18:00	<i>L. Tisza</i> (Massachusetts Institute of Technology, Cambridge, Massachusetts, USA): Remembering Eugene Wigner and pondering his legacy	
18:00 – 18:20	Closing	

SOCIAL PROGRAMME

All participants and accompanying persons are welcome to attend the following three programmes (covered by the registration fee).

WELCOME RECEPTION

The welcome reception will be held in the Harmony Hall of the Conference Building (Level -1) on **Sunday, 25 August** from **19:00** to **21:30**.

ORGAN CONCERT IN THE MATTHIAS CHURCH ON THE CASTLE HILL

An organ concert for the participants of the Conference will be held in the Matthias Church located at Szentháromság tér (Holy Trinity Square) of the historical castle district **on Monday**, **26 August** from **19:15** to **20:00**. Participants are expected to get to the place of the concert on their own; no organised transportation will be available. Please, do not forget to bring with you the free invitation card that you will find in your conference material.

How to get there: From the Pest side take Bus No.16 from Erzsébet tér (the bus stop is located in front of Hotel Méridien), which can be reached by all metro lines (station Deák tér). From the Buda side take the small Castle Bus (it has no number just a little picture of the Castle and its stop is up on the small hill above Moszkva tér, in front of the red brick post office building). Moszkva tér is the largest centre of public transportation of Buda, e.g., it is the terminal station of Tram No. 61, which has stops at Hotels Flamenco and Novotel. Should you go directly from the conference site to the Matthias Church, you may take Tram No. 6 to Móricz Zsigmond körtér to change for Tram No. 61. However, if you are in good condition, your best choice is probably walking to the Matthias Church. You may walk either from the stop "Déli pályaudvar" of Tram No. 61 (15-minutes walk) or directly from the University (1-hour walk).

For returning after the concert please note that the last castle bus leaves the Castle at 23:05, and the last metro of the Red Line leaves Moszkva tér at 23:40.

Matthias Church is denoted Historical Monument No. 8 on your map which can be found in your conference bag.

CONFERENCE EXCURSION

The Excursion will be held on **Wednesday**, **28** August. It includes a Hungarian folklore performance and horse show in authentic surroundings. Dinner will be served at "Tanyacsárda" in Lajosmizse. Participation is free for registered participants and accompanying persons. Buses will leave at **15:00** from the parking lot of the TTK Campus. Buses will be back to Budapest around **22:30** and will bring the participants to the conference hotels or will stop, upon request, at other places along their normal route.

Additional tickets can be requested at the registration desk.

CONFERENCE DINNER

The conference dinner will be served in the fabulous baroque **Stefánia Palace** on **Thursday**, **29 August** from **20:15** to **22:45**. The Palace is located close to the City Park (Városliget), its address being Budapest, XIV. Stefánia út 34.

Participants are expected to get to the place of the Conference Dinner on their own; no organised transportation will be available. Please, do not forget to bring your invitation card with you. This evening event is not included in the EPS-12 registration fees. **Tickets can be purchased in the Booking Office at the registration desk for 40**

How to get there: The simplest way is to take Bus No. 7 at Móricz Zsigmond körtér that is accessible by tram from most Conference Hotels on the Buda side. You should take off at "Stefánia út" (11th stop from Móricz Zsigmond körtér). From Novotel Budapest you can take Bus No. 8 towards Pest and change at its terminal for Bus No. 7 (stop "Ferenciek tere"). From Mercure Budapest Duna take any of the trams No. 4 or 6 at Mester utca going along the Ring (direction opposite to the conference site) and change for bus No. 7 at the crossing with Rákóczi út (4th stop). You may also go via "Hosök tere" (take the old Millennium Underground, i.e., the yellow metro line at Deák tér) and take trolley No. 75 (the stop is at 100 m to the right from the underground station). The trolley has a stop right at Stefánia út.

ICPS BARBECUE PARTY

The Farewell (barbecue) Party of ICPS2002 takes place on the Margaret Island (Europe Grill Garden) on **Tuesday, 27 August** starting at **20:00**. EPS-12 participants are welcome at this event, however its cost is not included in the EPS-12 registration fee.

Participants are expected to get to the Margaret Island on their own; no organised transportation will be available.

Tickets can be purchased in the Booking Office at the registration desk for 10 ∉person.

How to get there: The simplest way is to take Tram No. 4 or 6 at the TTK Campus through the Petofi bridge and to travel along the Ring. Once you have reached the Danube again, take off the tram in the middle of the Margaret bridge and walk down to the island. The place of the party is shown in the map on the back cover of this booklet.

PROGRAMMES FOR ACCOMPANYING PERSONS

Spouses and (school) children of participants are welcome at the conference site.

The **tour in the Parliament** is a 2-hour guided tour, which offers the opportunity to visit the impressive House of Parliament **on Monday**, **26 August**. After a walk around Hungary's largest building, interior visit of the magnificent neo-gothic Parliament (home of the Holy Hungarian Crown and the coronation insignia) with guidance through the splendid boardrooms and impressive staircases.

After the visit at the building of Parliament, a **guided sightseeing tour** starts at about 12:00. This will be a 3-hours guided tour in Budapest by bus, organised at the beginning of the meeting, enabling companions to get acquainted with the city. Among several famous sights the following places will be visited: Heroes' Square, Basilica, Opera House, Buda Castle, Matthias Church, Fisherman's Bastion, Gellért Hill, Citadel, etc. (picture gallery).

This programme is included in the accompanying persons' registration fee. Departure is from the parking lot of the TTK Campus (conference venue), at **9:30**.

Excursion to Gödöllo: a half-day guided tour (9:15–13:00) by bus to the former summer residence of Empress Elisabeth will be organised on **Tuesday, 27 August. Gödöllo** is located very near to Budapest, and its greatest treasure and touristical attraction is the 250-year-old Royal Palace. Visitors can see the living quarters of Emperor Franz Joseph and Empress Elizabeth (Sissi), and the newly renovated palm house, holding ornamental plants on exhibition. The capuchin abbey of Máriabesnyo and tomb of the Grassalkovich Dynasty will also be visited. This programme is not included in either of the registration fees.

Price of the ticket is 35 ∉person, including transportation, entry tickets, guidance and refreshments at the castle buffet. **Departure** is from the parking lot of TTK Campus (conference venue) **at 9:00.**

PRACTICAL HINTS

Advices for Your Departure

Railway stations can be found on the town map in your bag. Déli, Keleti and Nyugati railwaystations are denoted No. 71–73, respectively.

For confirmation of flights please contact the reception desk at your hotel.

Airport Minibus

Participants leaving from Budapest International Airport are advised to use the Airport Minibus shuttle service, which takes one from any address in Budapest for a fee of 2100 HUF/person (ca. 9 €) to airport. You may order your Airport Minibus at the reception desk of your hotel or by phone No. 296 8555 about one day before your departure.

Taking a taxi

The tariffs of the taxi companies may differ to some extent, but there is a common tariff ceiling. If you take a taxi, you can find the tariff chart on both the dashboard and the right rear window. The tariffs cannot be more than listed below, they, however, may be lower.

	Taxi ordered by phone	Taxi from the street
Basic fee	HUF 200	HUF 200
Per kilometre tariff	HUF 160/km	HUF 230/km
Waiting tariff	HUF 40/min.	HUF 60/min.

This is the tariff chart for all rides within Budapest and the rides starting in Budapest, including Ferihegy Airport. If you take a taxi in Budapest, but your destination is outside the city, the driver may request the return price to the city border.

You get price reduction if you order your taxi by phone, so you are better off ordering a taxi from the Hotel Reception or from a restaurant, than just getting into a car in front of your Hotel. Phone numbers of some taxi companies: Fotaxi 222 2222, City Taxi 211 1111, Rádió Taxi 377 7777, Taxi2000 200 0000.

INFORMATION OFFICES IN THE CITY

- Nyugati Railway Station, District XIII, phone: 3028580
- Süto utca 2, District V, phone: 3179800
- Budaörs, Agip complex (M1–M7 motorway junction), phone: (06-23) 417518 (Opening hours: 15 March – 31 October: 8:00–20:00 every day)
- Király utca 93, District VII, phone: 3521433, 3529804 (Opening hours: 9:00–18:00 every day throughout the whole year)

TELEPHONE SERVICE

Public telephones at the Conference site are available close to the elevators in several levels. They work with prepaid Hungarian Phone Cards ("telefonkártya" in Hungarian). Phone cards (HUF 800 and HUF 1800) can be purchased at the Post Office from 10:00 to 14:00 next to the Information Desk. Most public phones in Budapest work with phone cards, a few with coins (10, 20, 50, or 100 HUF coins).

Phoning from/to Hungary

In Hungary, the following calling sequences are used:

From public phones, the digits 00 are used to access an *international line*. This is followed by the country code, etc. For numbers *in Hungary but outside Budapest*, the calling sequence starts with 06, followed by the area code and the number of the subscriber.

Within Budapest, phone numbers have 7 digits. Be aware that in the past few years, many numbers have been changed. Old numbers you may still remember, starting with digit 1, have been all modified, and now they start with digit 3 or 4.

Mobile phones have different "area codes", like 20, 30, etc. Therefore, e.g., the mobile phone number (20) 123 4567 can be reached from a public phone as 06-20 123 4567.

A special procedure applies for **hotel-room telephones**; see the guide in the rooms. Calling from these phones may turn out to be quite expensive!

Important phone numbers in Budapest

Emergency:	112
Medical emergency:	104 or 311 1666
Police:	107 or 343 0034
Fire brigade:	105 or 321 6216

The information service on **phone numbers in Hungary** has the (local) phone number **198**. Information on **international phone numbers** can be obtained at number **199**. The country code of Hungary is **36**, the area code of Budapest is **1**.

In case of problems on the Conference site, please, contact Conference Assistants!

FIRST AID AND PHARMACY

A first-aid room can be found in the Conference Building. Should you need help, please contact the Conference Assistants or the Building Personnel.

The nearest Pharmacy on Buda side is located near Móricz Zsigmond körtér (Karinthy Frigyes út 2): two tram stops with No. 6 (in the Buda direction) and then straight ahead. On the Pest side the nearest Pharmacy is in the Páva utca: two tram stops through the Petofi bridge, enter Mester utca on your right ahead, and the first cross street is Páva utca on your left.

PHOTOCOPYING

Limited public photocopying service is available near the Chemistry Entrance of the Conference Building, operating with HUF coins. Note that the organisers do not offer photocopy service for transparencies as these will be available in electronic form at the website of the conference.

TRAVEL AND TRANSPORTATION

Budapest has a reliable public transportation network: three metro (subway) lines (colourcoded: yellow, red and blue), as well as many tram, bus and trolley lines. The participants are advised to use public transportation whenever possible. A free weekly pass is included in the registration fee. Please, do not forget to write your name on the ticket with capital letters upon receipt, otherwise a penalty should be paid upon control.

For participants arriving by car, a public parking lot is available on the campus.

The conference site can be accessed by trams No. 4 and No. 6 from the Great Ring on the Pest side of the Danube (on your town map the Great Ring is the series Szt. István krt., Teréz krt., Erzsébet krt., József krt. and Ferenc krt.).

To get to the conference, one should get off the trams at the stop next to the Petofi bridge on the Buda side. Then you walk through a small park to the Physics-Chemistry Building of the TTK Campus following the signs.

From the hotels in Buda the safest is to go to Móricz Zsigmond körtér and take tram No. 6 from its terminal station. To the conference site you should get off at the second stop.

Maps of the Conference site can be found on the cover sheets of this booklet, one showing you the location of the campus, the others the interior of the Physics-Chemistry Building.

FOREIGN EXCHANGE AND BANKING FACILITIES

The Hungarian currency is the Hungarian Forint (HUF). Currency exchange is available at the airport terminals, railway stations, travel agencies, banks and various places in the city. Traveller's cheques, and convertible currency may be exchanged at these facilities. Major credit cards are usually accepted in most hotels, restaurants and many shops in the city. Obtaining cash against ATM cards is very easy in Budapest from the ATM machines that can be found at most banks, hotels or on the street. The current approximate rate is 252 HUF ? 1 USD, 244 HUF ? 1 EUR.

The nearest bank office (ERSTE Bank Hungary) can be found opposite to the TTK Campus, near the tram stop at the bridge (on the campus of the Technical University of Budapest).

There is an ATM machine in the Conference Building, close to the Chemistry Entrance (the closest entrance to the tram stop). It accepts VISA, Eurocard/Mastercard, and Cirrus Maestro cards.

CONFERENCE HOTELS	
Park Hotel Flamenco **** H-1113 Budapest, Tas vezér u. 7.	phone: 3722000, fax: 3658007
Grand Hotel Hungaria **** H-1074 Budapest, Rákóczi út 90.	phone: 4781100, fax: 4781111
Novotel Budapest Congress **** H-1123 Budapest, Alkotás út 63–67.	phone: 3725700, fax: 4665636
Mercure Budapest Buda **** H-1013 Budapest, Krisztina krt. 41–43.	phone: 4888100, fax: 4888178
Mercure Budapest Metropol *** H-1074 Budapest, Rákóczi út 58.	phone: 4628100, fax: 4628181
Mercure Budapest Duna *** H-1095 Budapest, Soroksári út 12.	phone: 4558300, fax: 4558385
Hotel Ventura *** H-1119 Budapest, Fehérvári út 179.	phone: 2081232, fax: 2081241
Hotel Berlin *** H-1117 Budapest, Hunyadi János út 2.	phone: 4638700, fax: 4638733
Hotel Griff *** H-1113 Budapest, Bartók Béla út 152.	phone: 2040044, fax: 2040062

Hotel Griff Junior *

H-1113 Budapest, Bartók Béla út 152.

phone: 2032398, fax: 2031255

Summer Hotel Hill*

H-1118 Budapest, Ménesi út 5.

phone: 3869908, fax: 3869908

HOW TO GET TO THE TTK CAMPUS (CONFERENCE VENUE) FROM THE HOTELS?

Hotel Flamenco (1113 Budapest, Tas Vezér u.7.)

Take tram No. 61 from Tas vezér utca to Móricz Zsigmond körtér then take tram No. 6 to the Conference venue TTK Campus (name of stop: Petofi híd, Budai hídfo)

Novotel Budapest Congress (1123 Budapest, Alkotás út 63–67.)

Take tram No. 61 from Hegyalja út to Móricz Zsigmond körtér then take tram No. 6 to the Conference venue (name of stop: Petofi híd, Budai hídfo)

Grand Hotel Hungaria (1074 Budapest, Rákóczi út 90.)

Take the bus No. 7 or metro at Keleti railway station to Blaha Lujza tér, then change to tram No. 4 or 6 to the TTK Campus (name of stop: Petofi híd, Budai hídfo)

Mercure Buda Budapest (1013 Budapest, Krisztina krt. 41-43.)

Take the tram No. 61 from Déli railway station to Móricz Zsigmond körtér then take the tram No. 6 to the Conference venue (name of stop: Petofi híd, Budai hídfo)

Mercure Duna Budapest (1095 Budapest, Soroksári út 12.)

Take the tram No. 4 or 6 to the Conference venue TTK Campus (name of stop: Petofi híd, Budai hídfo)

Mercure Metropol Budapest (1074 Budapest, Rákóczi út 58.)

Take the tram No. 4 or 6 to the Conference venue TTK Campus (name of stop: Petofi híd, Budai hídfo)

Hotel Ventura (1119 Budapest, Fehérvári út 179.)

Take the tram No. 47 or 18 from the Hotel to Móricz Zsigmond körtér then tram No. 6 to the TTK Campus (name of stop: Petofi híd, Budai hídfo)

Hotel Berlin (1117 Budapest, Hunyadi János út 2.)

Take the bus No. 3 from the Hotel (name of stop: Építész utca) to Lágymányosi bridge then change for bus No. 103 to the TTK Campus (name of stop: Petofi híd, Budai hídfo)

Hotel Griff and Griff Junior (1113 Budapest, Bartók Béla út 152.)

The Bartók Béla út is under construction. Take the bus No. 7 or the tram-substitute buses No. 19/V or 47/V from the hotel to Móricz Zsigmond körtér, then change to tram No. 6 to the TTK Campus (name of the stop is: Budafoki út).

Hotel Hill* (1118 Budapest, Ménesi út 5.)

Take the bus No. 7 to Móricz Zsigmond körtér, then change to tram No. 6 to the TTK Campus (name of stop: Petofi híd, Budai hídfo) or walk down to the river and go along the bank to the TTK Campus (about 15–20 min walk). The Bartók Béla út is under construction. Substitute busses run instead of the tram No. 19 (19/V) and trams 47, 49 (47/V). The station is at the corner of Bertalan Lajos utca and Budafoki út.

Please do not forget to take along your weekly ticket, which will be handed over at the registration desk. If you fail to do so, you may have to pay a fine of 1500 HUF.

CONFERENCE SECRETARIAT

Diamond Congress Ltd. - EPS-12 H-1255 Budapest, POBox 48. Hungary **Tel:** +36 1 214 7701, +36 1 225 0210 **Fax:** +36 1 201 2680 **e-mail:**diamond@diamond-congress.hu **web site:**http://www.diamond-congress.hu/

CONFERENCE HOMEPAGE

http://www.eps12.kfki.hu







