

Fifth International Conference for History of Science in Science Education

July 12 – 16, 2004, Keszthely, Hungary

Theme: Units of Historical Presentation in Science Education

The *Fifth International Conference for History of Science in Science Education* brings together a group of actively involved researchers and scholars who meet to share their work and engage in dynamic discussions of various issues in science education. Ultimately, the objectives are to improve science teaching at all levels and to build centers of excellence in the participants' home institutions.

Introduction

The *Fifth International Conference for History of Science in Science Education* continues the conference series begun in 1997 at the Deutsches Museum in Munich and held, thereafter, in Munich in 1998 and 2000 and at the University of Winnipeg in Winnipeg, Canada, in 2001. The Conference series has been spearheaded by the *History of Science in Science Education Research Group* in Winnipeg under the leadership of Arthur Stinner of the University of Manitoba. Dr. Stinner has been joined by Dr. Jürgen Teichmann, Professor of History of Science at Ludwig-Maximilians-Universität and Director of the Education Department at the Deutsches Museum in Munich. This year, Dr. László Kovács of Berzsényi Daniel Teachers College in Sombathely, Hungary joins the organizing committee, and he and his colleagues are hosting the Conference.

Conference Purpose and Organization

This year's Conference theme, "Units of Historical Presentation in Science Education," reflects the Group's commitment to move towards the integration of history of science with science teaching from early years to university level. We aim to develop practical materials that can be used with little adaptation and supplementation in the science classroom.

Presentations

A maximum of 25 minutes will be allotted for each presentation, plus 10 minutes for questions and discussion. The Committee recommends that presentations consist of an introduction, summary, and conclusion, only, so that there may be sufficient time for serious discourse at the end of each presentation.

Conference Location

The *Fifth International Conference for History of Science in Science Education* will be held in Keszthely, Hungary. Keszthely is the oldest resort town on Lake Balaton which is the largest freshwater lake in Western Europe. The conference and accommodations will be located in the magnificent Festetics Palace, known as the "Hungarian Versailles". The Festetics Palace is the home of the Helikon Library, established at the end of the eighteenth century, which holds 52,000 volumes. The palace is a frequent site for international conferences and concerts.

Conference Website

Information about the Conference may be obtained at the Group's website www.hsse.uwinnipeg.ca.

Program Committee

Dr. Arthur Stinner, Professor, Faculty of Education,
University of Manitoba, Canada

Dr. Stephen Klassen, Department of Physics,
University of Winnipeg, Canada

Workshop Organizer

Dr. Don Metz, Education Program,
University of Winnipeg, Canada

Hungary Organizer

Dr. László Kovács, Professor and Head,
Department of Physics Education,
Berzsényi Teachers College, Szombathely, Hungary

Munich Organizer

Dr. Jürgen Teichmann, Professor and Director,
Education Department,
Deutsches Museum, Munich, Germany

Conference Schedule

Sunday, July 11, 2004

12:30 pm: Participants meet at platform 11, Vienna, Westbahnhof and board the bus.

Afternoon: Lunch and tour in Szombathely

Evening: Check-in to Festetics Palace, Keszthely

Monday, July 12, 2004

8:30 – 9:30 Opening "get-acquainted" breakfast

Session 1: 9:45 – 10:30 Paper 1
10:30 – 11:15 Paper 2
11:15 – 12:00 Paper 3

12:00 – 1:30 Lunch on your own

Session 2: 13:30 – 14:15 Paper 4
14:15 – 15:00 Paper 5
15:00 – 15:45 Paper 6

Evening: Tour of Festetics Palace and Concert

Tuesday, July 13, 2004

Session 3: 9:00 – 9:45 Paper 7
9:45 – 10:30 Paper 8

10:30 – 11:00 Coffee Break

Session 4: 11:00 – 11:45 Paper 9
11:45 – 12:30 Paper 10

12:30 – 14:00 Lunch on your own

Session 5: 14:00 – 14:45 Paper 11
14:45 – 15:30 Paper 12

15:30 – 16:00 Coffee Break

Session 6: 16:00 – 16:45 Paper 13
16:45 – 17:30 Paper 14

Evening: Free

Wednesday, July 14, 2004, Group historical and cultural excursion

Thursday, July 15, 2004

Session 7: 9:00 – 9:45 Paper 15
9:45 – 10:30 Paper 16
10:30 – 11:00 *Coffee Break*

Session 8: 11:00 – 11:45 Paper 17
11:45 – 12:30 Paper 18

12:30 – 14:00 *Lunch on your own*

Session 9: 14:00 – 14:45 Paper 19
14:45 – 15:30 Paper 20
15:30 – 16:15 Paper 21

Evening: Dinner sponsored by Lord Mayor of Keszthely

Friday, July 16, 2004

Session 10: 9:00 – 9:45 Paper 22
9:45 – 10:30 Paper 23
10:30 – 11:00 Closing session

12:00: *Bus to Vienna departs*

Conference Program of Sessions

Session 1: Monday, 9:45

**A Hundred Years Make a Significant Difference:
Popularization of Science in Hungary at the turn of Two
Centuries**

Gábor Á. Zemplén, University of Budapest, Hungary

Historical Surprises

Roger H. Stuewer, University of Minnesota, USA

Georg Simon Ohm, Ohm's Law and Electrical Resistance

J. Teichmann, Deutsches Museum, Munich, Germany

Session 2: Monday, 13:30

Concepts of the Electron

Stephen Klassen, University of Winnipeg, Canada

**Teaching ways of thinking instead of overcoming ideas: The
case of idealization**

Fanny Seroglou, Aristotle University of Thessaloniki, Greece

Annus Mirabilis 1905:

**The three papers of Einstein that laid the
foundations of modern physics**

Arthur Stinner, University of Manitoba, Canada

Session 3: Tuesday, 9:00

Using Historical Narratives to Guide Science Experiments

Don Metz, University of Winnipeg, Canada

The Story of a Light Ray

Igal Galili, The Hebrew University of Jerusalem, Israel

Session 4: Tuesday, 11:00

**How Bad Philosophy Leads Educational Research Astray:
Some Comments on Constructivism, Feminism, and
Multiculturalism**

Michael Matthews, UNSW, Australia

Measuring the Speed of Light: Why? Speed of What?

P. Lauginie, Université Paris-Sud, France

Session 5: Tuesday, 14:00

Ars Computi

Wesley M. Stevens, University of Winnipeg, Canada

**Learning from Medieval Mathematics:
Nicole Oresme's approach to series and "qualities"**

Jeff Babb, University of Winnipeg, Canada

Session 6: Tuesday, 16:00

Geometry for Nunavut:

A postmodern approach to the cognition of Archimedes

Ralph Mason, University of Manitoba, Canada

The Structure of dimensions:

**A revolution of dimensions (classical and fractal) in
education and science**

József Berke, University of Veszprém, Keszthely, Hungary

Session 7: Thursday, 9:00

**How are we using the history of physics
in our schoolbooks?**

László Molnár, Berzsenyi Daniel College, Hungary

**Interactive Demonstrations in Museums:
Push-Button Experiments**

Sándor Jeszenszky, Hungarian Electrotechnical Museum,
Budapest, Hungary

Session 8: Thursday, 11:00

**Q. Majorana's experiments on gravitational absorption:
Further documents and Manuscripts**

Giorgio Dragoni, Bologna University, Italy

**Why are vortices behind an obstacle named
after a great Hungarian?**

Michael Eckert, Deutsches Museum, Munich, Germany

Session 9: Thursday, 14:00

**Fleas like elephants, lice like bears: 18th century solar
microscope projections between
enlightened natural philosophy and amusement for women
and children**

Dr. Peter Heering, Deutsches Museum, Munich, Germany

**Let's play! Designing games that facilitate
the learning of science**

Georgios Primerakis & Vassilis Koulountzos,
Aristotle University of Thessaloniki, Greece

Logbooks and Journals:

Using Historical Materials in School Science

Barbara McMillan, University of Manitoba, Canada

Session 10: Friday, 9:00

**Zemplén's Monograph on
"Electricity and its Practical Applications" from 1910**

Iván Abonyi, Roland Eötvös University, Hungary

**Zemplén Competitions as Homage to the
Brilliant Hungarian Physicist**

László Kovács, Berzsenyi Daniel College, Hungary

Conference Guide

Description of Events

On Sunday, July 11, 2004, Conference participants arriving from Munich will be picked up by organizers in Vienna at the Westbahnhof, platform 11. They will be taken by bus to Keszthely, stopping on the way in Szombathely at Berzsenyi Daniel Teachers College for lunch complements of our Szombathely hosts and a tour of the facility. That evening participants will check in at the grand Festetics Palace.

On Monday morning at 8:30 Conference participants and their spouses will have breakfast together complements of the Winnipeg Group. At 9:30 the Conference sessions begin. On Monday evening all conference participants and spouses are invited to attend a grand tour of the Palace, with greetings from the Director of the Palace and a concert. See below for costs involved.

On Tuesday Conference sessions begin at 9:00 after breakfast and continue until 17:30 with appropriate breaks. Tuesday evening is free for participants to explore the town.

On Wednesday, Conference participants and spouses are invited to an excursion to Szigliget by ship and Czerszeg by bus. Walking on the way to the dock in Keszthely, we will stop to see the old Church, downtown. In Szigliget we will explore the town and hike to the top of the hill to see the ancient castle ruin there. After that we will take a bus to the Vineyard of the Keszthely Agricultural University in Czerszeg. There will be a University Dance Club performance, winetasting, and dinner, complements of the Hungarian History of Physics Research Group. For other associated costs, see below.

On Thursday, Conference sessions again begin at 9:00 after breakfast at the Palace and continue until 16:15 with appropriate breaks. Participants may wish to pay for their accommodations on Thursday. Thursday evening the Lord Mayor of Keszthely invites Conference Participants and spouses to attend a special dinner at the Hullám Restaurant on the beach, complements of the City of Keszthely.

On Friday, Conference sessions again begin at 9:00 after breakfast at the Palace and continue until 11:00 when Conference participants and spouses prepare to check-out. The bus back to Vienna boards at 12:00 noon and is expected to arrive back at the Westbahnhof in Vienna by about 16:00, leaving participants adequate time to catch the 16:34 train back to Munich.

Cost of Events and Accommodations

Please take note that credit cards are not generally accepted, but there is a 24-hour bank money machine at the Budapest Bank, Petho U. 1, quite close to the palace.

Costs are as follows:

Palace tour and concert **approximately** 4000 to 4467 Ft per person, depending on the participation rate. This works out to be about \$27 - \$30 Cdn or 16 – 18 Euro per person.

Transportation on Wednesday (ship and bus) **approximately** 3000 Ft per person or \$20 Cdn or 12 Euro per person.

Full buffet breakfast: 1500 Ft or \$10 Cdn or 6 Euro per person.

Room cost (divided by the number of occupants): 12500 Ft or \$85 Cdn or 51 Euro per room per night

Apartment cost (for 2 couples): 31,000 Ft or \$210 or 127 Euro per apartment per night.

Emergency Contact

Our telephone connection will be through the Helikon museum in the palace. The phone number there is 011 36 83 314 194 and the contact there is Gyorgyi Koller who has an assistant who speaks English well. The 011 prefix is for North American overseas calls.