

## Preface

The international workshop entitled *New Trends in HERA Physics 1999* took place between 30 May and 4 June 1999 at Ringberg Castle, which overlooks Lake Tegernsee in the foothills of the Bavarian Alps, one of the most picturesque locations to be found in the whole of Germany. The castle was built during the first half of this century by Duke Luitpold in Bavaria (Herzog Luitpold in Bayern), a member of the Wittelsbach family which ruled Bavaria over 800 years, and his friend Friedrich Attenhuber, an all-round artist, architect, and interior decorator. The castle is entirely their creation, from the massive Renaissance-inspired exterior right down to the fittings and furniture, which, in every detail, were designed by Attenhuber himself and executed by local craftsmen. Attenhuber also painted every single picture hanging in the castle. He found his models in the farmhouses around Lake Tegernsee. The castle embodies all trends of art and styles which dominated the first half of this century, combined with local Alpine originality and the individual creative power of its constructors. In accordance with the Duke's last will, the castle passed into the hands of the Max Planck Society after his death, in 1973. The castle was then transformed into a conference venue, where scientists can exchange their latest ideas and discuss problems with their colleagues from all over the world in beautiful surroundings and in a relaxed mountain atmosphere, high above the daily business activities.

This was the second event in a series of Ringberg workshops on HERA physics, which started two years ago with the workshop entitled *New Trends in HERA Physics*. In fact, at the end of that workshop, many participants expressed the opinion that this was a successful endeavour to bring theorists and experimentalists together in order to interpret the latest HERA data, and that it would be useful to organize a follow-up workshop in the same spirit.

On the occasion of the 1999 Ringberg workshop, thirty-eight experts of elementary-particle physics, both theorists and experimentalists, from twenty-two universities and research institutions in ten countries congregated to present their latest results on the various aspects of HERA physics. Specifically, there were twenty theorists and eighteen experimentalists, the latter representing the H1 and ZEUS collaborations at HERA and the collaborations at LEP and the Tevatron. The topics included: proton structure function; polarized  $ep$  scattering; final states in deep-inelastic scattering (DIS), with special emphasis on jet production at low  $x$ , power corrections in DIS, soft particle production, and instanton effects; photon structure function; photoproduction of jets and hadrons;

heavy-flavour and charmonium production; elastic and diffractive  $ep$  scattering; and new physics at HERA. We hope that the high-energy-physics community will benefit from these proceedings, in which the ongoing efforts in understanding the nature of the strong interactions, with particular emphasis on HERA physics, are documented.

We wish to thank all our friends and colleagues who have contributed their share to these proceedings. We are indebted to the workshop secretary, Mrs. Renate Saffert, for her assistance before, during, and after the workshop. We are grateful to Dr. Annette Holtkamp for technical assistance in the editorial work. The costs of catering and lodging at Ringberg Castle and the charges for the publication and dissemination of these proceedings were covered in equal parts by the Deutsches Elektronen-Synchrotron at Hamburg and the Max-Planck-Institut für Physik at Munich.

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*Günter Grindhammer*  
*Bernd A. Kniehl*  
*Gustav Kramer*

# List of Participants

**Johannes Blümlein**

DESY Zeuthen Theory Group  
Platanenallee 6  
D-15738 Zeuthen  
bluemlein@ifh.de

**Nick Brook**

Department of Physics and Astronomy  
University of Glasgow  
Glasgow, G12 8QQ  
United Kingdom  
n.brook@physics.gla.ac.uk

**Wilfried Buchmüller**

DESY  
Notkestraße 85  
D-22603 Hamburg  
wilfried.buchmueller@desy.de

**Gerd Buschhorn**

Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
gwb@mpmu.mpg.de

**Carsten Coldewey**

DESY Zeuthen  
Platanenallee 6  
D-15738 Zeuthen  
coldewey@mail.desy.de

**Michael Düren**

Universität Erlangen-Nürnberg  
Erwin-Rommel-Str. 1  
D-91058 Erlangen  
michael.dueren@desy.de

**Dirk Graudenz**

Paul Scherrer Institut  
CH-5232 Villigen PSI  
Switzerland  
dirk.graudenz@cern.ch

**Timothy Greenshaw**

Oliver Lodge Laboratory  
Liverpool University  
Liverpool L69 7ZE  
England  
green@hep.ph.liv.ac.uk

**Günter Grindhammer**

Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
guenter.grindhammer@desy.de

**Brian Harris**

Argonne National Laboratory ANL  
9700 South Cass Avenue  
Bldg. 362, HEP  
Argonne, IL 60439  
USA  
harris@hep.anl.gov

**Leif Joensson**

Physics Department  
Lund University  
Box 118  
S-22100 Lund  
Sweden  
leif@quark.lu.se

## XII List of Participants

### **Christian Kiesling**

Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
cmk@mppmu.mpg.de

### **Birger Koblitz**

Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
koblitz@mail.desy.de

### **Michael Klasen**

Argonne Nation Laboratoy  
9700 South Cass Avenue  
Argonne, IL 60439  
USA  
klasen@hep.anl.gov

### **Bernd Kniehl**

II. Institut für Theoretische Physik  
Universität Hamburg  
Luruper Chaussee 149  
D-22761 Hamburg  
kniehl@mail.desy.de

### **Henri Kowalski**

DESY  
Notkestraße 85  
D-22603 Hamburg  
kowalski@mail.desy.de

### **Gustav Kramer**

II. Institut für Theoretische Physik  
Universität Hamburg  
Luruper Chaussee 149  
D-22761 Hamburg  
kramer@mail.desy.de

### **Masahiro Kuze**

Institute of Particle and Nuclear  
Studies, KEK  
Tanashi  
188-8501 Tokyo  
Japan  
masahiro.kuze@desy.de

### **Peter Landshoff**

DAMTP  
Silver Street  
Cambridge CB3 9EW  
England  
pvl@damtp.cambridge.ac.uk

### **Jungil Lee**

II. Institut für Theoretische Physik  
Universität Hamburg  
Luruper Chaussee 149  
D-22761 Hamburg  
jungil@mail.desy.de

### **Eugene Levin**

HEP Department  
School of Physics  
Tel Aviv University  
Ramat Aviv, Tel Aviv  
69978 Israel  
leving@post.tau.ac.il

### **Alan Martin**

University of Durham  
South Road  
Durham City, DH1 3LE  
England  
a.d.martin@durham.ac.uk

### **Kristal Mauritz**

Iowa State University  
Ames IA 50011  
USA  
kristal@d0phy1.fnal.gov

### **Joachim Meyer**

DESY  
Notkestraße 85  
D-22603 Hamburg  
jmeyer@mail.desy.de

### **Vincenzo Monaco**

Istituto di Fisica  
University of Torino  
Via Pietro Giuria 1  
I-10125 Torino

Italy  
monaco@to.infn.it

**Guido Nellen**  
Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
guido.nellen@desy.de

**Richard Nisius**  
EP-Division  
CERN  
CH-1211 Geneva 23  
Switzerland  
richard.nisius@cern.ch

**Wolfgang Ochs**  
Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
wwo@mppmu.mpg.de

**John Outhwaite**  
Department of Physics  
University of Durham  
Durham, DH1 3LE  
England  
john.outhwaite@durham.ac.uk

**Daniel Pitzl**  
DESY  
Notkestraße 85  
D-22603 Hamburg  
pitzl@mail.desy.de

**Björn Pötter**  
Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
poetter@mppmu.mpg.de

**Alexander Proskuryakov**  
Moscow State University  
Department of High Energy Physics  
Vorobjovy Gory  
119899 Moscow  
Russia  
alexander.proskuryakov@desy.de

**Cong-Feng Qiao**  
II. Institut für Theoretische Physik  
Universität Hamburg  
Luruper Chaussee 149  
D-22761 Hamburg  
qiaocf@mail.desy.de

**Andreas Ringwald**  
DESY  
Notkestraße 85  
D-22603 Hamburg  
ringwald@mail.desy.de

**Thomas Schörner**  
Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
schorner@mppmu.mpg.de

**Laurel Sinclair**  
Department of Physics and Astronomy  
University of Glasgow  
Glasgow, G12 8QQ  
United Kingdom  
sinclair@desy.de

**Hubert Spiesberger**  
Institut für Physik  
WA ThEP  
Universität Mainz  
D-55099 Mainz  
hspiesb@thep.physik.uni-mainz.de

**Marco Stratmann**  
Department of Physics  
University of Durham  
Durham DH1 3LE  
England  
marco.stratmann@durham.ac.uk

**Thomas Teubner**  
DESY  
Notkestraße 85  
D-22603 Hamburg  
teubner@mail.desy.de

XIV List of Participants

**Valentin Zakharov**

Max-Planck-Institut für Physik  
Föhringer Ring 6  
D-80805 München  
xxz@mppmu.mpg.de

**Fabian Zomer**

IN2P3-CNRS and Université de  
Paris-Sud  
LAL, Bâtiment 200

F-91898 BP 34 Orsay Cedex  
France  
zomer@dice2.desy.de

**Lennart Zwirner**

II. Institut für Theoretische Physik  
Universität Hamburg  
Luruper Chaussee 149  
D-22761 Hamburg  
zwirner@mail.desy.de

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