



13th General Conference of the European Physical Society 2005

## FINAL CALL FOR ABSTRACTS SECOND ANNOUNCEMENT

<http://www.eps13.org>

### Welcome

Conference organisation

Important Dates and Address

### Scientific Programme:

- Conf. I "Photons Lasers and Quantum Statistics"
- Conf. II "Relativity, Matter and Cosmology (with ESA, ESO, CERN)"
- Conf. III "Brownian Motion, Complex Systems and Physics in Biology"

### Submission of Abstracts

General information (Conference venue, Registration fees, Hotel Reservation, Excursions)  
Social and Cultural Events (Conference Dinner)

## WELCOME

Dear Colleague,

The 13<sup>th</sup> General Conference of the European Physical Society, "**Beyond Einstein – Physics for the 21<sup>st</sup> Century**" will be a scientific highlight of the World Year of Physics, also declared International Year of Physics by the United Nations. This Conference offers a unique opportunity to present your research in fields that were opened by Albert Einstein through his three most famous papers, which he published in the *annus mirabilis* 1905. EPS13 is being organised jointly by the EPS Divisions and Groups, and will comprise three parallel scientific conferences, namely

1. **Photons, Lasers and Quantum Statistics**
2. **Relativity, Matter and Cosmology (with ESA, ESO, CERN)**
3. **Brownian Motion, Complex Systems and Physics in Biology**

Each one of these conferences will consist of three to four topical symposia that are described in detail below. Plenary, invited and contributed talks are planned. EPS13 is specifically designed to attract young researchers, thus ample room is given for poster sessions as well as contributed oral talks. 800 to 1000 participants can be accommodated.

An **Open Day** on Physics and Society, co-organised with the Swiss Academy of Sciences and the Swiss Physical Society, will address a wide public under the title "**Einstein Today**".

EPS13 is one of the scientific and educational events organised by the *Forum Einstein 2005 Bern*: EPS13 participants are invited to take part in other events organised by the *Forum*, such as the official Einstein celebration to be opened by the President of the Swiss Confederation.

Bern with its beautiful city centre will welcome you with a rich programme of cultural and other events. Before and after EPS13 several excursions to the picturesque surroundings of Bern and into the Alps are being offered.



**Martial Ducloy  
Huber**  
International Programme Chair



**Christophe Rossel**  
EPS13 coordinator

**Martin C.E.**  
EPS President

## CONFERENCE ORGANISATION

### International Advisory Committee

**Chair:** M.C.E. Huber, *EPS President, Paul Scherrer Institut, Villigen (CH)*  
R. Aymar, *Director General of CERN, Geneva (CH)*  
W. Benz, *Direktor des Physikalischen Instituts, Universität Bern (CH)*  
C. Cesarsky, *Director General of ESO, Garching (D)*  
J.-J. Dordain, *Director General of ESA, Paris (F)*  
M. Ducloy, *EPS President 2001–2003, Université de Paris-Nord, Villetaneuse (F)*  
M. Jacob, *EPS President 1991–1993, CERN, Geneva (CH)*  
N. Kroó, *EPS President 1993–1995, Hungarian Academy of Sciences, Budapest (H)*  
O. Poulsen, *EPS President Elect, Engineering College of Aarhus (DK)*  
R. Ricci, *EPS President 1988–1991, Università di Padova (I)*  
C. Schäublin, *Rektor der Universität Bern (CH)*  
H. Schopper, *EPS President 1995–1997, CERN, Geneva (CH)*  
D. Weaire, *EPS President 1997–1999, Trinity College, Dublin (IRL)*  
A. Wolfendale, *EPS President 1999–2001, University of Durham (UK)*

### International Programme Committee

**General Chair:** M. Ducloy, *Université de Paris-Nord (F)*

#### Conference I: “Photons, Lasers and Quantum Statistics”

##### **Chairs**

S. de Silvestri, *Politecnico di Milano (I)* (corresponding chair)  
N.J. Mason, *Open University, Milton Keynes (UK)*  
H.R. Ott, *ETH Zürich (CH)*

##### **Members**

G.G. Björk, *Royal Institute of Technology, Kista (S)*  
W. Ertmer, *Universität Hannover, (D)*  
E. Hinds, *Imperial College, London (UK)*  
K. Horn, *Fritz Haber Institut, Berlin (D)*  
F. Masnou, *Laboratoire Aimé Cotton, Orsay (F)*  
J. Osterwalder, *Universität Zürich (CH)*  
L. Rivkin, *Paul Scherrer Institut, Villigen (CH)*

#### Conference II: “Relativity, Matter and Cosmology”

*This conference is organised jointly with ESA, ESO, CERN as their triennial symposium*

##### **Chair**

M. Cruise, *University of Birmingham (UK)* (corresponding chair)

##### **Members**

J. Bernabeu, *Universidad de Valencia (E)*  
P. Bochler, *Universität Bern (CH)*  
K. Danzmann, *Albert Einstein Institut, Hannover (D)*  
L.A. Gaumé, *CERN, Geneva (CH)*  
A. Kugler, *Nuclear Physics Institute, Rez (CZ)*  
F. Gianotti, *CERN, Geneva (CH)*  
A. Gimenez, *ESA, Noordwijk (NL)*

**R. Landua**, *CERN, Geneva (CH)*  
**B. Leibundgut**, *ESO, Garching (D)*  
**J. Lister**, *EPF Lausanne (CH)*  
**R. Reinhard**, *ESA, Noordwijk (NL)*  
**P. Shaver**, *ESO, Garching (D)*  
**J. Silk**, *University of Oxford (UK)*  
**U.J. Wiese**, *Universität Bern (CH)*

### Conference III: "Brownian Motion, Complex Systems and Physics in Biology"

#### Chairs

**J.P. Boon**, *Université Libre, Bruxelles (B)* (corresponding chair)  
**H. Kelder**, *KNMI, De Bilt (NL)*  
**J.P. Bouchaud**, *CEA, Saclay (F)*  
**T. Duke**, *University of Cambridge (UK)*

#### Members

**P. Alstrom**, *Niels Bohr Institute, Copenhagen (DK)*  
**M. Ausloos**, *Université de Liège (B)*  
**M. Frenz**, *Universität Bern (CH)*  
**A. Goede**, *KNMI, De Bilt (NL)*  
**J. Ricka**, *Universität Bern (CH)*

#### Conference Coordination

**C. Rossel**, *IBM, Rüschlikon (CH)*

#### Local Organisation Committee

##### Chair

**H. Balsiger**, *Universität Bern (CH)*

##### Members

**F. Bühler**, *Universität Bern (CH)*  
**E. Flückiger**, *Universität Bern (CH)*  
**B. Stauffer**, *Universität Bern (CH)*  
**Bern Tourism** (CH)  
**EPS Secretariat**, *Mulhouse (F)*

## IMPORTANT DATES AND ADDRESSES

Important Dates and Addresses	
<b>28 February 2005:</b>	Abstract submission deadline
<b>1 June 2005:</b>	Deadline for early conference registration, hotel reservation and excursions

#### Conference Secretariat

#### Scientific Programme, Abstract Submission, Conference Registration, Social Programme and Excursions

##### EPS Secretariat

Mrs Ophélie Fornari  
Campus universitaire  
6 rue des Frères Lumière  
B.P. 2136  
F-68060 Mulhouse Cédex, France  
**Phone** +33-3-8932-9448  
**Fax** +33-3-8932-9449  
**e-mail** o.fornari@eps.org  
**Web site** <http://www.eps.org>

*Hotel Reservations*

**Bern Tourism Office**

Mrs Gabi Inaebnit

Laupenstrasse 20

CH-3001 Bern, Switzerland

**Phone** +41-31-328-1228

**Fax:** +41-31-328-1299

**e-mail** [gabi.inaebnit@bernetourism.ch](mailto:gabi.inaebnit@bernetourism.ch)

**Web site** <http://www.bernetourism.ch>

**SCIENTIFIC PROGRAMME**

**Opening Session and the three Conferences with their Symposia ([Conf. I](#)  
– [Conf. II](#) – [Conf. III](#))**

**Opening Session**

**Monday 11 July 2005, 09:30 – 12:00**

Arena Auditorium (Kursaal) – Hotel Allegro (Kornhausstrasse 3, Bern) {photo: kursaal}

**Welcome**

**Introductory Lectures**

*"100 Years of Relativity", T. Damour, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette (F)*

*"Attosecond Physics", F. Krausz, Max-Planck Institut für Quantenoptik, Garching bei München, and  
Technische Hochschule Wien, (A)*

*"Brownian Motion" (tbc), P.G. de Gennes, Collège de France, Paris (F)*

Conferences I, II, and III, beginning Monday, 11 July 2005, in the afternoon, will be held in the Main Building of the University of Bern and in the adjacent Institute of Exact Sciences ('Exakte Wissenschaften').

**Conference I: Photons, Lasers and Quantum Statistics**

**Plenary Speakers**

**C. Bennett**, IBM Labs, Yorktown Heights (USA)

**R. Brinkmann**, DESY, Hamburg (D)

**R. Blatt**, Universität Innsbruck (A)

**T. C. Chiang**, University of Illinois at Urbana-Champaign (USA)

**R. Claessen**, Universität Augsburg (D)

**R. Doerner**, Universität Frankfurt (D)

**R. Grimm**, Universität Innsbruck (A)

**W. Kuch**, Max-Planck Institut für Mikrostrukturphysik, Halle (D)

**H. Katori**, University of Tokyo (J)

**Z.-X. Shen**, Stanford University (USA)

**S. Stringari**, Università di Trento (I)

**S. Svanberg**, University of Lund (S)

**Symposium PP Photo-electron Spectroscopy**

In recent years, the spectroscopic exploitation of the photo-electric effect has produced a wealth of detailed information about electronic energy levels and elementary excitations in atoms, molecules and condensed matter. New territory in energy, momentum, spin and temporal resolution could be explored due to the advent of new photon sources (synchrotron radiation, femtosecond pulsed lasers) and due to technical advances in spectrometer technology and spin polarimetry. The Symposium will reflect the latest developments and illustrate their current and future impact condensed matter atomic and molecular physics.

**Chairs**

**K. Horn**, Fritz Haber Institut, Berlin (D)

**J. Osterwalder**, Universität Zürich (CH)

**Members**

**E.E.B. Campbell**, Göteborg University and Chalmers University of Technology, Göteborg (S)

**M.N. Piancastelli**, Università di Roma (I)

**Invited Speakers**

**M.C. Asensio**, *LURE, Orsay (F)*  
**C. Bordas**, *CNRS and Université Claude Bernard Lyon-I (F)*  
**N. Brookes**, *ESRF, Grenoble (F)*  
**M. Drescher**, *Universität Bielefeld (D)*  
**T. Greber**, *Universität Zürich (CH)*  
**D. Lindle**, *University of Nevada, Las Vegas (USA)*  
**M. Wolf**, *Freie Universität Berlin (D)*

#### **Symposium PC Cold Atoms and Molecules**

The meeting will cover major advances in the field of atom optics, degenerate quantum gases and Bose-Einstein condensation (BEC). A variety of BEC atomic assemblies particularly interesting and useful for the study of macroscopic quantum effects will be considered. Attention will be given to novel methods for laser cooling and trapping, together with techniques to manipulate and control BEC. Great attention will be devoted to so called second-generation cooling processes to achieve comparable control over molecules. Laser cooling, precision measurement, molecular beams, and molecular spectroscopy are the ingredient to achieve control at the quantum level over all the degrees of freedom of a molecule, both internal and external. Recent progress in this field will be a major topic. Finally, applications to high-precision measurements will be also considered.

#### **Chairs**

**W. Ertmer**, *Universität Hannover (D)*  
**F. Masnou**, *CNRS, Orsay (F)*

#### **Members**

**M. Inguscio**, *Università di Firenze (I)*  
**N.J. Mason**, *The Open University, Milton Keynes (UK)*

#### **Symposium PQ Quantum Information**

Quantum optics is a highly fertile research field for the future information technologies. The leading trend of current research is to use quantum mechanical effects to reach goals that cannot be achieved classically, such as perfectly secure cryptographic communications and highly efficient quantum parallel computation. The meeting will cover the main issues of these new, fast developing fields. Emphasis will be given on experimental achievements in the optical domain, and on all theoretical approaches relevant for quantum information. On the quantum processing side, attention will be focused on quantum error correction and fault-tolerant quantum computation, and on experimental implementations of quantum gates. The related fields of cloning, teleportation, and entanglement purification will be an integral part of this symposium.

#### **Chairs**

**G.G. Björk**, *Royal Institute of Technology, Kista (S)*  
**E. Hinds**, *Imperial College, London (UK)*

#### **Member**

**V. Buzek**, *Slovak Academy of Sciences, Institute of Physics, Bratislava (SK)*

#### **Symposium PF Facility-based Light Sources and Applications**

This symposium is organised to reflect the exciting future that is opening up with the advent of ever more powerful and bright laser and synchrotron light sources, with unique characteristics (very short pulses and transverse and longitudinal coherence), over a broad wavelength range. The program is designed to highlight the latest developments and the emerging fields of applications that will make this century just as scientifically exciting as the last one, coming as it did on the heels of the great papers published by Einstein 100 years ago.

#### **Chair**

**L. Rivkin**, *Paul Scherrer Institut, Villigen (CH)*

#### **Members**

**E.I. Lindau**, *Lund University (S)*  
**W. Sandner**, *Max-Born Institut, Berlin (D)*

#### **Invited Speakers**

**H. Dosch**, *MPI für Metallforschung, Stuttgart (D)*  
**J. Hajdu**, *Uppsala University (S)*

#### **Conference II: Relativity, Matter and Cosmology**

*This conference is organised jointly with ESA, ESO, CERN as their triennial symposium*

The two immense achievements of the twentieth century, general relativity and quantum mechanics, have been submitted to serious experimental test both in the laboratory and more broadly in the cosmos. Despite the very positive observational results, the theoretical problems in making a coherent physical model of the universe encompassing both quantum mechanics and general relativity remain at the forefront of physics research. Conference II addresses the latest research in the overlapping areas of Gravitation, Particle and Nuclear Physics and Cosmology. A series of plenary review talks will be available to all participants of Conference II at a level to stimulate the interest of physicists and astronomers both within and outside their own specialisation. Contributed talks by conference participants wishing to present more detailed research results will be scheduled in the afternoons. Poster sessions will be available for participants not giving oral presentations. Topics to be covered include Fundamental Laws of Physics and the constancy of Physical Constants, Tests of General Relativity, Quantum Gravity, Dark Energy, Gravitational Waves, String Theory and Extra Dimensions, The Standard Model and Beyond, LHC Physics and the Origin of Mass, Neutrino Oscillations and Masses, Matter in Extreme Conditions, Dark Matter, the Early Universe, Cosmological Parameters, Matter in the Universe, and Supernovae in Cosmology.

**Plenary Speakers include**

**K. Danzmann**, *Albert Einstein Institut, Hannover (D)*  
**G. Drexlin**, *Universität Karlsruhe (D)*  
**G. Efstathiou**, *Cambridge University (UK)*  
**J. Engelen**, *CERN, Geneva (CH)*  
**C.W.F. Everitt**, *Stanford University (USA)*  
**E. Fiorini**, *Università di Milano (I)*  
**W. Gelletley**, *University of Surrey (UK)*  
**F. Iachello**, *Yale University (USA)*  
**V.M. Kaspi**, *McGill University, Montreal (CND)*

**G. Ross**, *University of Oxford (UK)*

**B.F. Schutz**, *Albert Einstein Institut Potsdam (D)*  
**J. Silk**, *University of Oxford (UK)*  
**D. Spergel**, *Princeton University (USA)*  
**J. Stachel**, *Universität Heidelberg (D)*  
**F. Wagner**, *University of Kiel (D)*

**Sessions:**

**Ra**     **The Fundamental Laws of Physics and the Constancy of Fundamental Constants**  
**Rb**     **Tests of Gravitational Theory and General Relativity**  
**Rc**     **Quantum Gravity**  
**Rd**     **Dark Energy**  
**Re**     **Gravitational Waves**

**Chairs**

**K. Danzmann**, *Albert Einstein Institut, Hannover(D)*  
**A. Gimenez**, *ESA, Noordwijk (NL)*  
**R. Reinhard**, *ESA, Noordwijk (NL)*

**Rf**     **String Theory and Extra Dimensions**  
**Rg**     **The Standard Model and Beyond**  
**Rh**     **LHC Physics and the Origin of Mass**  
**Ri**     **Neutrino Oscillations and Masses**  
**Rj**     **Matter in Extreme Conditions**

**Chairs**

**J. Bernabeu**, *Universidad de Valencia (E)*  
**P. Bochler**, *Universität Bern (CH)*  
**A.A. Kugler**, *Nuclear Physics Institute, Rez (CZ)*  
**R. Landua**, *CERN, Geneva (CH)*  
**U.J. Wiese**, *Universität Bern (CH)*

**Rk**     **Dark matter**  
**RI**     **The early universe**  
**Rm**     **Cosmological parameters**  
**Rn**     **Matter in the universe**  
**Ro**     **Supernovae in cosmology**

### **Chairs**

**B. Leibundgut**, *ESO, Garching (D)*

**P. Shaver**, *ESO, Garching (D)*

**J. Silk**, *University of Oxford (UK)*

## **Conference III: Brownian Motion, Complex Systems and Physics in Biology**

In the first paragraph of one of his celebrated papers published in 1905, Einstein wrote: . . . according to the molecular-kinetic theory of heat, bodies of microscopically-visible size suspended in a liquid will perform movements of such magnitude that they can be easily observed in a microscope. It is possible that [these] movements are identical with the so-called "Brownian molecular motion". This article along with his doctoral dissertation and the paper published in the following year set the basis for the theory of Brownian motion which would prove to be - for years to come until nowadays – a source of inspiration in the analysis of fundamental and practical problems in Statistical Physics, in the theory of fluids, and in condensed matter physics, further extending into the theory of stochastic processes, dynamical systems theory, theoretical biology, and the theory of financial markets.

Various aspects of modern implications of the theory of Brownian motion and the ensuing new perspectives are the components of the spectrum of topics that constitute the program of the Symposium Brownian Motion, Complex Systems, and Physics in Biology. Invited speakers will discuss how ideas based on the theory of Brownian motion lead to the analysis of problems such as Stochastic Resonance, Brownian motors, anomalous diffusion, and more generally the complexity of biological physics. Starting from the paradigmatic random walk model, Louis Bachelier developed his "Théorie de la spéculation" in his thesis presented at the Sorbonne in 1900 and his ideas - forgotten for more than half a century - have been reactivated in the new field of Econophysics which is theme of the second part of the Symposium where the complexity of financial markets will be explored. Complexity is also at the core of the physics of the atmosphere which will be the main subject of the third part of the symposium.

### **Plenary Speaker**

**G. Ahlers**, *University of California, Santa Barbara (USA)*

**H. Berg**, *Harvard University (USA) (tbc)*

**G. Brasseur**, *Max-Planck Institut für Meteorologie, Hamburg (D)*

**D. Challet**, *University of Oxford (UK)*

**P. Hänggi**: *University of Augsburg (D)*

**Y. Klafter**, *Tel-Aviv University (IL) (tbc)*

**T. Lux**, *Universität Kiel (D)*

**A. Vulpiani**, *INFM, Università La Sapienza, Roma (I)*

## **Symposium BB From Brownian Motion to the Complexity of Biological Physics**

Various aspects of modern implications of Einstein's theory developed in his 1905 article on the theory of the Brownian movement and ensuing new perspectives are the components of the spectrum of topics that constitute the program of this Symposium. Invited speakers will discuss how ideas based on the theory of random walks and Brownian motion lead to the analysis of problems such as stochastic resonance, classical and quantum Brownian motors, anomalous diffusion, critical fluctuations, signals and noise, and more generally the complexity of biological physics.

### **Chairs**

**J.P. Boon**, *Université Libre, Bruxelles (B)*

**T. Duke**, *University of Cambridge (UK)*

### **Members**

**P. Hänggi**, *Universität Augsburg (D)*

**M. San Miguel**, *IMEDEA, Palma de Mallorca (E)*

### **Invited Speakers**

**D. Frenkel**, *FOM-Institute for Atomic and Molecular Physics (NL) (tbc)*

**P. Jung**, *University of Athens, Ohio (USA) (tbc)*

**F. Marchesoni**, *Università di Camerino (I) (tbc)*

**J. Prost**, *Ecole Supérieure de Physique et de Chimie Industrielles, Paris (F) (tbc)*

**C. Veigel**, *National Institute for Medical Research, London, UK (tbc)*

## **Symposium BR From Random Walks to the Complexity of Financial Markets**

Financial time series represent an extremely rich and fascinating source of questions, where a trace of human activity is recorded and stored in a quantitative way, sometimes over hundreds of years. These time series, perhaps surprisingly, turn out to reveal a very rich and non trivial statistical structure. Statistical models that describe these fluctuations have a long history, which dates back to Bachelier's "Brownian



walk" model for speculative prices in 1900, five years before Einstein's theory of the Brownian motion. Much more sophisticated models are however needed to describe more faithfully empirical data. For example, that financial data share many statistical properties with turbulent velocity intermittent, multifractal fluctuations. The recent availability of very high frequency data allows one to dwell very deep into the mechanisms underlying the intermittent random walk nature of price fluctuations.

#### **Chairs**

**P. Alstrom**, *Niels Bohr Institute, Copenhagen (DK)*

**J.-P. Bouchaud**, *CEA, Saclay (F)*

#### **Members**

**M. Ausloos**, *Université de Liège (B)*

**J. Keretsz**, *University of Budapest (H)*

#### **Invited Speakers**

**H. Foellmer**, *Humboldt Universität zu Berlin (D)*

**R. Mantegna**, *Università di Palermo (I)*

**J.F. Muzy**, *CNRS (F)*

**J. Peinke**, *Universität Oldenburg (D)*

#### **Symposium BP Physics of the Atmosphere** (with the ESA Earth Observation Directorate)

Physics of the Atmosphere has become a hot topic of research. Its relevance to environmental and climate change is placing urgency on the development of scientific understanding. Immediate needs for better understanding arise also from health physics aspects of air pollution and surface UV radiation. global observations of the terrestrial atmosphere can only be practically achieved by satellites and these measurements need to be added to ground based and airborne observation and assimilated in models in order to gain scientific understanding of the Earth system. In this session, both observation and modelling aspects will be covered.

#### **Chairs**

**A. Goede**, *KNMI, De Bilt (NL)*

**C. Zehner**, *ESA, Frascati (I)*

#### **Members**

**H. Kelder**, *KNMI, De Bilt (NL)*

**K. Künzi**, *Universität Bremen (D)*

**J. Staehelin**, *ETH Zürich (CH)*

#### **Invited Speakers**

**G. Bergametti**, *Université de Paris (F) (tbc)*

**O. Boucher**, *Université de Lille-I (F) (tbc)*

**J. Burrows**, *Universität Bremen (D)*

**H. Eskes**, *KNMI (NL)*

**H. Fischer**, *Universität Karlsruhe (D)*

### **SUBMISSION OF ABSTRACTS**

The International Programme Committee invites the submission of abstracts covering original, unpublished work in the topics of the Symposia described above.

Please submit your abstracts to only one conference. The EPS13 Programme Committee will transfer abstracts from one conference to the other, where appropriate, unless written instructions to the contrary are given by the author at the time of submission.

**Abstract Deadline:**      **28 February 2005**

**Authors are requested to** electronically submit their 200-word abstract without figures, together with the submission form. Complete instructions can be found at [www.eps13.org/](http://www.eps13.org/).

#### **Requirements for the electronic submission**

**Submission form** (electronic form is available on <http://www.eps13.org/authors/guidelines.html>)

Please insert the title, choose the conference and symposium, to which you want to submit your abstract, indicate your preference between poster and oral presentation. (Note, however, that the final decision on the form of presentation will be made by the International Programme Committee.) Insert the abstract in



\*.pdf format via the browse button. Type in the name and complete coordinates of the corresponding author, add the names and affiliations of all other authors.

### Abstract

The 200-word abstract should be typed with single-line spacing and prefaced by the title of the abstract, the authors and their affiliations, as well as the e-mail address of the corresponding author.

### Please follow the layout recommendations below

- **Format: Acrobat (\*.pdf) file**
- **Only submit black and white documents** without figures, and please avoid the use of undefined symbols and acronyms
- The text of the abstract (including references) must not exceed 200 words.
- **Paper size:** A4 (210 mm x 297 mm); material formatted for 8"x 11" paper will be converted to A4
  - Margins: left and right = 20 mm, top = 37 mm, bottom = 19 mm
- **Fonts:** 10 pt Times (roman, bold or italic) fonts (cf. example below)
  - for the title use 14 pt Times bold letters, centred on the page
  - list author's names and affiliation in 10 pt Times italic, centred on the page
  - relate authors and their affiliations by superscript numbers (cf. example below)
  - write the text, left adjusted, with 10 pt Times roman fonts.
- Cite references at the end of the page, by use of superscript letters (maximum of two) and avoid footnotes

How an EPS13 Abstract Might Look like
<i>B.C. Author<sup>1</sup> (bauthor@bluewin.ch), M. Second<sup>2</sup>, M. Third<sup>2</sup>, D.E. Further<sup>1</sup> and I.G. Higher<sup>2</sup></i>
<i><sup>1</sup> Swiss Patent Office, CH-3000 Bern</i>
<i><sup>2</sup> Alpine Research Station Jungfrauoch, CH-3801 Jungfrauoch</i>
Use paper in the A4 format (210 mm x 297 mm) and set margins to the left and right at 20 mm, on top to 37 mm and on the bottom to 19 mm. Then set the font to 'Times' and start with the title in 14-point size boldface. Underneath, go on with 10-point italic 'Times' fonts and list the authors in the desired sequence. Please insert (in parentheses) the e-mail address of the corresponding author, immediately following his/her name. On the next line, list the affiliations. Superscript numbers are used to relate authors and affiliations to one another (see example above). Now, horizontally centre title, author names and affiliations, and continue after one free line with left-adjusted abstract text in 10-point roman ( <i>i.e.</i> , normal) 'Times' font. Should you need references, call them out by superscript letters, but please avoid giving more than two references. Once you have converted your abstract into a *.pdf file, save it for later insertion into the electronic submission form. To give you an idea of the desired length of the abstract: the present text, with its 193 words, is close to the maximum length of 200 words.

These recommendations are intended to avoid technical problems in the submission of your abstract. We will do our best to correct any problems arising, but please be aware that in some cases, we may have to return the registration form or the abstract to the author for correction.

To avoid having your abstract rejected, please respect the above guidelines.

Authors will be notified via e-mail within 72 hours of receipt of their submission. If you have not received confirmation within that time, please contact the Conference Secretariat.

The abstracts will be reviewed by members of the Programme Committee and the corresponding author will be notified by **30 April 2005** whether the contribution is accepted for presentation at the conference.

Should you be unable to submit your abstract electronically and/or in \*.pdf format, please contact the EPS Conference Secretariat.

### Poster Format

The foreseen format for posters is A0 (portrait).

## GENERAL INFORMATION

### Language

The official language will be English.

### Conference Venue

The 13th General Conference of the European Physical Society, EPS13, will take place in the Main Building of the University of Bern and in the adjacent Institute of Exact Sciences ('Exakte Wissenschaften'). The Opening session will be held in the Arena Auditorium (Kursaal) of the Hotel Allegro (Kornhausstrasse 3, Bern)

### **How to reach the Arena Auditorium in the Kursaal (Hotel Allegro & Grand Casino Bern)**

#### **By foot from the town centre ("Zytglogge", or Clock Tower)**

Go towards the 'Stadttheater' and continue across the 'Kornhausbrücke' bridge. The Hotel Allegro is on your left at the other end of the bridge.

#### **By tram from the train station**

The tram stop is "Kursaal" on line 9, direction "Guisanplatz"

#### **By car**

Coming from the Autoroute A1, take exit 'Bern-Wankdorf' and drive towards the town centre on 'Papiermühlestrasse'; at 'Viktoriastrasse' turn right, and turn left again into 'Kornhausstrasse'. The Hotel Allegro will then come up on your right. Just before you reach the 'Kornhausbrücke', turn right into 'Schänzlihalde', where you will find the entrance to the underground garage of the Hotel Allegro.

### **How to Reach the University of Bern**

#### **From the Kursaal**

On foot (20 min.): via "Zytglogge" to the main rail station (see map)

Or by tram: line N.°9 to the main rail station.

#### **On foot from the Central Station (recommended)**

Upon arrival at the Bern train station proceed to the elevators at the end of the underpass that connects the tracks. Go up to the top floor ('Grosse Schanze') and you will be in the immediate vicinity of the Main Building, which will be behind you as you step out of the elevator.

#### **By car**

Leave the freeway A1 at exit *Bern-Neufeld* and proceed towards the city centre (*Zentrum*). At the first round-about turn right. After about 500m you will reach an intersection with a Shell gas station on the far left hand side. There you have to turn left into the *Gesellschaftsstrasse*. The Institute is at the end of this road. Please be aware that there are no long-term parking lots available around the institute, and the costs of the nearby parking lots are rather high.

#### **By bus**

The bus stop on line 12 is "Universität", direction Länggasse, if you are coming from the centre. The bus stop is approximately 150 m from the Main Building of the University. Coming from the train station, it is easier and faster to take the elevator.

### **Registration fees**

#### **Registration Fees**

The registration fee for the meeting includes admission to all EPS13 technical sessions, to the coffee breaks and the reception at the *Historical Museum*. Each participant will receive one abstract book at the registration desk. Conference II will produce proceedings, which will be billed separately.

By registering before **1 June 2005** you will benefit of reduced registration fees (see table), fees are given in Euros.

#### **Registration for the entire conference**

PARTICIPANT	BEFORE 31 MAY	FROM 1 JUNE
EPS MEMBERS (IM)	200 €	250 €
NON MEMBERS	250 €	325 €
STUDENT MEMBERS*	100 €	130 €
STUDENT NON MEMBERS*	125 €	170 €

(All registration fees are exempt from Value Added Tax).

#### **One day registration**

PARTICIPANT	BEFORE 31 MAY	FROM 1 JUNE
MEMBERS	100 €	100 €
NON MEMBERS	150 €	150 €
STUDENTS MEMBERS*	50 €	50 €
STUDENTS NON MEMBERS*	130 €	130 €

(All registration fees are exempt from Value Added Tax).

\* Application for the student rates must include a photocopy of an official student identity card, which must also be presented on-site when collecting registration materials.

Participants are asked to wear their badge during all events of the conference (except for the Opening Session, where access will be free).

Meals are not included in the registration fee. Participants can get lunch at the University Mensa (tbc) or in the numerous small restaurants located near the University. Information about restaurants will be available at the Registration Desk. A list of Bern restaurants is also available on the website of the Bern Tourism Office (<http://www.berne.ch>).

#### Hotel Reservation

Hotel reservation is organized by the Tourism Office in Bern. The list of hotels in all categories can be found on the EPS13 website. Please register on-line, following the link from the EPS13 website. If you cannot register on-line, fill out and send the **hotel reservation form** by mail or by fax to the Tourism Office in Bern, you will find online. Booking confirmation will be sent to you. The payment will be settled by the participant directly at the hotel. Because of the high tourist season, please be advised to make your hotel reservation early enough and at the latest **by 1 June 2005**.

#### Excursions

To book an excursion, please register on-line by following the link on the EPS13 web site. If you cannot register on-line, please fill in the **Excursion Form** and send it to the EPS Secretariat by regular mail or fax. **The excursions will be cancelled if the minimum number of participants is not reached (and refund will be arranged). The deadline for reserving excursions is 1<sup>st</sup> June 2005. More details on the excursions will be find online at <http://www.eps13.org/general/excursions.html> .**

#### Social and Cultural Events (Conference Dinner)

A list of cultural and social events can be find online at <http://www.eps13.org/general/events.html>. To reserve your conference dinner, please follow the indication online.

Looking forward to see you in Bern,

Best regards,

**Ophélie Fornari**  
**European Physical Society**  
**Conference Department**  
**Email: [o.fornari@eps.org](mailto:o.fornari@eps.org)**