

International Union of History and Philosophy of Science  
Division of History of Science and Technology  
IUHPS/DHST

**XXIII International Congress  
of  
History of Science and Technology**

*Ideas and Instruments in Social Context*

**PROGRAM**

28 July - 2 August 2009  
Budapest, Hungary

## Welcoming Address

On behalf of the Local Organizing Committee let me welcome you in the capital of Hungary. We are very glad that four years ago, in Beijing, you voted for the next Congress being organized in Budapest. It is really a great honour to host, after Mexico and China, the Congress of the History of Science, and Technology this time the 23rd.

We are quite sure that this Congress is the biggest ever of its kind. We are welcoming here 1300 registered participants, mostly authors, from 60 different countries. We are going to work in the coming days in 52 announced sessions and 79 self-organized symposia. The General Assembly of the International Academy of the History of Science, more than twenty General Assemblies of the international committees, meetings of special groups, and self-organized round-table meetings will take place during the week. It seems that the main theme of the Congress ("Ideas and Instruments in Social Context) was well chosen, and got many researchers to Budapest. The anniversaries of Galileo (1609-2009) and Darwin (1809-1859-2009) also will be duly commemorated. Some other topics aroused equally great interest among the historians of science all over the world as well as among the general public.

During the coffee breaks you probably will spend some time in the beautifully decorated lounge of the Budapest University of Technology and Economics. You will notice that this building and its garden are a monument worth studying more closely from the aspect of history of science and technology. Since 1927 busts of eminent professors have been erected to commemorate leading academics and teachers of the University. At each bust you will find an explanation about the activities of these national heroes of science and technology. First to be mentioned is the bust of Palatine Joseph, younger brother of emperor Francis I of Hapsburg-Lotaringia, who had great merits about the foundation of this university. The rector, during whose time the main building was erected, was chemist Vince Wartha, re-discoverer of a special glaze for ceramics; walking out to the garden the row of busts continues: among others, we can see here the bust of mathematician and chemist John von Neumann, a former student of this University, whose name, perhaps, does not require closer explanation.

In order to honour the memory of its great scientists, Hungary keeps erecting a considerable number of busts or memorial tables. Among the sites to be visited we mention the nearby University of Sciences, the Trefort Garden, near of some of the hotels accommodating the participants, and the Hungarian Museum for Science, Technology and Transport in the City Park. It would be a great honour if you could visit these sites in your spare time. Also some of the field trips are directed towards these sites.

Last but not least let me express our deepest gratitude to the institutions and personalities supporting and/or sponsoring the Congress. Among our supporters we shall first mention the Budapest University of Technology and Economics which willingly let us their lecture halls and facilities. Thanks are due to the Federation of Technical and Scientific Societies and the Hungarian Academy of Sciences. Our main sponsors were the Hungarian UNESCO Committee and the National Office of Research and Technology. We must mention the assiduous and professional work of SCOPE Ltd., the group that provided the administrative background, particularly Gusztáv Hencsey, Mariann Kindl, and Viktor Richter, who became a close friend of us all during the past 18 months. Individuals, who helped the Congress with enthusiastic voluntary work, were the members of the Local Organizing Committee, all

outstanding scientists of their trade, and Mrs. Catherine Jami, assessor of IUHPS/DHST, who provided the French translations of the circulars. Finally, this Congress could not have been brought into being without the wise and professional advice of Professor Ronald Numbers, and Professor Efthymios Nicolaidis, President and Secretary General, respectively, of IUHPS/DHST. Our special gratitude goes to the plenary speakers, the organizers and speakers of the symposia and the speakers of the sessions as well as to all our participants, who managed to learn the tricks of the registration system.

At this point I want to wish you, together with all the Hungarian organizers, a very nice and useful time in our capital.

A handwritten signature in cursive script that reads "Vámos Éva".

Éva Vámos  
Chair of the Local Organizing Committee

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## Program Schedule

Date	AM	PM	Evening
<b>27 July Monday</b>		<b>16.00 – 19.00</b> Registration	<b>19.00 – 21.00</b> Welcome Reception
<b>28 July Tuesday</b>	<b>08.30 – 09.00</b> Opening Ceremony  <b>09.00 – 11.00</b> Plenary Lectures  <i>11.00 – 11.30 Coffee Break</i>  <b>11.30 – 13.30</b> S04, S09, S21, S35, S41, S46, S47, S53, S58, S69, S71, S87, S96  T02, T04, T09-05, T09-06, T09-07, T23, T26, T31, T39	<b>15.00 – 17.00</b> S04, S08, S09, S21, S35, S41, S46, S47, S53, S58, S69, S71, S87, S96  T02, T04, T09-05, T09-06, T09- 07, T23, T26, T31, T39  <i>17.00 – 17.30 Coffee Break</i>  <b>17.30 -19.30</b> S04, S08, S09, S21, S35, S41, S47, S53, S58, S59, S69, S74, S88, S96  T02, T04, T09-05, T09-06, T23, T26, T31, T39	<b>20.00 – 22.00</b> Dinner on the Boat “Európa” <i>(optional)</i>
<b>29 July Wednesday</b>	<b>09.00 – 11.00</b> S09, S18, S22, S28, S35, S49, S50, S56, S69, S70, S72  T03, T08-02, T09-01, T09-05, T09-06, T15, T23, T26, T28, T30, T31, T36  <i>11.00 – 11.30 Coffee Break</i>  <b>11.30 – 13.30</b> S15, S18, S22, S28, S35, S49, S50, S56, S69, S70, S94  T03, T08-02, T09-01, T09-05, T09-06, T15, T23, T26, T28, T31, T36, T38	<b>15.00 – 17.00</b> S01, S13, S14, S15, S29, S31, S37, S42, S56, S70, S73  T08-02, T09-01, T09-02, T09- 12, T15, T16, T20, T22, T25, T26, T29, T36, T38  <i>17.00 – 17.30 Coffee Break</i>  <b>17.30 – 19.30</b> S01, S14, S15, S25, S29, S31, S37, S42, S56, S70, S73,  T09-01, T09-02, T09-12, T12, T15, T16, T20, T22, T25, T29, T36, T38	
<b>30 July Thursday</b>	<b>09.00 – 13.30</b> Optional Technical Visits  IUHPS/DHST General Assembly I	<b>15.00 – 17.00</b> S01, S03, S31, S33, S34, S37, S42, S75, S93  T03, T07, T08-05, T09-02, T16, T35  <i>17.00 – 17.30 Coffee Break</i>  <b>17.30 – 19.30</b> S01, S03, S31, S33, S34, S37, S42, S76, S93  T03, T07, T08-05, T09-02, T16, T35	<b>20.00 – 21.00</b> Organ Concert



<p><b>31 July Friday</b></p>	<p><b>09.00 – 11.00</b> Plenary Lectures <i>11.00 – 11.30 Coffee Break</i></p> <p><b>11.30 – 13.30</b> S03, S34, S40, S48, S51, S52, S54, S66, S77, S80, S83, S91, S93 T03, T05, T07, T09-02, T09-04, T09-14, T16, T21, T32, T35, T37</p>	<p><b>15.00 – 17.00</b> S12, S34, S40, S48, S51, S52, S54, S65, S66, S80, S83, S91, S93 T05, T07, T09-02, T09-04, T09-14, T16, T21, T32, T35, T37 <i>17.00 – 17.30 Coffee Break</i></p> <p><b>17.30 – 19.30</b> S07, S12, S32, S39, S40, S43, S45, S48, S54, S64, S65, S79, S80, S82 T05, T09-09, T10, T19, T24, T32, T35, T41</p>	
<p><b>1 August Saturday</b></p>	<p><b>09.00 – 11.00</b> S06, S12, S16, S17, S19, S23, S32, S38, S45, S57, S64, S67, S89 T08-01, T09-03, T09-10, T09-13, T10, T17, T21 <i>11.00 – 11.30 Coffee Break</i></p> <p><b>11.30 – 13.30</b> S12, S16, S17, S19, S23, S24, S36, S38, S44, S45, S63, S67, S89 T08-01, T09-03, T09-13, T11, T14, T17, T21, T35</p>	<p><b>15.00 – 17.00</b> S16, S17, S19, S24, S26, S27, S36, S38, S44, S45, S60, S63, S89 T08-01, T09-03, T11, T14, T17, T18, T21, T35, T40 IUHPS/DHST General Assembly II <i>17.00 – 17.30 Coffee Break</i></p> <p><b>17.30 – 19.30</b> IUHPS/DHST General Assembly S16, S17, S24, S26, S27, S36, S45, S60, S95 T08-01, T08-06, T09-08, T09-11, T11, T13, T17, T18, T21, T27, T35</p>	<p><b>20.00 – 22.00</b> Congress Dinner <i>(optional)</i></p>
<p><b>2 August Sunday</b></p>	<p><i>09.30 – 10.00 Coffee Break</i></p> <p><b>10.00 – 12.00</b> Plenary Lectures</p> <p><b>12.00 – 12.30</b> Closing Ceremony</p>		

## Plenary Sessions

### Opening Ceremony

**Tuesday, 28 July, 08.30 – 09.00, Room: A2**

*Chair: Péter Szegedi*

### Plenary Lectures

**Tuesday, 28 July, 09.00 – 11.00, Room: A2**

*Chair: Ronald Numbers*

**Darwin's Sacred Cause**

*James Moore*

*Chair: Éva Vámos*

**The Combersome Material Heritage of Astronomy**

*Paolo Brenni*

*Chair: Karl Hall*

**From Hungary to the World: Martians of Science**

*István Hargittai*

**Friday, 31 July, 09.00 – 11.00, Room: A2**

*Chair: Eberhard Heinrich Knobloch*

**Islam and Modern Science**

*Ekmeleddin Ihsanoglu*

**Scientists in Exile – A Phenomenon in Totalitarian Regimes. The Czechoslovak Case**

*Soňa Štrbáňová, Antonín Kostlán*

**Technology Transfer in Early Modern Europe**

*Robert Halleux*

**Sunday, 2 August, 10.00 – 12.00, Room: A2**

*Chair: Norbert Kroó*

**Antikythera Mechanism: Its meaning for Greek Astronomy**

*Alexander Jones*

*Chair: Éva Vámos*

**Women in Science in the US**

*Margaret Rossiter*

**Women in Science in Europe: From Sof'ja Kowalewskaja to Dorothy Hodgkin**

*Annette B. Vogt*

### Closing Ceremony

**Sunday, 2 August, 12.00 – 12.30, Room: A2**

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S26	Interactions between Mathematics and the Natural Sciences: Scientific Realities and Social Representations (1750-1950)	A16	34
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S28	Visual Languages (and Representations) of the Sky: Frameworks and Focal Points in Social Context	A5	35
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# Detailed Program of Symposia

## **S01 Ancient and Medieval Astronomy with Special Emphasis on its Socio-cultural Context**

**Organisers:** S.M. Razaullah Ansari, Julio Samsó, Anne Tihon  
Room: B2

### **Session I.: Ptolemy, his Writings, and their Transmission: Status of Present Research**

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Alexander R. Jones*

**Babylonian and Greek Antecedents of Ptolemy's Tables**  
*Alexander R. Jones*

**Ptolemy and his Time: An Unedited Astronomical Papyrus**  
*Anne Tihon*

**Introducing the Edition of the Handy Tables of Ptolemy**  
*Raymond Mercier*

**Ibn al-Raqqam's al-Zij al-Mustawfi**  
*Julio Samsó*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Julio Samsó*

**Ptolemaism in al-Andalus: Jābir b. Aflah and the Evolution of the Term Hay'a**  
*José Bellver*

**Tasyir in the Islamic West: Ibn Abi-l-rijal and Alfonso X**  
*Montse Díaz-Fajardo*

**Jagannātha's Samrāt-siddhānta: A Translation of Almagest into Sanskrit**  
*Ramasubramanian K. Sharma*

**The Indian Scholar Khayrullah Muhandis and His Persian Translation of Al-Tusi Recension of Almagest**  
*S.M. Razaullah Ansari*

### **Session II.: Contextual Oriental Studies**

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Raymond Mercier*

**Buddhist Astronomy in its Cultural Context**  
*Michio Yano*

**Patronage of Astronomy and Astrology in Post-classical Islamic Societies**  
*Sonja Brentjes*

**Knowledge Secrecy and the Chinese Assimilation of Islamic Astronomy in the 14th Century**  
*Yunli Shi*

**The Impact of the Telescope on Astronomy and Society in China**  
*Xiaochun Sun*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Anne Tihon*

**Yavana-yantra to Yantra-râja**  
*Sreeramula Rajeswara Sarma*

**Astronomy Part of the Kerala Work, Yuktibhasa (circa 1530 CE)**  
*Sriram Subrahmanya Myyasandra*

**A Survey of Persian Zijes in Extant in Iran with Special Stress on their Use in Medieval Iranian Society**  
*Farid Ghassemlou, Fariba Sabet*

**Final Remarks by the Chair of Organizing Committee**  
*S.M. Razaullah Ansari*

**S03 Status in Mathematics: In Particular the Role of Applications in the First World War**

**Organisers: Jeremy Gray, Reinhard Siegmund-Schultze**

Room: A16 and D1 (on Friday)

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Michael Eckert*

**The Rise of Complex Analysis in France and Germany**  
*Jeremy J. Gray*

**Cauchy's and Weierstrass's 'Schools' on Complex Function Theory: A Comparison**  
*Umberto Bottazzini*

**Function Theory for War: Ballistics and Fluid Mechanics in France, 1915-1930**  
*David Aubin*

**The British Use of Mathematics in the First World War**  
*June E. Barrow-Green*

**Thursday, 30 July, 17.30 – 18.30**

*Chair: June Barrow-Green*

**Developing a Theory of Ballistics from Experimentation and Mathematics: Oswald Veblen, Forest Ray Moulton, and the Aberdeen Proving Ground Project**  
*Deborah Kent*

**The Rise of Exterior Ballistics in America, 1880-1929**  
*Alan Gluchoff*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Deborah Kent*

**Mathematics in a Dead End: Arnold Sommerfeld and the Turbulence Problem of the Early 20th Century**  
*Michael Eckert*

**Richard von Mises: A Pioneer of Practical and Theoretical Aerodynamics**  
*Reinhard Siegmund-Schultze*

**Aviation and Aerodynamics Alongside Mathematics: The Case of the University of Leipzig**  
*Karl-Heinz Schlote*

## **S04 Mathematical Analysis from the Eighteenth to the Nineteenth Centuries**

**Organisers: Craig Fraser, Michiyo Nakane**  
Room: A8

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Michiyo Nakane*

**Elaboration of Euler's Ideas on Series in the Early 19th Century**  
*Hans Niels Jahnke*

**Euler and Functions of a Complex Variable**  
*Craig G. Fraser*

**Two Ways of Understanding the Nature of Transcendental Functions in Mathematical Analysis**  
*Carlos Alvarez*

**From Lagrange to Frege: Is a Function an Expression?**  
*Marco Panza*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Craig Fraser*

**Da Cunha, Stockler and Mathematical Analysis in Portugal in the Period 1770-1820**  
*Luis R. Saraiva*

**Le Statut de l'Analyse Mathématique : de l'Encyclopédie au Cours de l'Ecole Polytechnique**  
*Christian Gilain*

**Numbers, Limits, and Continuity in Gauss**  
*Giovanni Ferraro*

**"Throwing Some Light on the Vast Darkness that is Analysis": Niels Henrik Abel's Contributions to the Reorientation of Analysis in the 1820s**  
*Henrik Kragh Sørensen*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Hans Niels Jahnke*

**What Makes Mathematical Analysis Rigorous? Counterexamples and Pathological Functions**  
*Michiyo Nakane*

**The Place of Analysis in 19th Century British Mathematics**  
*Adrian Rice*

**Mittag-Leffler and Weierstrassian Analysis**

*Laura E. Turner*

**Rigour vs. Intuition: Teaching and Research in Analysis in Turin in the Second Half of the Nineteenth Century**

*Erika Luciano*

**S06 Transmission and Transformation of Mathematics and Mathematical Instruments in their Social Contexts, East and West**

**Organisers: Joseph W. Dauben, Liu Dun**

Room: C3

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Joseph W. Dauben*

**Qin Jiushao's Divining Method and in which the Mathematical Theory Contained**

*Gang Hou*

**The Introduction of Napier's Rods in China**

*Jose A. Cervera*

**Karel Slaviček and Yan Jiale Method**

*Dun Liu*

**On the History of a Compass**

*Galina A. Zverkina*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Dun Liu*

**Circles and Squares, Cubes and Spheres, East and West**

*Joseph W. Dauben*

**Leibniz's View of the I Ching**

*Mary Sol de Mora Charles*

**The Calculating Program of the Lunar Theory in Yuzhi Lixiang Kaocheng (1725)**

*Dalong Lu*

**“Wasan” Mathematicians, Technocrats and Samurai during the Edo Period in Japan – Seki Takakazu's Residence and the Social Status of Mathematicians**

*Shigeru Jochi*

**Trigonometric Tables, Their Utility, and Making in**

*Jiang-Ping Jeff Chen*

**S07 The Nature and Aims of Prediction in Ancient Science**

**Organiser: Francesca Rochberg**

Room: A12

**Friday, 31 July, 17.30 – 19.30**

*Chair: Francesca Rochberg*

**Prediction from and in the Sky in Babylonia**

*Hermann Hunger*

**“Inference from Signs and Prediction”**

*Francesca Rochberg*

**The Earliest Scientific Predictions**

*John P. Britton*

**Babylonian Period Relations**

*Teije de Jong*

**Mathematical Models or Observational Aids? Shadow Length Schemes in Babylonian Astronomy**

*John M. Steele*

**S08 Ideas and Instruments in the Development of Physics and their Use in Science Education**

**Organisers: Art Stinner, Jürgen Teichmann, Peter Heering**

Room: A7

**Session I.: From Mechanics to Electromagnetism**

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: László Kovács*

**Atwood's Machine: A Historical Case Study to Complement and Enrich Contemporary Methods of Teaching Newton's Laws of Motion.**

*Arthur Stinner*

**The Hero and the Dragon – Fraunhofer and the Dark Lines of the Sun's Spectrum**

*Jürgen Teichmann*

**The Induction Coil and the Electromagnetic Waves**

*Sándor Jeszenszky*

**Joule's Electromagnetic Rotor and Paddle Wheel Apparatus**

*Giorgio Dragoni, Martina Lodi*

**Session II.: From Electromagnetic Waves to Einstein**

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Jürgen Teichmann*

**The Changing Meanings of Precision – from Coulomb to Gauss and Weber**

*Susanne Heinicke, Peter Heering*

**The Eötvös Apparatus: The Equivalence of Internal and Gravitational Mass**

*László Kovács*

**The Experimental Confirmation of Einstein's 'Heuristic' to Explain the Photoelectric Effect: Going Beyond the Textbook Presentation**

*Mansoor Niaz*

**General discussion and closing remarks**

*Art Stinner, Jürgen Teichmann*

**S09 Islamic Science in Context: Texts, Instruments, Locales, and Institutions “in Memory of Professor Edward S. Kennedy”**

**Organisers: Jamil Ragep, Mercè Comes Maymó**

Room: C5

**Session I: Practical Astronomy and Instrumentation: Use and Wider Significance**

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Mercè Comes Maymó*

**Trigonometric Instruments in Medieval Islam. New Perspectives and Possibilities**

*Emilia Calvo*

**Medieval Arabic Astronomical Instruments with Astrological Functions**

*Josep Casulleras*

**Exposing the Forgery of an Astronomical Instrument: An Alleged Moroccan Astrolabe Dated 1845**

*Ingrid Hehmeyer*

**The Simple Version of the Sarrājiyya Instrument (14C): Textual and Technical Remarks**

*Roser Puig*

**Mathematical Astrology in Astronomical Handbooks**

*Benno van Dalen*

**Session II: The Multifarious Contexts of Islamic Science**

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Mercè Comes Maymó*

**Bīmāristān al-Manṣūrī: State and Medical Practice in Mamluk Egypt (1285-1304)**

*Ahmed Ragab*

**The Boundaries of Trigonometry: Al-Samaw'al and the 480-Degree Circle**

*Glen R. Van Brummelen*

**Environmental Studies about Cities in Medieval Islam**

*Lutfallah Gari*

**The Sultan and the Stars: The Kitāb al-Tabsira fi ilm al-nujum of al-Ashraf Umar**

*Petra G. Schmidl*

**Several Remarks on the “Ashkāl al-Ta’sīs” by al-Samarqandī and Commentaries on it by al-Rūmī**

*Irina Lyuter*

**Session III: Philosophical and Theological Contexts of Islamic Science**

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Mercè Comes Maymó*

**“Stealing the Water” and Commenting on the Void. Philosophical and Technological Aspects of the Greek and Arabic Perceptions of the Clepsydra**

*Constantin Canavas*

**A Hidden School: The Scientists-Philosophers of the 12th Century in al-Andalus**  
*Miquel Forcada*

**Astrology in Early Kalām and Tafṣīr**  
*Robert G. Morrison*

**Session IV.: Geographical Knowledge and Nautical Application**  
**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Mercè Comes Maymó*

**Ibn Fadlallah on the Nautical Winds**  
*Mónica Herrera-Casais, Mohsen Zakeri*

**al-Mursī's Nautical Chart in the Mediterranean Context**  
*M. Mercè Comes*

**The Qibla, From the Sky to the Sea**  
*Monica Rius*

**Le Géographe a l'Idrisi dans l'Historiographie Espagnole Pendant les XVIIIe et XIXe Siècles**  
*Juan Martos Quesada*

**S12 Ideas and Instruments in the Social Context in the Ottoman Empire and the National States**

**Organisers: Ekmeleddin Ihsanoglu, Efthymios Nicolaidis, Tuncay Zorlu**  
Room: C1

**Friday, 31 July, 15.00 – 17.00**

*Chair: Ekmeleddin Ihsanoglu*

**Evolution, Functioning and Capacity of the Mediterranean Windmills**  
*Atilla Bir, Mustafa Kaçar*

**The Ottoman Royal Cannon Foundry: "Tophane-I Amire"**  
*Salim Ayduz*

**Shemseddin Sami's Treatise of Astronomy, 'Gok' (Sky): An Effort in the Way of Formation of Turkish Scientific Language**  
*Sevtap Kadioglu*

**An Analysis of Qushjī's Astronomical Textbooks**  
*Tofiq Heidarzadeh*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Tuncay Zorlu*

**Engineering Periodicals in the Ottoman Turkish**  
*Cuneyd Okay, Tuncay Zorlu*

**Ottoman Nautical Terminology as Attested in the 18th Century Sources**  
*Tuncay Zorlu*

**Locks and Keys: Their Story From Past to Present**  
*Semra Saracoglu, Bulent Karakas*

**Books on Darwin and Darwinism in the Ottoman Empire**

*Cemil Ozan Ceyhan*

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Constantine Skordoulis*

**The Point and Importance of Works of the Nasiruddin Tusi in the Ottoman World**

*Nihal Ozdemir*

**Ottoman Phd Dissertations of Chemistry Completed in European Universities**

*Emre Dolen*

**First instruments of the National Observatory of Athens. When, From Where, Why and How.**

*Panagiotis G. Lazos*

**The Reception of Ernst Haeckel's Ideas in Greece**

*Constantine D. Skordoulis, Kyriakos Kyriakou*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Mustafa Kaçar*

**The Interaction Between Mathematics and Greek Trade During the Period of the Ottoman Occupation**

*Maria Terdimou*

**The Foundation and Early Phase of the Imperial Observatory of Constantinople**

*Christophe Benoist*

**Le Rôle Social et Politique des Ingénieurs du Corps du Génie dans le Jeune État Grec: Entre l'Europe et les Structures Traditionnelles**

*Fotini Assimacopoulou, Konstantinos Chatzis*

**S13 Darwin Outside Europe: Ideas of Evolution in Comparative and Global Perspective**

**Organisers: Cemil Aydin, Marwa Elshakry**

Room: C1

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Olga Restrepo Forero*

**Darwinism After 1945: The State and Fate of 'Evolution' in Early Cold War Culture**

*Christian Geulen*

**Moving Darwin / Tales of the Travels of Darwinism**

*Olga Restrepo Forero, Malcolm Ashmore*

**Yādollāh Sahābī's Defence of the Theory of Evolution**

*Martin Riexinger*

**Darwin in Non-Western Nationalist Thought**

*Cemil Aydin*



## **S14 The Commerce of Science: Exchanging Objects, Instruments and Ideas in the Early Modern World**

**Organisers: Daniel Margocsy, Mario Biagioli**

Room: A15

### **Session I.: Owning and Selling Instruments**

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Harold Cook*

**Georg Hartmann and the Beginnings of the Printed Scientific Instruments Trade**

*Suzanne Karr Schmidt*

**Trading Up: Instruments and Architecture in Early-Modern England**

*Stephen A. Johnston*

### **Session II.: The Circuits of Natural History**

**The Price of Mobility: Transporting Exotic Animals in Early Modern Europe**

*Daniel Margocsy*

**Trading Places: Domestic Worlds and Materials of Scientific Exchange in Early Enlightenment Danzig**

*Alix Cooper*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Stephen Johnston*

**Final Discussion**

### **Session III.: Science and the State**

**Commerce and Science in the Dutch Republic**

*Harold J. Cook*

**A Sampling History of Autodidacticism**

*Avner Ben-Zaken*

**Scientific Practice as Political Economy in the English Atlantic Empire, 1650-1688**

*Matthew Underwood*

## **S15 Chemistry in the Aftermath of World Wars**

**Organisers: Yasu Furukawa, Ernst Homburg, Jeffrey Johnson, Gábor**

**Palló**

Room: A13

### **Session I.: Chemistry and Chemical Industry in the Aftermath of World War I.**

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Yasu Furukawa*

**The Impact of World War I upon Japanese chemistry**

*Yoshiyuki Kikuchi*

**French Chemists and the Reorganization of Chemistry in the International Community after the First World War**

*Danielle M.E. Fauque*

**Soviet Chemistry after the Civil War**

*Yakov M. Rabkin*

**Crisis, Change and Creativity in Science and Technology (Keynote address)**

*Jeffrey A. Johnson*

**Session II.: Chemistry and Chemical Industry in the Aftermath of World War II.  
Wednesday, 29 July, 15.00 – 17.00**

*Chair: Ernst Homburg*

**World War II, the Cold War, and British Women Chemists**

*Sally M. Horrocks*

**The Difficult Beginning of the German-Israeli Scientific Cooperation**

*Ute Deichmann*

**Chemistry at the University of Strasbourg in the Aftermath of World Wars I and II**

*Pierre Laszlo*

**Commentary**

*Carsten Reinhardt*

**Session III.: Chemical Technology Transfer in the Aftermath of Two World Wars  
Wednesday, 29 July, 17.30 – 19.30**

*Chair: Gábor Palló*

**Isolation & Innovation: German Chemicals and American Political Economy after  
World War I**

*Kathryn Steen*

**Role of Prettre's Lyons Laboratory in the Postwar Development of Fischer-Tropsch  
Synthetic Oil Technology in France.**

*Baptiste Voillequin*

**Postwar Transfer of Synthetic Rubber Technology Between Germany, Russia and the  
USA**

*Peter J.T. Morris*

**Commentary**

*Anthony S. Travis*

**S16 Mathematics in the Austrian-Hungarian Empire**

**Organisers: Christa Binder, Martina Becvarova**

Room: C4

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Martina Becvarova*

**The Appointment Policy in the Austro-Hungarian Monarchy**

*Christa Binder*

**The Reception of Bolyai's Geometry in the Austrian-Hungarian Empire**

*Katalin Munkácsy*

**Greek Mathematical Publications in Vienna in the 18th-19th Centuries**

*Christine Phili*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Christina Phili*

**Franc Hočevar and His Scientific Work**

*Marko Razpet*

**Franc Hočevar - Textbooks Writer**

*Nada Razpet*

**Mathematical Education in the Province of Voivodina Within the Habsburg Monarchy**

*Aleksandar M. Nikolić*

**Wilhelm Matzka (1798–1891) and his Position in the Austro-Hungarian Mathematics**

*Michaela Chocholova*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Peter Schmitt*

**Karel Pelz an Outstanding Geometer of the 19th Century**

*Marta Pémová, Zita Sklenáriková*

**The Mathematics and its Professors at the Mining (and Forestry) Academy in Schemnitz**

*Miroslav Tibor Morovics*

**Czech Mathematicians and their Role in the Development of Mathematics in the Balkans**

*Martina Becvarova*

**Mathematics in Lwów Before the Famous Lwów Mathematical School**

*Stanislaw Domoradzki*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Christa Binder*

**“The Crisis of Intuition” – Austrian-Hungarian Contributions in the Quest of Defining the Mathematical Term “Dimension” from the 1850’s to the 1920’s**

*Bernhard Johann Karl Beham*

**Muslim Ideas and Instruments in the Mathematics and Astronomy of Austria-Hungary**

*Harald Gropp*

**S17 Mathematical Discoveries and Demonstrations: East and West**

**Organisers: Chikara Sasaki, Helène Bellosta, Ioannis Vandoulakis, Feng**

**Lisheng**

Room: A1

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Chikara Sasaki*

**Two Archetypes of Mathematical Discoveries and Demonstrations: Ancient Greece and Ancient China**

*Chikara Sasaki*

**Early Greek Mathematics and Eleatic Philosophy: A Reappraisal of a Controversial Relation**

*Ioannis M. Vandoulakis*

**The Treatise on the Section of a Cone of Serenus of Antinoe and its Relation With the Book XII of Euclid's Elements**

*Konstantinos S. Nikolantonakis*

**Theory of Proof in the 10th Century: What Change? Why?**

*Hélène Bellosta*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Hélène Bellosta*

**Epistemic Aspects of Algebraic Demonstration: East and West**

*Albrecht Heeffner*

**About the Reading of Diophantus Between the 16th and 17th Century**

*Paolo Freguglia*

**Les Mathématiques de Newton Après les Principia**

*Massimo Galuzzi*

**Leibniz's Parisian Studies on Infinitesimal Mathematics**

*Eberhard Heinrich Knobloch*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Ioannis Vandoulakis*

**History of Demonstration as Vital Ingredient of Mathematics**

*Michael I. Monastyrsky*

**Pre-modern Japanese Mathematics, Wasan and Demonstration**

*Tatsuhiko Kobayashi*

**The Comparative Studies on the Discoveries and Demonstrations in the Eighteenth-century Mathematics in East and West**

*Nobuo Miura*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Feng Lisheng*

**Styles de Démonstration en Philosophie Naturelle: Galilée, Tartaglia, Borelli.**

*Enrico Giusti*

**Descartes and the "Impossible" Constructions with Ruler and Compass**

*Aldo Brigaglia*

**On the Seki Takakazu's Summation Formulae for of Powers of Natural Numbers and its Construct Method**

*Lisheng Feng*

**S18 History of Science and the New Media: Resources for  
Connecting the Global Community of Scholars**

**Organisers: Peter Harper, Stephen Weldon**

Room: A4

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Peter Harper*

**The Website @.Ampère and the History of Electricity**

*Christine Blondel*

**Physics Educational Instruments in New Media: Case Study of Capodistrian School**

*Stanislav J. Juznic*

**Managing the Dispersion of Sources on Science History: National Bibliography**

*Birute Raiiene*

**Digital Humanities in the United Kingdom: Advancing Computation Methods in the  
Digital Humanities through the Arts-Humanities.net Project: [http://www.](http://www.arts-humanities.net)**

*Craig Bellamy*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Peter Harper*

**Digital Media at Centro Simao Mathias**

*Ana M. Alfonso-Goldfarb, Marcia H. M. Ferraz, Silvia I. Waisse de Priven*

**World History of Science Online: Citation, Standards and Web Services**

*Gavan J. McCarthy*

**The Cost of Free Access: Making the Isis Bibliography Available on the Open Internet**

*Stephen P. Weldon*

**S19 Physics and Cold War**

**Organisers: Christian Forstner, Leonardo Gariboldi**

Room: A14

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Christian Forstner*

**The Nobel Prize and the Cold War**

*Robert Marc Friedman*

**The Haber Institute in Berlin During the Cold War**

*Dieter Hoffmann*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Falk Mueller*

**The Spy Who Came In From the Lab: A Cold War Tale Based on Real Physicists**

*Simone Turchetti*

**Between East and West? Austrian Neutrality, Cold War, and Nuclear Physics**

*Christian Forstner*

**Physics in Spain Under Franco**

*Néstor Herran, Xavier Roqué*

**When Latitude and/or Altitude Matters. International Collaborations in Cold-War Times Cosmic-Ray Physics**

*Leonardo Gariboldi*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Leonardo Gariboldi*

**The Double Track for Superconductivity During the Cold War**

*Georges Waysand*

**The Recommencement of Electron Microscopy After World War II in the Two German States**

*Falk Mueller*

**Interacting Fields—Quantum Field Theory and the Conceptual Borderlands Between Solid-State and Particle Physics During the Cold War**

*Christian Joas*

**Pictures Without Problems: The Reconstitution of an International Physics Community in the 1950s**

*Elvira Scheich*

**S21 Questions of Reflexivity: The International Circulation of Knowledge and Techniques**

**Organisers: A. Michael Osborne, Jahnavi Phalkey**

Room: A15

**Session I.: Scientific and Popular Medicine in the Portugese Empire**

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Mike Osborne*

**Teaching Medicine and Learning How to Cure: the Circulation of European and Indigenous Knowledge in 19th Century Portuguese Colonies**

*Cristiana Bastos*

**Climatology, Parasitology, and the Development of Tropical Medicine in 19th Century Brazil**

*Flavio Coelho Edler*

**The International Circulation of Medical Knowledge About Malaria**

*Monica Saavedra*

**Comments: audience and members of the research team for “Empires, Centers, and Provinces: the Circulation of Medical Knowledge in the Nineteenth Century,”**

**Instituto de Ciencias Sociais, Fundação para a Ciência e Tecnologia, Lisbon, Portugal**

**Session II.: Medicine, Race and Governance**

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Mike Osborne*

**The Circulation of Medical Knowledge in Mexico, During and After the French Intervention, 1860s-80s**

*Paul Edison*

**From Race Crossing to Over Population: Scientific Discourses on the Population of Jamaica (1929-1945)**

*Jill Briggs*

**Construction of Medical Hegemony: An Exploration into Colonial Encounters in Anatomical Knowledge in India**

*Jayanta Bhattacharya*

**Session III.:South Asian Texts and Contexts**

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Jahnvi Phalkey*

**Worldly Visions: Science and Modernity in Colonial India**

*Prakash Kumar*

**Western Science in Late 19th-Early 20th Century Hindi-Language Print Media**

*Rajive Tiwari*

**Scientific Correspondence for the Global Diffusion of Theory: The Case of F. Mesnil's Laboratory of Tropical Zoology at the Institut Pasteur (First Third of the 20th Century)**

*Annick Opinel*

**S22 Learning, Producing and Using Medical Knowledge in Colonial Settings**

**Organisers: Cristiana Bastos, Renilda Barreto**

Room: A15

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Cristiana Bastos*

**Introduction, Research Agenda, and Theoretical Goals**

*Cristiana Bastos*

**Political Crisis, Exile, and the Circulation of Medical Concepts: M. J. Henriques de Paiva Between Portugal and Brazil (1800-1829)**

*Maria Renilda N. Barreto, Luiz Otavio Ferreira*

**Learning to Heal in the Santa Casa da Misericórdia's Hospital (Rio de Janeiro, First Half of the 19th Century)**

*Tânia S. Pimenta*

**Medical Knowledge Applied to the Education: The Mutual Teaching in Nineteenth Century**

*Tereza Cardoso*

**Brazil and Tropical Medicine from the 1880s to the Great War**

*Jaime L. Benchimol*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Renilda Barreto*

**Folk Hydrotherapy and the Science of Medical Hydrology in Brazil and Portugal**

*Maria Manuel Quintela, Cristiana Bastos*

**Pharmacies, Industries, and Overseas: Cinchona and Quinine (18th-20th Centuries)**

*João Rui Pita*

**Babel of races: classification and anthropology in ‘Portuguese Timor’**

*Ricardo Roque*

**From Hospitals to Bush Clinics: The Politization of Health Care in Portugal’s African Colonies**

*Philip J. Havik*

**Rolling Bones or Probabilistic Softwares: Deterministic Chaos in Mozambican Healing and in Risk Analyses**

*Paulo Granjo*

**Final Commentary by Discussant**

*Saraiva Tiago*

**S23 A Change in Empires: European and North American Influences in Latin America’s Scientific World in the Nineteenth and Twentieth Centuries**

**Organisers: Camilo Quintero, Shawn Mullet**

Room: A8

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Shawn Mullet*

**Nation, Nature, and Naturalists: Exploring U.S.-Colombia Scientific Relations in the Early Twentieth Century**

*Camilo Quintero*

**The Rebuilding of German Influence in Latin America through Medical Science Between the World Wars**

*Magali Romero Sá*

**The Rockefeller Foundation and the Introduction of Genetics in Mexico**

*Ana Barahona*

**Building Brazilian Bridges: Gleb Wataghin and Physics at the University of Sao Paulo**

*Shawn Mullet*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Camilo Quintero*

**Continental Bridges: Globalization of Geological Cultures from a South American Perspective at the Turn of the 20th Century**

*Maria Margaret Lopes*

**S24 Global Visions? The Telescope between Competition and Collaboration**

**Organisers: Sven Dupré, Albert van Helden**

Room: A9

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Sven Dupré*

**Introduction: The Telescope Between Competition and Collaboration**

*Sven Dupré*



**Galileo's Shopping List: an Overlooked Document About Early Telescope Making**

*Giorgio Strano*

**Johann Wiesel 's Telescopes and his Clientele**

*Inge Keil*

**Astronomical Sites in the Dutch Republic, or the Changing Use of the (Astronomical) Telescope in Institutional and Private Settings During the 17th and 18th Centuries**

*Huib J. Zuidervaart*

**The Art of Polishing: Practice and Prose in 18th-century England**

*Jim Bennett*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Sven Dupré*

**Networks of Telescope Makers and the Evolution of Skill: The Evidence From Observatory and Museum Collections**

*Gloria C. Clifton*

**Astronomy in the Field: Mason, Dixon and the Greenwich Observatory, 1763 - 1768**

*Nicky Reeves*

**Dollond or Fraunhofer: Instruments and Practices for Early Nineteenth Century Star Chart Observations**

*Klaus Staubermann*

**The Limits of the Universe and the Limits of the Telescope: A Controversy on Stellar Distances in the Nineteenth Century**

*Pedro M.P. Raposo*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Sven Dupré*

**Topography as Instrument: High-Altitude Telescope Observations and the Rocky Mountain Eclipse of 1878**

*Steve Ruskin*

**The Smithsonian Institution's Contribution to Global Networking in Astronomy**

*David H. DeVorkin, Teasel Muir-Harmony*

**The Making of Space Astronomy**

*Robert W. Smith*

**Commentary**

*Mario Biagioli*

**S25 Science as a Matter of Identity and Modernity in Latin America: 'Positivism' and 'Positivisms' in the Late XIX and Early XX Centuries**

**Organisers: Natalia Priego, Sonia Lozano**

Room: A11

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Sonia Lozano*

**Porfiriato, Pisciculture et Progrès**

*Minerva Contreras-Alvarado, Dr. Ismael Ledesma-Matos*

**The New Visions of Venezuela in the Late XX Century: The Contributions of the Positivists**

*Yajaira Freites*

**Scientific Universalism and Controversies with a Positivist Perspective in Brazil**

*Bernardo J. Oliveira*

**Is There a Latin American Philosophy of Science? Notes Upon Late-19th and Early-20th Century Mexico**

*Natalia Priego*

**Le Début du Positivisme au Venezuela. Adolf Ernst et Rafael Villavicencio: de l'Histoire Naturelle à la Philosophie de l'Histoire 1863-1898**

*Juan J. Martin-Frechilla*

**S26 Interactions between Mathematics and the Natural Sciences:  
Scientific Realities and Social Representations (1750-1950)**

**Organisers: Christian Gilain, Tom Archibald**

Room: A16

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Tom Archibald*

**Les Premiers Travaux de d'Alembert en Hydrodynamique (1745-1750) : Une Nouvelle Problématique**

*Gerard Grimberg*

**L'Hydrodynamique et le Calcul Intégral à Plusieurs Variables dans la Seconde Moitié du XVIIIe Siècle**

*Alexandre Guilbaud*

**Les Équations aux Dérivées Partielles chez D'Alembert, Euler et Lagrange: des Mathématiques Mixtes aux Mathématiques Pures**

*Guillaume Jouve*

**Choosing and Measuring Physical Parameters for Mathematically**

*Muriel Guedj, Arnaud Mayrargue*

**French Geodesy in 19th and 20th Centuries. Context, Actors and Mathematical Practices in the Field.**

*Martina Schiavon*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Christian Gilain*

**Henri Poincaré's Approach to Astronomy**

*Scott A. Walter*

**Integral Equations Between Theory and Application, 1900-1920**

*Thomas Archibald, Rossana Tazzioli*

**Different Views on Applied Mathematics in Germany in the 1920s**

*Birgit Bergmann*

**Group Theory and Quantum Mechanics: Van Der Waerden's Contribution**

*Martina R. Schneider*

## **S27 Spectroscopy: Science and Society**

**Organisers: Peter Maria Schuster, George N. Vlahakis**

Room: A8

**Saturday, 1 August, 15.00 – 17.00**

*Chair: George N. Vlahakis*

**Spectroscopy in Ireland in the Late 19th Century**

*Denis Weaire, Se O'Connor*

**Spectroscopy in Greece. The Early Days**

*George Vlahakis*

**The Scientific Network of Robert W. Bunsen, Founder of Spectroscopy, in the Light of his Private Library**

*Rudolf W. Soukup*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Denis Weaire*

**Historical Development of the Spectroscopy of Planetary Atmospheres**

*Bruno P. Besser*

**Computer Simulations: A New Way to Approach Nature**

*Franjo Sokolic, Giovanni Ciccotti*

**Applying the Doppler Principle to the Amici Prisms – A Think-different in Astronomy Giving Birth to Astrophysics**

*Peter Maria Schuster*

## **S28 Visual Languages (and Representations) of the Sky:**

**Frameworks and Focal Points in Social Context**

**Organisers: Cornelia Lüdecke, James Fleming**

Room: A5

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Cornelia Lüdecke*

**Socializing the Skies: British Skies in Popular Culture 1780-1880**

*Marilyn Gaull*

**La Niña, Stellar Portents, and the Extinction of Easter Island's Birdmen, 1862-1866**

*Gregory T. Cushman*

**Instructions for Cloud Observation at Meteorological Stations in Germany Before the International Year of Clouds 1896/97**

*Mathias Deutsch, Michael Börngen, Karl-Heinz Poertge*

**Seeing Icebergs in the Sky: G. I. Taylor's Newfoundland Voyage**

*Daniela K. Helbig*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: James Fleming*

**Visible Impressions from World War II - Reality or Artistic Interpretation?**

*Cornelia Luedecke*

**A Hole in the Sky? A Visual History of Ozone Depletion**

*Sebastian V. Grevsmühl*

**/Cloud/... Blur**

*Thomas Mical*

**S29 Perspectives on the Rise of Climate Science**

**Organisers: Matthias Heymann and Robert Marc Friedman**

Room: A5

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Robert Marc Friedman*

**From Polar War and Cod Fishery to Global Climate Change**

*Maiken L. Lolck*

**Nuclear Arms, Cold War, and the Rise of Climate Science**

*Matthias Dörries*

**The Project of MECCA**

*Nils R. Hundebøl, Matthias Heymann*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Matthias Heymann*

**Modeling Climate Prosperity**

*Vladimir Jankovic*

**How Global Warming Stimulated Ocean Research in Germany**

*Walter Lenz*

**Climate and Clientelism in Brazil**

*Christina H.M. Barboza*

**S31 Les Ingénieurs au Service des Princes et des Etats: Un Regard sur la Mobilité Professionnelle en Europe, XVe-XIXe Siècle**

**Organisers: Ana Cardoso de Matos, Irina Gouzévitch, André Grelon**

Room: C5

**Session I: S'Expatrier pour se Former et s'Informer: Migration Entre la Formation et l'Action**

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Ana Cardoso de Matos*

**Les Ingénieurs pour le Risorgimento Italien: Une Contribution «Internationale» pour la Construction de la Nation**

*Renata de Lorenzo*

**L'État Libéral Portugais et la Formation à l'Étranger de Cadres Techniques Modernes (1851-1900)**

*Paulo Simões Rodrigues, Helena Souto*

**Trained in Europe to Serve the State: Preliminary Remarks on Ottoman Engineers of the 19th Century**

*Feza Günergun*

**Session II.: Pérégrinations et Expatriations: Parcours Classiques, Parcours d'Exception**

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Irina Gouzévitch*

**Aristocrates en Ecosse – Ingénieurs en Russie: la Famille Bruce au Service de la Couronne Russe, Fin XVIIe- Début XVIIIe Siècle**

*Irina Gouzévitch*

**Les Ingénieurs Français et Flamands et les Projets de Forteresses de l'Alentejo, Portugal, au XVIIe Siècle**

*Antónia Fialho Conde*

**Lamé et Clapeyron en Russie, 1820-1830**

*Margaret M. Bradley*

**Dzrewiecki (1844-1938): les Pérégrinations Européennes d'un Ingénieur Russo-Polonais**

*Claudine Fontanon*

**Between Europe and America. E. Terradas (1883-1950) and the New Engineering in Spain**

*Antoni Roca-Rosell*

**Session III.: Mise à Disposition des Compétences: le Travail des Experts dans les Pays Étrangers**

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Irina Gouzévitch*

**Foreign Engineers in Spain and in the Ottoman Empire: A Comparative Study from a Long-Term Perspective (18th to Early 20th Century)**

*Darina Martykánová, Meltem Akbas*

**La Mission des Ponts et Chaussées en Grèce (1882-1886); un Corps National d'Ingénieurs pris dans des Rapports Économiques Internationaux**

*Anna Mahera*

**Sous le Signe de l'École des Ponts et Chaussées: João Evangelista de Abreu et les Chemins de Fer Portugais**

*Maria Paula Diogo*

**A Place for Foreign Specialists: French Agronomists and the Institutionalization of Agricultural Sciences in Brazil, 1870 – 1910**

*Graciela de Souza Oliver*

**Gaspard Monge et les Polytechniciens à Rome**

*Luigi Pepe*

**Les Ingénieurs Étrangers dans l'Industrie du Gaz et de l'Électricité au Portugal, 1850-1920**

*Ana Cardoso de Matos*

**Session IV.: La Remise en Question de la Mobilité Professionnelle: Crises et Nationalismes**

**Thursday, 30 July, 17.30 – 19.30**

*Chair: André Grelon*

**Les Ingénieurs de la Renaissance au Service du Grand Prince de Moscovie, ou les "Habits" Pour un État Unifié (Fin XVe - Début XVIe Siècles)**

*Dmitri Gouzevitch*

**Great Hydraulic Works of French Engineers During the Napoleonic Period in Italy**

*Maria Teresa Borgato*

**Otages de « l'Intérêt des Arts et des Fabriques » : les Mécaniciens Anglais en France au Début du XIXe Siècle**

*Christiane Demeulenaere-Douyere*

**Conclusion**

*Andre Grelon*

## **S32 From Natural History to Biology, when Life Sciences were Looking for an Object**

**Organisers: Bernardino Fantini, Stéphane Tirard**

Room: A5

**Friday, 31 July, 17.30 – 19.30**

*Chair: Stéphane Tirard*

**La Biologie Végétale Durant la Deuxième Moitié du XIXe Siècle: de la Pratique au Laboratoire et Retour**

*Cristiana Oghinā-Pavie, Stéphane Tirard*

**Quelle Révolution Pasteurienne dans les Sciences du Vivant?**

*Gérard Jorland*

**La Naissance de la Zoologie en Belgique: Pierre-Joseph Van Beneden**

*Marie Claire S.Y. Van Dyck*

**La Réception du Transformisme dans les Milieux Catholiques à la Fin du XIXe Siècle**

*Olivier Perru*

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Stéphane Tirard*

**La Question du Verdissement des Huitres: Observatoire Privilégié de la Transformation des Sciences de la Vie à la Fin du XIXe Siècle et au Début Du**

*Céline M.-L. Briée*

**Aux Origines d'une Science du Développement**

*Jean-Louis Fischer*

## **S33 How Instruments Change Hands**

**Organisers: Sara J. Schechner, A. D. Morrison-Low**

Room: A15

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Alison Morrison-Low*

**'Distinguished and Well-known to Princes and Lords': The Self-marketing of Early-modern Instrument-makers in Germany**

*Michael B. Korey*

**Symbiosis and Style: the Production, Sale and Purchase of Instruments in the Luxury Markets of Early Eighteenth Century London**

*Alexi S. Baker*

**Counterfeits, Copycats, and Knockoffs in the Branding and Selling of Scientific Instruments**

*Sara J. Schechner*

**Selling Surveying Instruments in America Before the Printed Trade Catalog**

*Richard Kremer*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Sara J. Schechner*

**The Gentle Art of Persuasion: Advertising Instruments During Britain's Industrial Revolution**

*Alison D. Morrison-Low*

**Selling by the Book: Scientific Trade Literature**

*Liba Taub, Joshua Nall*

**Mathematical Instruments Changing Hands at World's Fairs, 1851-1904**

*Peggy A. Kidwell*

**The Economics of Instruments: Prices in Europe Between 1800 and 1914**

*Paolo Brenni*

**S34 Cold War Social Science: Transformations in Politics, Patronage, Disciplines, and Democratic Ideology**

**Organisers: Mark Solovey, Hamilton Cravens**

Room: C4

**Session I.: Social Science, Social Movements, and Social Reform**

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Nadine M. Weidman*

**The Strange Career of Neo-Evolutionist Anthropology in the United States**

*Howard Brick*

**The Crossroads of Race and Gender: Ashley Montagu and the Unity of Human Nature, 1950-1975**

*Nadine M. Weidman*

**Revolt Against The System: Radical Individualism and the American Social Sciences in the Age of the Cold War 1945-2000**

*Hamilton Cravens*

**Session II.: Disciplinary Transformations**

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Joel Isaac*

**Cold War Modern? Shapes of Knowledge in Harvard's Department of Social Relations**

*Joel Isaac*

**Producing Reason**

*Hunter A. Heyck*

**The Birth of a Movement: Joy Paul Guilford and Creativity Research in American Psychology, 1950-70**

*Michael Trevor Bycroft*

**Session III.: Social Theory and Democratic Ideology**

**Friday, 31 July, 11.30 – 13.30**

*Chair: Jefferson D. Pooley*

**International Influences and Interpretations of Futures Studies**

*Kaya Tolon*

**Gemeinschaft After All: The Frontstage and Backstage of Small Group Research in Early Cold War Social Science**

*Jefferson D. Pooley*

**Somewhat Known but Not Known Well: Sociologist Harry Alpert's Travels in American Social Science**

*Mark Solovey*

**American Foundations and Socio-economic Research in Italy: A Long-term Analysis**

*Giuliana Gemelli*

**Session IV.: The Human Machine in Cold War Social Science**

**Friday, 31 July, 15.00 – 17.00**

*Chair: Edward Jones-Imhotep*

**Cold War Emotions: Mother Love and Human Nature in Post-War America**

*Marga Vicedo*

**Maintaining Humans**

*Edward Jones-Imhotep*

**The Most Advanced of All Social Sciences?: Linguistics in Cold War America**

*Janet Martin-Nielsen*

**S35 History of Numerical Tables – The Second Meeting on History of Exact Sciences along the Silk Road**

**Organisers: Dominique Tournès, Anjing Qu**

Room: B2

**Session I.: Tables in Antiquity**

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Zhigang Ji*

**From Square Tables to Calculation of Surfaces in Mesopotamia**

*Christine Proust*

**Fractional Tables and Water Clocks in Egypt**

*Micah T. Ross*

**From Lists to a Table to Manage Grains: The Evidence from the Oldest Extant Chinese Mathematical Books**

*Karine C. Chemla, Biao Ma*

**Session II.: Tables and Astronomy**

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Alexander Jones*

**The Function of Numerical Tables in the Mathematical Structure of Ptolemy's /Almagest/**

*Nathan Sidoli*



**The Numerical Model of Chinese Planetary Theory**

*Anjing Qu*

**The Precision of the Planetary Calculation in the Song Dynasty**

*Quan Tang*

**Mercure et le Second Équatoire de Jean de Lignières**

*Matthieu Husson*

**Session III.: Tables and Arithmetic**

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Karine C. Chemla*

**Comments on the Numerical Tables and Algorithms in Fibonacci's Liber Abaci**

*Zhigang Ji*

**Cardano's Rule of Proportional Position in Artis Magnae**

*Jiwei Zhao*

**Earliest Factor Tables**

*Maarten Bullynck*

**Une Étude Empirique de Georg Cantor**

*Anne-Marie Decaillot*

**Session IV.: Tables and Engineering in the 19th Century**

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: David Aubin*

**Euler-Otto's Ballistic Tables**

*Dominique Tournes*

**Instruments Versus Tables dans le Calcul des Déblais et Remblais dans la France des Années 1830-1860**

*Konstantinos Chatzis*

**Mathematics, Analysis, and Mechanisation in Great-Britain (1834-1934)**

*Marie-José J. Durand-Richard*

**Session V.: Tables and Engineering in the 20th Century**

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Dominique Tournes*

**The Relationship between Numerical and Graphical Methods in the First Half of the 20th Century**

*Renate A. Tobies*

**The Design of Numerical Tables for Statistical Quality Control in Industry (1920-1950)**

*Denis Bayart*

**"Why Might a Mathematician Want to Add Pulse Circuitry to Pencil and Paper?"  
Mathematical Tables in the Era of Digital Computing.**

*Liesbeth De Mol*

## **S36 Introduction of Modern Mathematics in Iberoamerica**

**Organisers:** Alejandro R. Garciadiego, Sergio Nobre, Clara H. Sánchez

Room: A4

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Sergio R. Nobre*

**The Translation into Spanish of Kurt Grelling's Theory of Sets**

*Alejandro Garciadiego*

**Introduction of Set Theory in Colombia**

*Clara Helena Sánchez Botero, Víctor Albis*

**Logic and Set Theory in Primary and Secondary Education in Spain**

*Elena Ausejo*

**Hilbert's "Grundlagen der Geometrie" Translated into Spanish: A Case of a Famous Mathematical Text and its Contexts**

*Leo Corry*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Alejandro Garciadiego*

**Mischa Cotlar's First Studies on Measure and Integration Theory (1939-1944)**

*Luis C. Arboleda, Carlos D. Galles*

**The Impact of Antonio Monteiro on the Establishment of Algebraic Logic in Latin America**

*Eduardo Ortiz*

**Sur Une Contribution de Pi Calleja au Problème d'Induction et Récursivité dans les Axiomes de Peano pour les Nombres Naturels**

*Luis Carlos Arboleda*

**A Brazilian Genealogy of the Mathematics from Luigi Fantappiè**

*Plínio Zornoff Táboas*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Clara Helena Sánchez Botero*

**The Birth of the Research in Mathematics Inside the State of São Paulo - Brazil**

*Sergio R. Nobre*

**Intuition, Formalism, and Purity in Brazilian Mathematics**

*Rogério Monteiro de Siqueira*

**On the Development of Paraconsistent Logic and the Brazilian School of Logic**

*Itala M.L. D'Ottaviano*

**Some Historical Considerations on the Paraconsistent Logic in Brazil**

*Carlos Roberto Moraes*

## **S37 Science, Politics, and Development in the 20th Century**

**Organisers:** Olival Freire Junior, Patrick Petitjean, Alexis de Greiff

Room: C2

**Session I: Politics and Scientific Internationalism**

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Olival Freire*

**UNESCO in the 50s: From the Periphery Principle to Technical Assistance**

*Patrick Petitjean*

**International Scientific Activity in an Autarchic and Isolated Regime: The Origins and Constitution of Particle Physics in Spain**

*Agustín Ceba Herrero, Jorge Velasco González*

**The Technical and Scientific Activities of the Office of Inter American Affairs (1940-1946)**

*Alexis De Greiff*

**The Exact Sciences and Politics in Argentina, Brazil, Portugal, and Spain in the Immediate Post-war Years: Common Features and Differences**

*Eduardo Ortiz*

**Session II.: Science and Development in 20th Century Ibero-America I.**

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Patrick Petitjean*

**Scientific Development Under Military Dictatorship: The Case of Brazilian Physicists (1964-1985)**

*Olival Freire*

**A New Look at an Old Devil: A Democratic Computer Market Reserve During an Authoritarian Dictatorship**

*Ivan da Costa Marques*

**Scientific Policies in Portugal During the Dictatorial Regime and the Physics and Genetics Communities (1929-1954)**

*Júlia Gaspar, Maria do Mar Gago, Ana Simoes*

**Shaping Scientific Communities in Francoist Spain, 1939-1967**

*Antoni Malet*

**Session III.: Science and Development in 20th Century Ibero-America II.**

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Alexis de Greiff*

**Les Agronomes Sylviculteurs et les Politiques Forestières des Années 1930-1960 au Brésil**

*Diana Antonaz*

**Historical Notes on the Geophysics in Brazil – Petrobrás and the National Development**

*Aurino Ribeiro Filho, José Eduardo Clemente*

**The Mathematician Norberto Cuesta Dutari Recovered from Oblivion**

*José M. Pacheco*

**The Rebirth of a «Scientific Movement» and the Foundation of the National Board of Education in the First Period of Portuguese Dictatorship**

*Emília V. Gomez, Augusto J.S. Fitas, Fátima Nunes*

**Session IV.: Institutions for Science and Development**

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Patrick Petitjean*

**Science and Social Inequality: Caste and Gender in Modern Physics in India**

*Abha Sur*

**Personal Motivation in the Creation of the First Profession and Research Institutions of Physics in Mexico**

*Maria Ramos*

**The Political Engagement of a Scientific Institution: The Museu Nacional of Rio de Janeiro in the Beginning of the 20th Century**

*Heloisa M. Bertol Domingues*

**S38 Marxism and 20th Century Natural Science**

**Organisers: Anja Jacobsen, Alexei Kojevnikov, Masakatsu Yamazaki, with the participation of Olival Freire Junior**

Room:A15

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Anja Jacobsen*

**Marx's Appeal to Dutch Scientists**

*Leo P. Molenaar*

**Vygotsky, Blonsky and Marxist Psychology in Soviet Russia**

*Alexander Dmitriev*

**Soviet Marxism and Scientism**

*Alexei B. Kojevnikov*

**Re-examination of the Disputes Over the Interpretation of Physical Theories in Pre-War Soviet Russia: From the Philosophical Viewpoint**

*Koji Kanayama*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Alexei Kojevnikov*

**Foundations of Quantum Theory and Marxism: Rosenfeld Versus Bohm**

*Anja Skaar Jacobsen*

**Le Lyssenkisme et la Conceptualisation de la Science Prolétarienne**

*Deniz Uztopal*

**The Impact of the Soviet Genetics Controversy on Japan from the Late 1930s to the Early 1950s**

*Hirofumi Saito*

**Marxism as a Useful Tool: Japanese Particle Physicists**

*Masakatsu Yamazaki*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Masakatsu Yamazaki*

**Rejection and Acceptance of Plate Tectonics: Stalinism and the Japanese Geological Community**

*Jiro Tomari*

**Marxist Philosophy and Natural Science in the Last Days of the USSR**

*Paul Josephson*

## **S39 Early Modern Conversations between Science and the World's Religions**

**Organisers: Scott Gerard Prinster, Efthymios Nicolaidis**

Room: A8

**Friday, 31 July, 17.30 – 19.30**

*Chair: Ekmeleddin Ihsanoglu*

**The Heresy Prosecution of Renaissance Scholars Domenico Scandella, Giordano Bruno, and Galileo Galilei**

*Scott G. Prinster*

**Oswald Croll's "De signaturis internis rerum": A Theory of Pharmacognosy at the Crossroads of Tradition and Modernity**

*Fabienne Gallaire*

**The Atmosphere as Physical Mirror of the Society – The Case of Jean André Deluc (1727-1817)**

*Marita Hübner*

**Laplace's Private Religious Discomfort**

*Roger Hahn*

**The Scientific Revolution and the Two Faces of Augustinianism**

*Rob Iliffe*

**The Scientific Revolution and the Eastern Orthodox Church**

*Efthymios Nicolaidis*

## **S40 Visual Representations in Science and Pseudo-Science in Pre-Modern and Non-Western Cultures**

**Organisers: Alexei Volkov, Vera Dorofeeva-Lichtmann**

Room: A14

**Session I.: Pre-modern Cartography**

**Friday, 31 July, 11.30 – 13.30**

*Chair: Alexei Volkov*

**Maps of Chinese Empire in East Asian Cartographic Traditions: An Attempt at a Typology**

*Vera Dorofeeva-Lichtmann*

**The Representation of Japanese Islands on European Maps**

*Ekaterina Simonova-Gudzenko*

**Map Behind the Mask of a Talisman: The Taoist Diagram of the "True Form of the Eastern Sacred Mountain Tai"**

*Sheng Jiang*

**Session II.: Diagrams in Pre-modern Science**

**Friday, 31 July, 15.00 – 17.00**

*Chair: Vera Dorofeeva-Lichtmann*

**Diagram and Algebraic Equations in Chinese Mathematics of the 13th Century: The Example of the Yigu yanduan by Li Ye**

*Charlotte V. Pollet*

**A Survey of Geometrical Figures in Korean Mathematical Texts in 17th to 19th Centuries**

*Jia-Ming Ying*

**Astronomy and Astral Divination in Early Medieval Japan**

*Kam-Wing Fung*

**Session III.: Talismans and Pseudo-medical Diagrams**

**Friday, 31 July, 17.30 – 19.30**

*Chair: Kam-Wing Fung*

**Mapping the Body in Early Medieval Daoism: Visualization of Deities in the Laozi Zhongjing**

*Alexandre Iliouchine*

**The Talismanic Tableaux of the Masters of Psalmodia: Between Writing and Image in China**

*Aurélie Névoz*

**Talismans and Diagrams in the Manuscripts of the Minority Nationalities of Northern Vietnam**

*Alexei K. Volkov*

**S41 Ideas and Instruments in the Iberian World in Early Modern Times (15th to 17th Century)**

**Organisers: Víctor Navarro Brotons, Henrique Leitão**

Room: A4

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Susana Gómez*

**Portuguese Cosmography in Sixteenth-Century Florence. Portuguese Maps in the Grand-Ducal Collections: Their Use, Influence and Legacy**

*Angelo Cattaneo*

**The Magnetic Variation and the Variation Compass in Portuguese Navigation Techniques, XV to XVIII Centuries**

*José Malhão Pereira*

**Mathematical Diagrams and Other Theoretical "Instruments" in 16th Century Nautical Science**

*Henrique Leitão*

**Mathematics and Cosmography in Sixteenth Century (Second Half) Spain: Instruments, Ideas, and Practices**

*Víctor Navarro Brotons*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Henrique Leitão*

**Cosmography and Astrology in Manila: Tracing an Intellectual Network in the Iberian Colonial World**

*Ana Avalos*

**Clavius, Coignet, Galileo, Gunter: the European Discussion About the Sector in Lisbon**

*Samuel Gessner*

**Instruments for Learning. The Practice of Astrology and Astrological Discs**

*Tayra M.C. Lanuza-Navarro*

**Instruments Employed by Master Esquivel to Create the Map of Spain (c. 1555)**

*Isabel Vicente, Antonio Crespo*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Victor Navarro Brotons*

**Mathematical Instruments in the Spanish Artillery Treatises, 1530-1700**

*Mariano Esteban Piñeiro*

**New Worlds and Old Languages: The Problem of the Transmission of Knowledge in Utopian Literature**

*Susana Gómez*

**Jose Zaragoza and the Scientific Renewal in 17th Century Spain: Ideas, Instruments, and Practices**

*Eduard Recasens*

**S42 The Emergence of the Periodical Form (17th-18th Centuries) as an Instrument of Scientific Change**

**Organisers: Jeanne Peiffer, Maria Conforti, Fernando Reis, Iordan**

**Avramov**

**Room: B3**

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Fernando Reis*

**Advancing the Baconian Science? ‘Queries for Natural History’ in the Early Philosophical Transactions and the Correspondence of Henry Oldenburg**

*Iordan V. Avramov*

**Nouvelles Stratégies de Communication Scientifique dans l’Italie Moderne. Les Publications de A. Vallisneri dans la Revue « La Galleria di Minerva »**

*Cristina Dessì*

**Testimonial Forms of Scientific Knowledge Presentation**

*Simone De Angelis*

**Mathematical Instruments in the Seventeenth-century Journal des Savants**

*Jeanne Peiffer*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Maria Conforti*

**Beyond Instructions. Scientific Instruments in Early Modern Italian Periodicals**

*Maria Conforti*

**Notes on Advertising Microscopes in the Seventeenth Century Italy.**

*Michela Fazzari*

**About the Scientific Discourse in the Kaiserlich-königlich Privilegirten Anzeigen**

*Ágoston Zénó Bernád*

**A Veil of Ignorance: Anonymity and Promotion of Self in the Eighteenth-Century Republic of Letters**

*Mathias Persson*

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Jeanne Peiffer*

**Disseminating the Sciences to the Portuguese Readers in Late Eighteenth-century Periodicals**

*Fernando E. Reis*

**Jacopo Riccati Organizer of Mathematics Knowledge and Advanced Research in Italian Journals of 18th Century**

*Clara Silvia Roero*

**Vulgariser le Mesmérisme: le Magnétisme Animal dans les Périodiques Italiens au XVIIIe Siècle**

*Patrizia Delpiano*

**Les Observations sur la Physique et les Questions Agricoles Entre 1771 et 1779**

*Paul M.M. Robin*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Silvia Roero*

**Fonction et Statut de la Traduction dans le Journal des Scavants**

*Georgette Stefani-Meyer*

**Communicating Swedish Science in German: The Periodicals of Swedish-Pomerania**

*Andreas Önnarfors*

**S43 Science, Space, and Claims to European Domination – The Dynamics of Knowledge from the Renaissance through the Enlightenment**

**Organisers: Catherine Jami, Laszlo Kontler, Antonella Romano**

**Room: B2**

**Friday, 31 July, 17.30 – 19.30**

*Chair: Antonella Romano*

**European Scientific Mission in China Seen From Mexico: Challenging European Domination from the "Periphery"**

*Antonella Romano*

**New Knowledge on the New World and the Shaping of Historical Discipline: Provincializing the Enlightenment**

*Silvia Sebastiani*

**Relevant Knowledge on the Margins: Maximilian Hell and the Eighteenth-century Astronomers' Republic**

*László Kontler*

**Herder's Travels: Language, Sociability, and the Concept of the Nation**

*Anthony LaVopa*



**Useful Knowledge and Academic Reform in Hungary at the End of the Eighteenth Century**

*B. Zsuzsanna Török*

**Erudition as Epistemic Culture: Ideals, Strategies, Practices**

*Hans Erich Boedeker*

## **S44 The Transmission of Modern Scientific Knowledge from the West to China**

**Organisers: Baichun Zhang, Yibao Xu**

Room: A5

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Baichun Zhang*

**Expeditions of the Russian Academy of Sciences and Studying of China in the First Half of the Nineteenth Century**

*Tatiana Y. Feklova*

**Galileo's Military Compass in China**

*Yibao Xu*

**Westernization of Mathematics Education in China: Calvin Wilson Mateer's Work**

*Yi Han*

**Development of Mathematical Education and the Professionalization of Chinese Mathematicians During 1860-1904**

*Miao Tian*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Yibao Xu*

**The Transmission of Western Mechanics into China in the Seventeenth Century**

*Baichun Zhang, Miao Tian, Matthias Schemmel*

**The Modernization of Chinese Industry Via Meiji Japan**

*Jian Yang*

**The Academic Activities of the Chinese Physicists in Europe from 1920s to 1950s**

*Xiaodong Yin*

**Animadversion on the Quantum Mechanical Viewpoints of the Copenhagen School in China from 1950s to 1970s**

*Huakai Hu*

## **S45 The Antikythera Mechanism and its Place in the History of Science, Technology and Ideas**

**Organisers: Alexander Jones, Yanis Bitsakis**

Room: A1 (on Friday) and B2

**Session I.: Discovery and Background**

**Friday, 31 July, 17.30 – 19.30**

*Chair: Mike Edmunds*

**Opening**

*Mike Edmunds, Alexander Jones*

**The Antikythera Shipwreck, the Treasure and the Fragments of the Mechanism**  
*Mary Zafeiropoulou, Panagiotis Mitropoulos*

**Prerequisites for the Antikythera Mechanism to be Constructed in the 2nd Cent BCE**  
*Theodosios Tassios*

**The Antikythera Mechanism, the First Mechanical Universe**  
*Xenophon Moussas, Dionysios Kriaris*

**Discussion**

**Session II.: The Mechanism**

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Mike Edmunds*

**The Antikythera Mechanism: An Instrument of Mathematical Astronomy**  
*Tony S. Freeth*

**A Practical Approach to Studying the Antikythera Mechanism**  
*Michael T. Wright*

**A New Model of the Antikythera Mechanism**  
*Kyriakos Efstathiou, Theodora Zacharopoulou, Magdalini Anastasiou, John-Hugh Seiradakis*

**The Solar Anomaly and the Venus Display on the Antikythera Mechanism**  
*James C. Evans*

**Saturday, 1 August, 11.30 – 13.30**

**Discussion**

**Session III.:The Inscriptions**

*Chair: Alexander Jones*

**The Inscription on the Antikythera Mechanism**  
*Yanis Bitsakis, Agamemnon Tselikas, Alexander Jones*

**The Front Cover Plate of the Antikythera Mechanism**  
*Agamemnon Tselikas, Yanis Bitsakis*

**The Eclipse Inscriptions within the Context of Ancient Astronomy**  
*John M. Steele*

**Discussion**

**Saturday, 1 August, 15.00 – 17.00**

**The Parapegma of the Antikythera Mechanism**  
*Tony Freeth*

**Astronomical Implications of the Parapegma of the Antikythera Mechanism**  
*Magdalini Anastasiou, John-Hugh Seiradakis*

**The Antikythera Parapegma in Context**  
*Daryn Lehoux*

**Discussion**

## **Session IV.: The Mechanism in Context**

*Chair: Theodossios Tassios*

### **Mechanics, Thought, and the Marketplace – The Antikythera Mechanism in Context**

*Michael G. Edmunds*

**Saturday, 1 August, 17.30 – 19.30**

#### **Instructions for the Instrument-Maker? Ptolemy's Planetary Hypotheses and Mechanical Representations**

*Elizabeth Burns*

#### **A Comparison Between the Astrolabe and the Antikythera Mechanism**

*Flora Vafea*

#### **Une Fille d'Anticythère: La Calotte Zodiacale de Chevroches et ses Cousins Bourguignons**

*Frédéric Devevey, Christian Vernou, Patrice Cauderlier*

#### **The Inscriptions of the Disc of Chevroches into their Context**

*Patrice Cauderlier*

#### **Discussion**

## **S46 National Funding of Biomedical Research**

**Organisers: Giuliana Gemelli, Jean-François Picard, William H. Schneider**

**Room: A3**

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: William H. Schneider*

#### **From Private Initiative to Public Government Funding of Medical Research and Public Health in Italy: Opportunities and Constraints**

*Giuliana Gemelli*

#### **The Medical Research Council in Britain: Science, Utility and Politics Since 1913**

*John V. Pickstone*

#### **The First Medical Research Institute in China: The North Manchurian Plague Prevention Service**

*Daqing Zhang*

#### **The Meeting of Medicine and Biology in France: Success and Limits of Political Planning**

*Jean-François Picard*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Giuliana Gemelli*

#### **The Birth of the Fight Against Cancer in Europe: The Case of EORTC**

*Bertrand Dargelos*

#### **Internal and External Influences on the Establishment of the NIH Extramural Funding Program in the United States**

*William H. Schneider*

**Shaping Scientific Research with Decisions Not to Fund: The U.S. Government and Human-Embryo Research**

*Doris T. Zallen*

**Researching Public Health in the Age of Biomedicine: Population-Based Science and Expertise in France and Britain (1940s-1980s)**

*Luc Berlivet*

**S47 Letters at War – Scientific Controversies in the Correspondences of the 17th and 18th Century**

**Organisers: Anne-Lise Rey, Siegfried Bodenmann**

Room: A13

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Siegfried Bodenmann*

**The Interplay Between the Private and the Public Dimensions in 17th and 18th Centuries Scientific Debates**

*Marcelo Dascal*

**Geometrization or Mathematization: Christian Huygens' Critiques on Infinitesimal Analysis**

*Fabien Chareix*

**Routine Controversies: Mathematical Challenges in Early Modern France**

*Catherine Goldstein*

**La Controverse Entre G. W. Leibniz et Denis Papin: de la Polémique Publique à la Correspondance**

*Anne-Lise Rey*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Jean-Pierre Schandeler*

**Anatomie d'une Controverse Épistolaire: la « Correspondance » Leibniz-Clarke (1715-1716)**

*Philippe Hamou*

**Le Rôle des Correspondances dans la Querelle de la Circulation Sanguine**

*Claire E. Crignon-De Oliveira*

**Correspondre avec Son Médecin à l'âge des Lumières: débats et contestations**

*Vincent Barras, Séverine Pilloud*

**Enlightened Controversies or Controversies in the Enlightenment? Albrecht von Haller versus Coschwitz and La Mettrie**

*Rainer Godel*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Anne-Lise Rey*

**La Violence sous le Verbe Académique. Aspect Rhétorique d'un « Débat » sur la Certitude en Histoire à l'Académie des Inscriptions et Belles-lettres au XVIIIe Siècle**

*Jean-Pierre Schandeler*

**Spreading the Word: Reporting an Eighteenth-Century Controversy About Lightning Rods**

*Roderick W. Home*

**Une Réconciliation Controversée de Séléné et Newton: Clairaut, d'Alembert, Euler et la Théorie de la Lune**

*Siegfried Bodenmann*

**Final Discussion**

*Anne-Lise Rey, Siegfried Bodenmann*

**S48 Networks of Instrumentation in the Neurosciences**

**Organisers: Jean-Gaël Barbara, Cornelius Borck**

Room: A10

**Friday, 31 July, 11.30 – 13.30**

*Chair: Jean-Gaël Barbara*

**Technical Advances in Neurochemistry: Histofluorescence and Immunohistochemistry**

*Claude A. Debru*

**A Fine Balance: The Cultural Implications of Indirect Measurement**

*Gabriel Finkelstein*

**Action Potentials and the “Digitization” of the Nervous System by European Scientists Between 1900 and 1950**

*François Clarac*

**The PPI Network: From Spiritual Brain to Future Antipsychotics?**

*Nicolas Langlitz*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Cornelius Borck*

**Epilepsy, a Disease Between the Fields of Clinics and Surgery in the Twentieth Century**

*Celine Cherici*

**Electric Fish Discoveries in Modern Age: Complex Networks of Scientific Endeavour and Historical Intricacies.**

*Marco Piccolino*

**From Leipzig to Cambridge, from Wundt to James: Hugo Münsterberg and his Laboratories for Experimental Psychology**

*Henning Schmidgen*

**Travels of a Bioassay: The Eserinized Leech Muscle in Henry Dale's Lab and Beyond**

*Tilli Tansey*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Cornelius Borck*

**Ex-radar Folk with Biological Leanings?: Models, Electronics, and the Nerve Impulse at WWII**

*Max Stadler*

**What was in their Luggage? German Refugee Neuroscientists and the Emergence of Interdisciplinary Research Networks in North-America, 1933-1963**

*Frank W. Stahnisch*

**S49 Mediators of Sciences. Women Translators of Scientific Texts, 1600-1850 – Mediatrices de Sciences. Femme Traductrices de Textes Scientifiques, 1600-1850**

**Organisers: Patrice Bret, Brigitte Van Tiggelen**

Room: A3

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Patrice Bret*

**Women Translators in 19th Century Greece: The Case of "Ladies' Newspaper" and "Estia"**

*Poly Giannakopoulou*

**Transforming the Text: Translation Practices of the Philosopher, Emilie Du Chatelet**

*Judith P. Zinsser*

**Mariangela Ardinghelli: Poetry and Electricity in 18th-century Naples.**

*Corinna Guerra*

**Mme Thiroux d'Arconville and the Uses of Translation : Anonymity, Autonomy, and Authorship in Women's Contribution to Chemistry in the XVIIIth Century**

*Brigitte R.P. Van Tiggelen*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Brigitte R.P. Van Tiggelen*

**Madame Lavoisier, une Negociatrice de la Republique des Lettres**

*Keiko Kawashima*

**Women Translating Science in the Spanish Enlightenment**

*Elena Serrano*

**Mme Picardet and the Translation of European Chemistry at the End of the Eighteenth Century**

*Patrice Bret*

**God in Translation: Mary Somerville and the Moral Guardianship of Science**

*Michal Meyer*

**S50 Plants as Ideas and Instruments: A Symposium in Memory of Philip J. Pauly**

**Organisers: Barbara Kimmelman, Harro Maat**

Room: A6

**Session I: Plants as Ideas of Culture and Taste**

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Barbara Kimmelman*

**In the Name of the Bourgeoisie. Early Belgian Plant Collectors in America (1830-1865)**

*Denis J.N. Diagre*

**Seeds of Wealth: The Changing Life of Cotton Plants in Nineteenth Century Western India**

*Sandip K. Hazareesingh*

**Pure Lines, Modular Genotype, and Entrenched Genetic Identity: A Cultural History of the Rise of Modern Genetics (1860-1915)**

*Christophe Bonneuil, Philip Thurtle*

**A Taste for the Spoils of Empire: David Fairchild and American Plant Cosmopolitanism**

*Barbara A. Kimmelman*

**Session II.: Plants as Instruments of Public Policy**

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Harro Maat*

**What Has Been Learned from Past Green Revolutions?**

*Jonathan Harwood*

**The Co-Evolution of Potatoes and Pigs and the Political Economy of Nazism**

*Tiago Saraiva*

**Instrumental Thinking About the Genotype and Phenotype of IRRI's High Yielding Rice Varieties**

*Harro Maat*

**Botanical Education: Contested Territories in Public Education 1900-2000**

*Dawn Sanders*

**S51 For Better or for Worse? Collaborative Couples in the Sciences**

**Organisers: Brigitte Van Tiggelen, Annette Lykknes**

Room: A3

**Friday, 31 July, 11.30 – 13.30**

*Chair: Brigitte Van Tiggelen*

**Changing Strategies for Collaborative Couples in the Sciences**

*Nancy G. Slack*

**The Allocation of Scientific Credit to Collaborative Couples: The Lederbergs and the 1958 Nobel Prize in Physiology**

*Pnina Geraldine Abir-Am, Christina C. Luo, Pinar A. Ozisik*

**Ida and Walter Noddack: A Collaborating Couple in Chemistry**

*Brigitte Van Tiggelen, Annette Lykknes*

**Invisibility and Partnership: Families in Early Twentieth Century Swedish Science**

*Staffan R. Bergwik*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Annette Lykknes*

**Scientific Couples in Hungary**

*Éva Vámos*

**Married for Science: Success and Failure in the Collaboration Between Astrid Cleve and Hans von Euler-Chelpin, 1902–1912**

*Kristina Espmark*

**Science at Terling: Placing Collaboration in the Context of the Victorian Country House**

*Donald L. Opitz*

**Pioneering Couples in Chemistry and in its Popularisation**

*Jean-Jacques Dreifuss, Natalia Tikhonov*

## **S52 Formation of Experimentation in Plant Sciences from 18th to 19th Centuries**

**Organisers: Brigitte Hoppe, Nicolas Robin**

Room: A15

**Friday, 31 July, 11.30 – 13.30**

*Chair: Brigitte Hoppe*

**Studies on the Balsams in the 18th Century: A Modern Experimental Approach**

*Marcia H.M. Ferraz, Ana M. Alfonso-Goldfarb, Silvia I. Waisse de Priven*

**Plants, Private Estates and Public Assistance: Formation of Plant Breeding Experimentation in Russia, 18th – 19th Centuries**

*Olga Yu. Elina*

**From Experimentation on Plants to an Experimental Analysis of Plants in Early Electrophysiology**

*Brigitte Hoppe*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Nicolas Robin*

**18th Century Utilitarian Botany and the Manufacturing of Potash in Colonial Brazil**

*Fernando J. Luna de Oliveira*

**The Experimental Discovery of the Nature of Plants – The Empirical Spirit of the Scientific Revolution**

*Nicolas Robin*

**The Human Instrument in the 18th Century Laboratory**

*Larry Stewart*

## **S53 Communicating Science in 20th Century Europe: Comparative Perspectives**

**Organisers: Arne Schirrmache, Leszek Zasztowt**

Room: A14

**Session I: 20th Century Publishing Phenomena**

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Arne Schirrmacher*

**New Initiatives in Popular Science Publishing in Early Twentieth-Century Britain**

*Peter J. Bowler*

**Two Models or One? Popularization of Science in Poland Before and After the Collapse of the Soviet Bloc**

*Jarostaw Włodarczyk*

**Popular Science Books and Human-Origins-Research in Contemporary Spain. Atapuerca – The Making of a Magic Mountain.**

*Oliver Hochadel*



## **Session II.: Science Communication as Political Tool**

**The Political Background of Polish and Soviet Science Popularization in the Post-war Period**

*Leszek Zasztowt*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Christine Blondel*

**Public Policies of Publicisation of Science in Post-war France. Toward a "State Affair"**

*Andrée Bergeron*

## **Session III.: Science Imprints: Science Content and Genres of Newspapers, Journals, Books**

**A Comparative Approach to the Representations of Science and Technology in the Portuguese Press at the Beginning of the 20th Century**

*Ana Simões, Ana Carneiro, Maria Paula Diogo*

**Science and Technology in the Early-20th Century Greek Daily Press**

*Erini Mergoupi-Savadiou, Faidra Papanelopoulou, Sypros Tzokas*

**The Popularization of Science in Hungary, 1867-1945: Textbooks, Media, Personalities**

*Tibor Frank*

## **Session IV.: Beyond Print: Science Communication in the Early Audio-visual Age**

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Peter J. Bowler*

**Science Programs as Integral Part of Weimar and Post-war German Radio**

*Arne Schirmmacher*

**Science in the French Popular Media in the 1930s and 40s: From Radio to Movies, Songs, and Cabaret**

*Daniel Raichvarg*

## **Session V.: New Perspectives in Popular Science Studies**

**General Discussion**

## **S54 Sources of East Asian History of Science, Technology, and Medicine**

**Organisers: Paul U. Unschuld, Paul D. Buell, Christopher G. Muench (Germany/USA/USA)**

Room: B3

**Friday, 31 July, 11.30 – 13.30**

*Chair: Paul D. Buell*

**Textual Sources of the Traditional Chinese Life Science Feng Shui**

*Manfred Kubny*

**“Mister Chen’s Instructions on the Inner Cinnabar”: A Source for Transformation**

*Rudolf Pfister*

**A Source for the Cosmopolitan Medicine of the Mongol Era: Huihui Yaofang**

*Paul D. Buell*

**The Significance of Research on Ancient Chinese Medical Literature Preserved Not in Chinese Archives but in Foreign Libraries Only**

*Jinsheng Zheng, Zhibin Zhang*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Paul D. Buell*

**Michael Boym, Le Chéron d'Incarville and João Loureiro – Three Important Sources in the History of Botany of China**

*Manuel S. Pinto, Noel Golvers*

**Manchu Texts on Natural Science in the Early Qing Period: The Manchu Anatomy and other Manchu Books on Mathematics and Medicine**

*Junsei Watanabe*

**Sources, Content and Influence of the Book "Les Secrets de la Médecine des Chinois" (1671)**

*Eric Marié*

**A New Realm of Sources for Chinese Medical Historiography. The Chinese Medical Manuscripts of the 16th to the 20 Century in Two Collections in Berlin**

*Paul U. Unschuld*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Paul U. Unschuld*

**New Perspectives on Late Imperial Medical Texts**

*Angelika C. Messner*

**Chinese Medical Practice on the Western Frontier: A Case Study in Adaptation**

*Christopher Muench*

**S56 Communities and Communication in East Asian Sciences**

**Organisers: Catherine Jami, Christopher Cullen**

Room: D1

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Michele Thompson*

**Searching for the Community of 'Astronomers' in Early Imperial China**

*Cullen Christopher*

**Scholars, the State, and the Circulation of Mathematical Knowledge in Early Qing China (1644-1735)**

*Catherine Jami*

**The Emergence of Literati Mathematicians and the New Culture of Mathematics in Late Eighteenth-century Korea**

*Jongtae Lim*

**Medical Networks and Circulation of Knowledge in the Margins of the Qing Empire (1644-1911)**

*Florence Bretelle-Establet*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Catherine Jami*

**Who Were the First Generation of ‘Statisticians’ in Early 20th Century China?**

*Andrea Bréard*

**Science, Nationalism, and Internationalism in Early 20th Century China**

*Fa-Ti Fan*

**Gia Truyen and Arapprochement Within the Healing Community in Vietnam**

*Michele Thompson*

**National Academy of Peiping and Scientists Trained in France**

*Xiao Liu*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Christopher Cullen*

**Continuity/Discontinuity and Changing Agents of Japan's Colonial Sciences**

*Togo Tsukahara*

**Community Building and Transmission of Knowledge: The Case of Quantum Physics in Japan**

*Kenji Ito*

**Precious Few: East Asian Nobel Laureates in Science in the Twentieth Century**

*Dong-Won Kim*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Togo Tsukahara*

**Identifying “Local Area Doctors”: TKM (Traditional Korean Medicine) Practitioners and Disease under the USAMGIK, 1945-1948**

*John DiMoia*

**Constructing the Community of Radiation Medicine in Post-war Japan: Communication Between Japanese and American Scientists**

*Aya Homei*

**Leaping from Theory to Practice: Mathematics in China in the Late 1950s**

*Jiri Hudecek*

**S57 Meanings of “Science” in Twentieth and Twenty-First Century East Asia**

**Organisers: Angelika C. Messner, Bridie Andrews Minehan**

Room: A4

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Angelika C. Messner*

**Linking Chinese Crafts to Global Contexts – The Research Objective of Zhu Qiqian**

*Martin Hofmann*

**Dress Pattern Books and the Diffusion of Western Tailoring Techniques in Maoist China**

*Iris Hopf*

**Reference to Science in the Life-Stories of Senior Chinese Medicine Practitioners in the PRC**

*Lena Springer*

**Sentimental Education in Scientific Terms**

*Angelika C. Messner*

**Meanings of 'Becoming Scientific' in Republican and Early Communist China**

*Bridie Andrews Minehan*

**S58 Iron Curtains and Immaterial Instruments – The Circulation of Software and Computer Science in Cold War Europe**

**Organisers: Gerard Alberts, Maria Bardosova, Helena Durnova, Thomas Misa**

Room: A10

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Maria Bardosova*

**The Feedback of Fear: American and Soviet (Mis)Perceptions of the Other Side's Cybernetics Agenda**

*Slava Gerovitch*

**Computing in Russia Before and After 1991**

*Paul Josephson*

**When the Iron Curtain Leaked: Tracking Eastern European and Soviet Influences upon Belgian Computing History**

*Sandra C.M. Mols, Marie D'Udekem-Gevers*

**Jacek Karpiński – A Polish Bill Gates?**

*Izabela Bondecka-Krzykowska, Anna Ren-Kurc, Marlena Solak*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Thomas J. Misa*

**Vladimír Vand and Scientific Computing**

*Alena Šolcová, Michal Křížek*

**Seeing Like a State? The "Functional Programming Systems" in the Central Planning Economy of East Germany**

*Simon Donig*

**Reasons for the Failure of Soviet Estonian Computer Project Juku**

*Laur Kanger*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Gerard Alberts*

**Science and Politics Intertwined: Slovak Computing in the International Context**

*Maria Bardosova*

**Turning Programming Language into Working Technology: Compiler Construction at the Amsterdam Mathematical Centre, 1960**

*David Nofre, Gerard Alberts*

**Western Effort, International ALGOL 60: Compiler Construction in Czechoslovakia in Early 1960s**

*Helena Durnova*

**Eastern European Computer Pioneers' Roundtable**

**S59 Instruments for Modifying and Enhancing Oneself and their Social Impact: The Case of Amphetamines and Some of their Derivatives**

**Organisers: Pascal Nouvel, Maria-Teresa Brancaccio**

Room: A3

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Maria-Teresa Brancaccio*

**Les Thérapies Médicamenteuses de la Bile Noire par Râzî (865 – 925)**

*Mehrnaz Katouzian-Safadi*

**When 'Modifying the Self' is a Command: Amphetamines and the Allied Military in the Second World War**

*Nicolas Rasmussen*

**Birth, Growth and Decline of a Bio-power: Some Remarks on the Career of the First Synthetic Psychotropic Drug, Amphetamine.**

*Pascal Nouvel*

**A Conceptual History of the Notion of Bio-power**

*Dominique Lecourt*

**'Make Me Smarter': Amphetamines and the Quest for Cognitive Enhancement**

*Maria Teresa Brancaccio*

**S60 Colonizing Drugs – Constructing the Other in the Mirror of (Precarious) Substances**

**Organiser: Bettina Wahrig**

Room: A7

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Bettina Wahrig*

**Will the Real Colonizer Please Stand Up? Early Modern Controversies on the Effects of Tobacco on the Western Body.**

*Martina Mittag*

**Religion – Pharmacy – Transfer of Pharmaceutical Knowledge and Drugs Men of God as Mediators Between the Cultures (16th to 18th c.)**

*Sabine Anagnostou*

**Drugs from the Mountains: Coca as an Exotic Tonic (ca. 1850-1900)**

*Bettina Wahrig*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Bettina Wahrig*

**The Toxic Total Situation: Preservatives and the Critical Consumer Around 1960 in West Germany**

*Heiko Stoff*

**Standardizing Sleeping-Sickness Therapy as a Precarious German-British-Belgium-Spanish Cooperation in the Interwar Period**

*Marion Hulverscheidt*

**Test Systems and Mutagens: The Regulation of Scientific, Consumptive, and Dangerous Objects**

*Alexander Schwerin*

## **S63 Entanglements of Instruments and Media in Investigating Organic Worlds**

**Organisers: Joan Steigerwald, Philippe Huneman**

Room: A13

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Joan Steigerwald*

**Defining Life in the Eighteenth Century: Instrumental Reasoning, Excitable Matter and Living Subjects**

*Joan Steigerwald*

**The Very Nervous Apparatus : Entanglements of Media, Mind and Matter**

*Cornelius Borck*

**Response-able Experimentation with Toxic Algae**

*Astrid Schrader*

**Generating “Anxiety Like Phenotypes” in the Elevated Plus Maze: A Measure of Mouse Anxiety or a Model of Human Anxiety?**

*Nicole C. Nelson*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Joan Steigerwald*

**The Use of Computer Simulation in Studying Biological Evolution: Pure Possible Processes, Selective Regimes and Open-ended Evolution.**

*Philippe Huneman*

**Recalcitrant Instruments, Objects and Investigators in the Non-invention of a Non-invasive Prenatal Genetic Diagnosis Technique**

*Aryn Martin*

**Excitable Media: Intra-cellular Signal Transduction and Intra-active Models of Cellular Life**

*Natasha S. Myers*

## **S64 Working with Pages and Texts**

**Organisers: Karine Chemla, Ito Kenji, Richard Yeo**

Room: A3

### **Session I.: Working with Texts and Inscriptions**

**Friday, 31 July, 17.30 – 19.30**

*Chair: Ito Kenji*

**Working with Texts and Spaces to Extract Square Roots in Medieval Sanskrit Mathematics**

*Agathe Tamar Keller*

**From Quarry to Paper: Cuvier's Reconstruction of Montmartre Tertiary Mammals**

*Bruno Belhoste*

**Laboratory Writing**

*Hans-Jörg Rheinberger*

### **Session II.: Writing and Rewriting Writings**

**The Significance of Paratext in Buffon's Histoire Naturelle**

*Stephane Schmitt*

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Karine Chemla*

**A Mathematician Writes within a Given Genre: Books of Mathematical Recreations by Dénes König**

*Mitsuko Mizuno*

### **Session III.: The Analysis of Textual Practices and Historiography**

**Focusing on Actual Manuscripts to Discuss What the Genuine Text of Euclid Was**

*Ken Saito*

**Editing Texts and Diagrams: Medieval Islamic Discussions of Archimedean Solids**

*Gregg De Young*

**La Reflexion du Passé Industriel des Pays de Boheme aux Archives du Musée National Technique de Prague**

*Milada Sekyrková*

## **S65 Diverse Cultural Practices in 20th Century Nuclear Physics**

**Organisers: Gisela Mateos, Maria Rentetzi**

Room: A9

**Friday, 31 July, 15.00 – 17.00**

*Chair: Christian Forstner*

**The Greek-American Connection: The First Nuclear Reactor in Greece**

*Maria Rentetzi*

**The Mexican-American Connection: The First Mexican Accelerator**

*Gisela T. Mateos*

**The Norwegian-American Connection: Atom Smashers Before and After WW II.**

*Roland Wittje*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Gisela Mateos*

**Turkey's Participation to the 'Atoms for Peace' Program: Expectations and Consequences**

*Kaan Ata*

**Nabor Carrillo and the First Van De Graaff Particle Accelerator in Mexico**

*Enrique Esqueda Blas, Ramos Lara María de la Paz*

**S66 Framing the Outer World in the Biological and Human Sciences: A Comparative Historical Perspective**

**Organisers: Vincent Guillin, Beth Hannon**

Room: A4

**Friday, 31 July, 11.30 – 13.30**

*Chair: Vincent Guillin*

**Circumstances in Context: The Example of John Stuart Mill's Ethology**

*Vincent Guillin*

**Weismann's Barrier?: the Roles of Soma and Environment in Late Nineteenth Century Evolution**

*Fern M. Elsdon-Baker*

**Milieu, Umwelt and Lebensraum. Friedrich Ratzel and the Beginnings of an Environmental Science**

*Wolf Feuerhahn*

**The Internal and the External in Evolutionary Theory at the Turn of the Twentieth Century**

*Sander Gliboff*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Vincent Guillin*

**"To Do Work in the World": Instrumentalism in Pragmatist Psychology and Philosophy**

*Stephane Madelrieux*

**The Concept of Umwelt in Physiological Anthropology: Von Uexküll, Portmann, Buytendijk**

*Anne M. Fagot-Largeault*

**The Concept of Biodiversity: Between Science and Society**

*Marc Kirsch*

**Finding the Boundary: Evolutionary Developmental Biology**

*Elizabeth M. Hannon*



## **S67 Uses of Cultural Manifolds in Research**

**Organisers: Nathan Sivin, Xiaochun Sun**

Room: A7

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Xiaochun Sun*

**Cultural Manifolds and the Need for Generalists**

*Nathan Sivin*

**The Manipulation of Fire in Chinese Alchemy**

*Juan He*

**Animals as Cultural Manifold**

*Martina Siebert*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Nathan Sivin*

**What Inhibited the Development of the Planetary Theory in Song China?**

*Xiaochun Sun, Guangchao Wang*

**Control vs. Autonomy: Fabrications in Song Astronomy**

*Yu Yu Dong*

**The Needham Question and Beyond**

*Liuxiang Hao, Xiaoye Cao*

## **S69 The Social History of Military Technology**

**Organisers: Barton C. Hacker, Margaret Vining**

Room: B3

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Barton C. Hacker*

**Separating the Men from the Polloi: The Rejection of Missile Technology by the Classical Greeks**

*Nick D. Barley*

**Republican Roman Rejection of Siege Technology**

*Colin D. Hough*

**Seven Reasons for the Rejection of Known Military Technologies in the Classical World**

*Tracey Rihll*

**Children of Mercury, Children of Mars: Civil and Military Technology in German Vernacular Illustrations, 1400-1525**

*Bert Hall*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Barton C. Hacker*

**Native American Adoption of Firearms 1609 – 1640**

*Lawrence E. Babits*

**The Embodied Soldier and the Impact of Technology**

*Michael Budd*

**Spirit of the Age: Inventors, Scientific Instruments, and the Military at the Royal Artillery Institution, Woolwich**

*Steven A. Walton*

**The Conventionnel, the Workers and the War. An Early Welfare State or a Workforce Militarization?**

*Christophe Bonnet*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Barton C. Hacker*

**Weapons and Ethnology in 19th-Century Britain: Lt.-Gen. Pitt-Rivers and his Museum**

*David F. Channell*

**James H. Burton, John W. Mallet, and the Foundations of a New South: System, Uniformity, and Control at the Confederate Ordnance Department**

*Steven G. Collins*

**Navy, Taxes, and People: The Italian Royal Navy's 1874 Shipbuilding Program and its Consequences**

*Ciro Paoletti*

**"Hunk O'Tin" – The American Ambulancier and his Model T in France, 1915-1919**

*Jeffrey Larrabee*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Margaret Vining*

**Visualizing Tanks: War Artists Confront a New Technology on the Western Front**

*Barton C. Hacker*

**Impact: Packaging the U.S. Army Air Force Fire-Raising Practice During the Second World War**

*Ralph R. Hamerla*

**The Norden-Victor Connection: Making Bombsights and Selling Adding Machines in World War II**

*Michael T. Tremblay*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Margaret Vining*

**The Development of Air Defense Systems in France: From Transatlantic Networks to Systems Engineering (1955–1975)**

*Pierre-E. Mounier-Kuhn*

**Greek Military Aviation in the Electronic Era: Technical Protocols, Competition, and International Trends**

*Dimitrios E. Ziakkas*

**Touching the Face of God: Religion and the U.S. Air Force**

*Tim Cathcart*

**S70 'Spacing Earth History': Geological and Paleontological Sciences in Cultural Contexts from 17th to 20th Centuries**

**Organisers: Bernhard Fritscher, Miklos Kazmer**

Room: A16

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Bernhard Fritscher*

**Une "Approche Organique" des Montagnes en Europe Médiévale – Sauvegardée par des Mineurs Allemands en Hongrie et Documenté par Marsigli**

*Péter Papp*

**Origin of Geology in the Netherlands (1780-1839)**

*Thomas J.A. Reijers*

**First Geological Investigations of Australia's Coastal Regions by French and British Expeditions, 1788-1803: An Example of Scientific Cooperation Between Two Nations at War**

*Wolf Mayer*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Bernhard Fritscher*

**Letters of German Naturalists to Domokos Teleki, the First President of the Jena Mineralogical Society, in the End of the 18th Century**

*István Viczián*

**Mining Versus Archaeology: National Styles in Early 19th Century Stratigraphy**

*Bernhard Fritscher*

**Lyell's Palaeontological Research in Gran Canaria**

*Consuelo Sendino, Paul D. Taylor*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Miklós Kázmér*

**Geneological Reasoning in Alpine Tectonics. Linking Family History to Earth History**

*Andrea B. Westermann*

**Styles in Geology: Eduard Suess and Erudition**

*Ernst P. Hamm*

**The Ries Patriots: The Influence of Nationalism and Local Confinement on a Science Distrusting Instruments**

*Martina M. Kölbl-Ebert*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Miklós Kázmér*

**Geology as a Service in Nation Building – The Japanese Example**

*Andreas N. Küppers, Yasuo Nogami*

**The Soviet Experts and the Integrated Survey of Natural Resources in China (1950s)**

*Xiaojing Hu*

## **S71 Instrumentalizing Social Practice – Socializing Instrumental Practice**

**Organisers: Peter Heering, Klaus Staubermann**

Room: A9

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Peter L. Jakab*

**Political Ideas and Instrumental Ideals: The Design of Scientific Instruments in the Late 18th Century**

*Peter Heering*

**Calorimetry and the Social Question in the Late Nineteenth Century**

*Elizabeth R. Neswald*

**Instrumental Knowledge: Understanding Historic Socio-Technological Practice through Engineering Models**

*Klaus Staubermann*

**Accelerating for Peace Science, Technology, and the American Decade of Nuclear Research in India**

*Jahnvi Phalkey*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Klaus Staubermann*

**Sounds for Comfort - of Computers Users in the 1950s**

*Gerard Alberts*

**Orbiting Mars, Orbiting a Camera: The Ambiguities of Building a Scientific Research Group Around a Single Instrument**

*Jan Frercks*

**Gathering Data, Losing Focus: The Aeronautical Research Instrumentation of Samuel Pierpont Langley**

*Peter L. Jakab*

**“A Fatal Hour for Metallography”: The Cognitive and Social Appropriation of New Instruments and Methods in Aachen’s Ferrous Metallurgy from 1900 to 1914**

*Stefan Krebs*

## **S72 60 Years of Cybernetics and Information Theory – Ideas, Artefacts and Instruments**

**Organiser: Lars Bluma**

Room: A9

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Peter Heering*

**What Cybernetics Did to Change the Mindsets of Engineers: New Design Procedures in the 50s and 60s**

*Lars Bluma*

**Crossing Boundaries of Cybernetics and Information/Communication Theory. The Idea of Fuzzy Sets and its First Technical Application**

*Rudolf Seising*

**Bionic Prototypes as Scientific Models: Experimental Epistemology at the Biological Computer Laboratory 1958-1974**

*Jan K. Mùggenburg*

**Richard Wagner and his Book on Feedback Systems in Economy**

*Frank Dittmann*

### **S73 Ideas of Technology Across Time and Space: Changing Concepts and Ideologies**

**Organiser: Eric Schatzberg**

Room: A9

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Lars Bluma*

**The Arts and Engineering: Their Meaning and Cultural Place in Late Medieval and Early Modern Europe**

*Pamela O. Long*

**A Weberian Model on Technological Knowledge – Medieval Transmission of Knowledge on Pigments and Dyes for Painters and Illuminators**

*Guido Frison*

**“Machine” and “Decline”: Conceptions of Technik in the Conservative Revolution of the Weimar Republic**

*Adelheid Voskuhl*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Stefan Krebs*

**The Transnational Shaping of Theory of Technology in Imperial Japan, 1931-1945**

*Aaron S. Moore*

**The Role of Continental Concepts of Technology in American Social Thought, From Talcott Parsons through Herbert Marcuse**

*Eric Schatzberg*

### **S74 Technology in the Interaction with Society and the Environment**

**Organiser: Timo Myllyntaus**

Room: A9

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Irina Gouzévitch*

**Technological Responses to Concern for the Future: Finnish Experience on Copying with Limits of Natural Resources**

*Timo J. Myllyntaus*

**Driving is (Not) for Everyone – Gender Perspective on Motoring Experiences in Finland, 1949-1980**

*Riikka Jalonen*

**Against the Tide – Technology Transfer from the Periphery**  
*Jan Kunnas*

**Resource Conservation and Electrification in California**  
*James C. Williams*

## **S75 Playing with Technology**

**Organiser: Stefan Poser**

Room: A9

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Reinhold Bauer*

**Heavenly Games of Flight on the Prehistory of Flying: Between Aesthetic Illusion and Wonderful Technology**

*Natascha Adamowsky*

**Toys, Educational Toys, and Scientific Instruments**

*Joseph Wachelder*

**Stories of Modern Technology in the Child's World During the Cold War: The Case of the Netherlands**

*Dick Van Lente*

**Technology, Play and Innovation**

*Stefan Poser*

## **S76 Politics, Technology and Infrastructure**

**Organiser: ICOHTEC**

Room: A9

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Janis Langins*

**Bertrand Goldschmidt, Plutonium and Technobiography**

*Matthew Adamson*

**The Building of the Paris Métro, from 1898 to Second World War: An Overview on the History of Technology**

*Pascal B. Desabres*

**Satellites into Plowshares: Politics and Space Technology, 1946-1967**

*Sean Kalic*

**A Glimpse Behind the Curtain: Polish Perspectives on the American Housing Industry in the 1950s**

*Slawomir Lotysz*

**Tires for Giants. The Development of the Pneumatic Tire and its Importance for Road Transportation**

*Jørgen Burchardt*

## **S77 The Impact of Ideas and Ideologies on Science and Technical Innovations**

**Organiser: ICOHTEC**

Room: A9

**Friday, 31 July, 11.30 – 13.30**

*Chair: Dick van Lente*

**Engineers and Conservatives in the Creation of State Hydroelectric Power in Canada**

*Janis Langins*

**The Technology Gap in Canadian Medicare**

*John B. Stranges*

**Institutional Cultural Influence on the Application of Science to War, 1914 to 1945**

*David Zimmerman*

**Evidences Regarding the Introduction of Metallurgy and the Utilization of Gun Powder in Europe**

*Horia Colan*

## **S79 Special Topics**

**Organiser: ICOHTEC**

Room: A15

**Friday, 31 July, 17.30 – 19.30**

*Chair: Alexandre Herlea*

**The Historical Development of the Notions “Natural” and “Artificial”**

*Vitaly Gorokhov*

**Water Pollution and its Treatment in Nineteenth-century United States**

*Anthony N. Stranges*

**Mining: Ideas and Instruments in Germany 1750 to 1900**

*Wolfhard Weber*

**The International Committee for the History of Technology (ICOHTEC). Scientific Development and Politics from 1968 till 1989**

*Holger Skorupa*

## **S80 Practices, Views, and Networks in 19th and 20th Century Mathematics**

**Organisers: Laura Rodríguez, Frédéric Brechenmacher**

Room: A16

**Friday, 31 July, 11.30 – 13.30**

*Chair: Frederic Brechenmacher*

**What is 'Mathematical Practice' in The Philosophy of Mathematical Practice?**

*Jessica Carter*

**Hilbert on the Notion of Completeness: A Conceptual and Historical Analysis**

*Catherine Karella*

**Emile Picard: A View on his Mathematical and Epistemological Ideas**

*Pierre Lamande*

**History of Mathematics as a Way of Justification. Mathematicians' Views on their own Discipline During the Weimar Republic**

*Bjoern T. Schirmeier*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Laura Rodriguez*

**Views and Practices in the Early Functional Analysis**

*Laura Rodríguez*

**A Triple Point of Mathematics: Born and Wiener's "New Formulation of the Laws of Quantization"**

*Arianna Borrelli*

**Networks and Individual Agency: The Case of Galois Theory in France at the Turn of the 19th Century**

*Caroline Ehrhardt*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Laura Rodriguez*

**On the Identities of Algebra in 19th Century: Algebraic Practices, Networks, Cultural Issues**

*Frédéric Brechenmacher*

**Practices, Networks, and Fields: Making (Historical) Sense of Poincaré's Early Work**

*Renaud Chorlay*

**Shifting Boundaries. Kronecker's Early Work on Complex Multiplication and Dirichlet's Legacy in Number Theory**

*Ivahn Smadja*

**S82 Visual Cognition in the History of Science**

**Organisers: Christophe Heintz, Tamas Tófalvy**

Room: C1

**Friday, 31 July, 17.30 – 19.30**

*Chair: Tamás Tófalvy*

**Visual Cognition and History of Science**

*Christophe Heintz*

**Visual Thinking in Medieval Scientific and Philosophical Manuscripts**

*Anna Somfai*

**What are Genetic Maps Visualizations of?**

*Marion Vorms*

**The Role of Visuality in Konrad Lorenz's Philosophy of Science**

*László Nemes*



**S83 Revisiting Joseph Nedham's 'Rivers and the Sea' Metaphor:  
The Construction of Modern Science and Technology in a  
Global Context, 17th-19th Centuries**

**Organisers: Kapil Raj, Mau Chuan-hui**

Room: A7

**Friday, 31 July, 11.30 – 13.30**

*Chair: Kapil Raj*

**Needham's Rivers and Sea Metaphor and the Nineteenth Century Perception of  
Scientific Knowledge in India**

*Irfan Habib*

**Circulation Intercontinentale des Savoirs et des Techniques au Pérou (XVI-XVIIIe  
Siècle)**

*Carmen Salazar-Soler*

**Maps, Perambulators, Repeating Circles, and Theodolites: Mapping in India and  
Great Britain, 1780-1830**

*Kapil Raj*

**The Jesuit and the Long Life. The First French Translation of a Chinese Text of  
Nurturing Life (Yangsheng) in the Early 18th Century**

*Frédéric Obringer*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Mau Chuan-hui*

**From Starry Abnormity to Meteorological Phenomenon: The Impact of Aristotelian  
View of Comet on Xu Guangqi and Xiong Mingyu in Ming Wanli Period**

*Kuang-Tai Hsu*

**Gewu Rumen: A Case Study of the Introduction of Western Physics into Nineteen-  
Century China**

*Hao Chang*

**Artisanal Know-how and Modern Sciences: The Use of Chinese Traditional  
Knowledge in French Research on Sericulture**

*Chuan-Hui Mau*

**S87 The Reception of Darwinism at the Subnational Level: Cities**

**Organisers: Thomas F. Glick, Hans Henrik Hjermitsev**

Room: A5

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Thomas Glick*

**The Early Reception of the Origin of Species in Boston**

*Thomas F. Glick*

**Harmony of Nature and Struggle for Survival: Reception of Darwinism in Russian  
Plant Geography**

*Anastasia A. Fedotova*

**Darwinism and Neo-Darwinism between Prague and Brno, 1900-1915**

*Michal Šimunek, Tomas Hermann*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Hans Henrik Hjermitsev*

**Darwinism and the Birth of the Polish Urban Intelligentsia: Warsaw, Cracow, and Lwów**

*Daniel Schümann*

**Darwinism and Cultural Struggles in Rural Askov and Metropolitan Copenhagen in Nineteenth-century Denmark**

*Hans H. Hjermitsev*

**S88 Comparative Reception of the Synthetic Theory of Evolution in the Soviet Union, Eastern and Central Europe**

**Organisers: Eduard I. Kolchinsky, Uwe Hossfeld, Oleg Philipchuk**

Room: A5

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Eduard I. Kolchinsky, Oleg Philipchuk*

**Peculiarities of Evolutionary Synthesis in Nazi Germany and Soviet Russia**

*Eduard Kolshinsky*

**The Development of Darwinism by Ukrainian Zoologists (Late 19th – Early 20th Centuries)**

*Oleg Pilipchuk*

**Theodosius Dobzhansky: A Large Step Towards Solving “The Species Problem” – A Main Step Towards “Evolutionary Synthesis”**

*Mikhail Konashev*

**The Teaching of Evolutionary Theory in Russian Secondary Schools Between the World Wars**

*Anna V. Samokish*

**The Selectionist Turn of Bernhard Rensch (1900-1990) through the Prism of Panpsychistic Identism**

*Uwe Hossfeld, Georgy S. Levit*

**Reception of Darwin’s Ideas in Russia: The Struggle for Existence and Natural Selection. V. N. Sukachev’s Experimental Program**

*Yakov Gall*

**S89 The Role of Rail Transport in Development of the Infrastructure in St-Petersburg (Russia) and Kiev (Ukraine) and their Interference in XIX – First Half of XX Centuries**

**Organisers: Margarita Voronina, Alexander Soldatov, Victor Shataev**

Room: A10

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Margarita Voronina*

**Role of the Corpus of Railroad Engineers in Institutionalization of High Technical Education in Russia**

*Boris I. Ivanov*

**The Role of Institute of Engineers of Means of Communication (St. Petersburg, Leningrad) in Formation Engineers of Transport in 1910-1930**

*Margarita M. Voronina*

**Borodin Creativity in a Context of Development of Mobile Structure Engineering of Ukrainian Railroads (Second Half XIX in)**

*Viktor N. Shataev*

**The Warsaw Railway Station in St. Petersburg**

*Alexsander V. Soldatov, Nina P. Soldatova*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Alexander Soldatov*

**K.I. Potier (1786 - 1855) and Applied Geometry Development in Russia.**

*Natalya N. Eliseeva, Nikolai A. Eliseev*

**Department of Physics and its Professors in the Institute of Engineers of Means of Communication**

*Petr V. Velikorussov*

**The Historical Development in Kiev University of Railways Transport**

*Anna P. Berezhtnyak*

**The Investigation of the Development of Non-traditional Types of Transport**

*Elena N. Eliseeva*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Victor Shataev*

**The Role of the Naval Engineering Institute in Creation of Russian Underwater Navy**

*Isay Kuzinets*

**Origin and Beginning of Building of Diesel Engines in the World (End of XIX-Beginning of XX Century)**

*Elena L. Sorochinskaya*

**S91 Biography as a Genre in Different National Traditions of Writing about Science and Scientists**

**Organisers: Galina Smagina, Aleksandar Petrovic, Marina Loskutova**

Room: A13

**Friday, 31 July, 11.30 – 13.30**

*Chair: Aleksandar Petrovic*

**Reading History of Women Scientists Through Biography : Life-stories of Lydia Rabinowitsch-Kempner, Lina Stern, and Gertrud Woker**

*Natalia Tikhonov Sigrist*

**Assessment of Different Biographical Approaches to Writing about Science and Scientists**

*Rose-Luise Winkler*

**Local Amateur Scholars of the 19th – early 20th Centuries in Russia: Biographical Tradition and Prosopographic Data**

*Marina V. Loskutova*

**Biographic Method as an Instrument of Historical-Scientific Research (the Example of W. F. Louguinine's Studies in Thermochemistry)**

*Elena A. Zaitseva, Galina I. Liubina*

**Friday, 31 July, 15.00 – 17.00**

*Chairs: Galina Smagina, Marina Loskutova*

**The Year that has Changed the Earth**

*Aleksandar Petrovic*

**Victor Conrad and the Seismological Service of Austria**

*Christa Hammerl*

**The Diaries of the Traveler Pyotr Kozlov: A Self-portrait in Geographic Space**

*Tatiana I. Yusupova*

**The First and the Only One: The Director of St. Petersburg Academy of Sciences Princess Ekaterina Dashkova and her Biographers**

*Galina I. Smagina*

**L'histoire de Science et l'Histoire de la Vie: Une Nouvelle Lecture de la Biographie du Savant**

*Natalia Knekht*

**S93 History of Prospective Technology Studies**

**Organisers: Imre Hronszky, Gerhard Banse, Armin Grunwald**

Room: C3

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Gerhard Banse*

**Cooperation with Middle and Eastern European Countries in the Field of TA – Results and Experiences**

*Gerhard Banse*

**History and Perspectives of PTA – The Case of the EP**

*Miklós Györffy*

**The Development of Parliamentary Technology Assessment (PTA) in The Netherlands**

*Jan Staman*

**Parliamentary Technology Assessment in Europe – A Short history**

*Michael Rader*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: José A. López Cerezo*

**Expectations and Expertise Meet. Nutritional Theories and Functional Foods**

*Marta I. Gonzalez, Rebeca Ibanez-Martin*

**Technology, Literacy, and Knowledge Society**

*Cipriano Barrio-Alonso, Irene Díaz García*

**Participation in Science and Technology: Learnings from the Swiss PubliForums and Publifocus**

*Sergio Bellucci*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Klaus Kornwachs*

**The Methods of Herman Kahn in The Year 2000 Forecast Revisited**

*Klaus Kornwachs*

**Prospective Studies of Technology in Mexico and Latin America: Past and Future of Network Building**

*F. Medardo Tapia Uribe*

**On History of Roadmapping and Scenario Building**

*Imre Hronszky, Ágnes Fésüs*

**The Research and Public Diffusion of Science and Technology in the Museums**

*Garcia Myriam, Belén Laspra*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Attila Havas*

**National Foresight Programmes in Central and Eastern Europe**

*Attila Havas, Michael Keenan*

**S&T Forecasting in the Soviet Union and the Post-Soviet Countries**

*Igor Yegorov*

**Florida Tech – Building a Research University (A Case Study)**

*Gordon L. Nelson*

**A Critical Approach to Public Understanding and Participation in Science and Technology**

*José A. López Cerezo, José L. Luján López, Montaña Cámara Hurtado*

## **S94 Brief History of Characterisation of Engineering Materials and Structures**

**Organiser: László Tóth**

Room: C5

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: László Tóth*

**The Role of the Natural and Engineering Sciences in the Economical and Social Reorganisation**

*László Tóth*

**Historical Background and Development of Impact Testing**

*Andre Pineau*

**Metal Fatigue – The Story of an Enigmatic Science**

*R. Sunder*

**Brief History of Structural Integrity Concept**

*János Lukács*

**Evolution of the Hardness Testing**

*Péter Tóth*

**Evolution of the Non-destructive Testing in Hungary**

*Peter Trampus*

## **S95 History of Travel, Travel Medicine, and Traveler's Medical Kits**

**Organiser: Peter Felkai**

Room: A14

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Péter Felkai*

**History of Travel Medicine and the Travelers**

*Péter Felkai*

**From the First "Fountain Pen" to Ball Point Pens. Writing Instruments from and for Medical Doctors.**

*Gerhard F. Strasser*

**Journeys of Medical Purpose in Ancient Near East (2nd Millennium B.C.)**

*Gaye Sahinbas Erginoz*

## **S96 Seeing and Measuring, Constructing and Judging: Instruments in the History of the Earthsciences**

**Organisers: Ana Carneiro and Marianne Klemun**

Room: A16

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Ana Carneiro*

**Perception of Strong Winds in Early Modern Times**

*Katrin Hauer*

**Searching for Modernization – Instruments in the Development of Geological Sciences in Portugal (18th Century)**

*Isabel M.C. de O. Malaquias, Manuel S. Pinto*

**The 'Mineralogical' Task of Human Senses – A Survey on the Language of 'Mineralogy' in Weimar-Jena circa 1800**

*Benigna Kasztner*

**Travelling with Instruments: Italian Geologists in the Field Between the 18th and 19th Centuries**

*Ezio Vaccari*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Marianne Klemun*

**Minerals Scrutinized: Alberto Betim Paes Leme (1883-1938) and the Application of Spectrography**

*Silvia F.M. Figueiroa*

**Aspects of the Role of Microscopes in the History of Petrology in Japan**

*Michiko Yajima*

**The Early History of Geological Maps and Their Use as Instruments of Discovery, With East–West Comparisons**

*David Roger Oldroyd*

**The Geologist's Hammer – Tool, Equipment, Instrument and/or Bagde**

*Marianne Klemun*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Ana Carneiro*

**Measuring the Inaccessible Earth: Deep Time and Unreachable Spaces**

*Gregory Good*

**"A Bursting Landscape in the Middle of Portugal: Theories and Experiments by  
Georges Zbyszewski (1909—1999)"**

*Teresa S. Mota*

**Time Machines: Model Experiments in Geology**

*Thomas Brandstetter*

**Under the Spell of the Photographic Camera: A Case-study of the Use of Photography  
in Nineteenth-century Palaeontology**

*Ana M. Carneiro*





# Detailed Program of Regular Sessions

## T02 Classical and Oriental Antiquity

Room: C1

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Hermann Hunger*

**A Prehistoric Gnomon**

*J. Samuel Cornelius, George Abraham*

**Accounts of Living and Dying in Aristotle's De Long. and De Juv.**

*Keith Bemer*

**The Interaction of Mathematical and Physical Astronomy in Antiquity: The Earth-Sun Distance in Ptolemy's Astronomy and Cosmology**

*Christian C. Carman*

**Planetary Models as Expounded by Nilakantha in Aryabhatiya-bhashya**

*Kasi Viswanatha Sarma Upadyayula*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Keith Bemer*

**Computation of Lunar Eclipse in Indian Astronomy**

*Dinesh Mohan Joshi*

**Early Greek Mathematics and Thales Geometry: A Plausible Reinstatement**

*Dimitrios Patsopoulos*

**Susruta: The Sage-surgeon of Ancient India & His Surgical Instruments**

*Amarnath Thakur*

**Greek Paradoxography: The Beginning of Popular Science in the Hellenistic World, between Entertainment and Social Prestige**

*Irene Pajón Leyra*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Irene Pajón Leyra*

**The Three- and Four-line Locus in Apollonius's CONICA: Geometry and Algebra**

*Sabetai Unguru, Michael N. Fried*

**Analysis and Discovery: The Babylonian Mathematics in the Light of the Euclidean Data**

*Piedad Yuste*

**Indian Astronomy and Inscriptions**

*Subbarayappa V. Bidare*

## T03 Arabic and Islamic World

Room: C1

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Mohammad Bagheri*

**View on the Classification of Animals by Al-Jâhiz (776-868)**

*Meyssa Ben Saad*

**The Correlation between Local Culture & Public Spaces along the History of Islamic Cities (Case Study, Loft Port, Qeshm Island)**

*Mehri Mohebbi, Amir Saeed Mahmoodi*

**Trees of Knowledge: Generic Templates for Al-Farabi's "Enumeration"**

*Lydia S.M. Wilson*

**The Experimental and Instrumental Contexts of Early Arabic Optics**

*Elaheh Kheirandish*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Mohammad Bagheri*

**Combinatorial Problems on Chessboard from 11th Century Iran**

*Mohammad Bagheri*

**Ghāzān Khān's Innovations of the Astronomical Instruments**

*Seyyed Mohammad Muzaffari, Georg H. Zotti*

**A Comparison between the Optical Doctrines of Ibn al-Haytham (Alhazen) and Ibn Sīna (Avicenna) by Kamāl al-Dīn al-Fārisī**

*Maryam Farahmand*

**Traces of Mathematical Historiography in Islamic Mathematical Works**

*Younes Karamati*

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Mohammad Bagheri*

**Texts, Instruments and Learning in the 14th Century Maghrib. The Sine Quadrant as a Didactical Resource.**

*Maravillas Aguiar Aguiar*

**Prediction via Numbers and Letters**

*Hosein Roohoullahi*

**A Comparative Study of Qūtb al-dīn Shīrāzī's Models on the Configuration of the Outer Planets**

*Kaveh F. Niazi*

**Planetary Model of Qūtb al-Din Shirazi for Superior Planets**

*Amir Mohammad Gamini*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Mohammad Bagheri*

**The Integration of Philosophy, Logic, and Exact Observation in Laboudy's Medical Investigations**

*Tarek Adnan Ahmed*

**Linear Astrolabe according to Its Inventor**

*Sajjad Nikfahm Khybravan*

**A History of Precise Calculations in Exact Sciences: Ancient and Medieval Times**

*Fateme Savadi*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Mohammad Bagheri*

**Mukanna "Moon Maker": Discoverer of Mercury Telescope?**

*Abasali A. Rustamov*

**Stairway to Heaven or Sullam-al-Sama of Kashi**

*Farhad Rahimi*

## **T04 South Asia and India**

Room: A11

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Michael A. Cremo*

**The History and Prospects of Bangladesh to India Natural Gas Pipeline Project**

*Md. Mamunur Rashid*

**Perceptions of Western Techno-Scientific Progress: Karim Khan Mushtaq Jhajjari – a Visitor to Britain (1840-41)**

*Gulfishan Khan*

**Role of Technical Thoughts in Social Context**

*Ugrasen Pandey*

**On the History of Brahmagupta's Mathematics and Its Transmission to Arab Countries**

*Rabindra Kumar Bhattacharyya*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Katalin Munkácsy*

**Planning and Technology for National Reconstruction, the NPC Initiative in Colonial India**

*Jagdish N. Sinha*

**Time to Change and Unchanging Time – Modernity, Colonialism and the Native Calendar Reform in Late Nineteenth Century Tamil Nadu**

*Venkateswaran Thathamangalam Viswanathan*

**Rewriting the History of Indian Archeology**

*Michael A. Cremo*

**Concept of Sunya in the Indian Antiquity**

*Parthasarathi Mukhopadhyay*

**Ideas and Instruments: The Indian Contribution**

*K.S. Murty*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Katalin Munkácsy*

**Jesuit Contribution in Science Education, Research and Popularisation in Bengal (India) During the Late 19th Century**

*Subhankar Ghosh*

**Saltpetre Manufacture Technology in Medieval India**

*Ishrat Alam*

**The Lessons of Millenary Water Use in the Ancient Israeli Kingdom (VIII BC– II BC)**

*Olga A. Aleksandrovskaya, V.A. Shamis*

**T05 East Asia**

Room: C5

**Friday, 31 July, 11.30 – 13.30**

*Chair: Erich Pauer*

**The Jiudian Bamboo Slips and the Space and Time Correlations of the Yin and Yang Concepts**

*Sándor P. Szabó*

**The Beginning of Wasan: Mathematical Practices with Disparities**

*Marion Cousin*

**Continuing Joseph Needham's Traces of the “Great Extension Number”: The Origin of the “Great Extension Mathematics” (Indeterminate Analysis) in China**

*Honghai Deng*

**The Organization of Technical Knowledge Transfer on the Eve of Japan’s Industrial Revolution**

*Erich Pauer*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Yuqun Liao*

**Change in Meaning or Style of the Knowledge: Diversification of Equipments in Acupuncture Research in Contemporary China**

*Yan-Hong Huang*

**Introduction of the Understanding and Practice Course of Managerial Psychology in China in the 20th Century**

*Kang Xu, Chao He*

**The Main Characters of the Traditional Chinese Medicine**

*Yuqun Liao*

**The Meaning of Solar Eclipse for the Ancient Chinese Based on the “Jing Jian Nei Zhi” Text from the Chu Bamboo Slips Collection of the Shanghai Museum**

*András Márk Szekeres*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Hsiu-fen Chen*

**Engendering Emotions: Women’s Melancholy in 16th-17th Century Chinese Medicine**

*Hsiu-Fen Chen*

**Election of Members of the Second Research Council of Academia Sinica and Its Impact in 1940**

*Jinhai Guo*

**Development of Botany in Republican China (1912-1949) – A Bibliometrics Analysis**

*Ang Li*

**An Analysis on the Debate of the Concept of “Mass-Energy”**

*Yan-Feng Wang*

**Good Fortune or Environmental Harmony?**

*Michael J. Paton*

**Soviet Experts and Chinese Air Force Education (1949-1960)**

*Yang Aihua*

**The Study of Relation between Science and Public in China Westlake Expo 1929**

*Zhengwei Li, Yadong Shi*

## **T07 The Middle Ages (Western and Byzantine) and Renaissance**

Room: A8

**Thursday, 30 July, 15.00 – 17.00**

*Chair: István Draskóczy*

**Faith or Knowledge? Normative Relations between Religion and Science in Two Byzantine Texts.**

*Gianna Katsiampoura*

**Explanations of the Plague in the Late Middle Ages**

*Otto S. Gecser*

**Literature and Astronomy in Sacrobosco's Tractatus de Sphaera and Computus Ecclesiasticus**

*Roberto de Andrade Martins*

**On the Semiotic Processes that Enabled Bombelli's L'algebra**

*Roy Wagner*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Roy Wagner*

**Child Health during the Medieval Ages in Islamic World**

*Abdul Nasser Kaadan*

**Byzantine Astrolabes and the Construction of Greek Authority in 16th-Century Europe**

*Darin Hayton*

**Mathematics and Venetian Naval Architecture: An Analysis of the Geometrical Methods in Ship Design Used from the 14th to the 17th Century**

*Lilia Campana, Mauro Bondioli*

**The Cisterna Fulcronica: What Can We Learn from a 16th Century Occitan Treatise of Arithmetics ?**

*Annie Michel-Pajus*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Benedek Varga*

**Science and Translation in the 15th Century Europe. The Latin Texts on the Sexagenarium by Johannes Bonie and Christianus de Prolianus.**

*José A. González Marrero, Maravillas Aguiar Aguilar*

**Magic and Technology in Early Italian Renaissance: Automata in Boiardo's "Orlando Innamorato"**

*Nadia Ambrosetti*

**From Abulcasis to Guy de Chauliac – The History of the Surgery in Europe in the Middle Ages**

*Erzsébet Igari*

**The Sense of Hearing and the Reconsideration of the Practical Sciences in Roger Bacon**

*Yael Raizman-Kedar*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Darin Hayton*

**Horoscopes as Biographies in the Renaissance**

*Dóra Bobory*

**The Late Medieval Salt Mining and the Technical Questions of Salt Transport in Hungary**

*István Draskóczy*

**T08-01 Mathematics and Mechanics in the Classical Period (1543-1800)**

Room: C5

**Saturday, 1 August, 09.00 – 11.00**

*Chair: János Tanács*

**The Problem of Parallels in its Social Context: The Political, Religious and Educational Circumstances of the Hungarian Kingdom at the End of the 18th Century**

*János Tanács*

**The Problem of Conflict and Exchange of Knowledge: The Case of the Revolution in Ballistics in 18th Century Europe**

*Toru Tajima*

**Do Not Lump Everything Together. The Failure of the Philosophical Model, the Success of the Mathematical one in Mechanics in the Classical Period.**

*Fabio Zanin*

**John Theophilus Desaguliers: A Newtonian between the Patronage and the Market Relations**

*Luiz Carlos Soares*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: János Tanács*

**The Early Years of Gresham College, London**

*Robin Wilson*

**L'équilibre des Sons: La Musique et les Mécaniques chez Marin Mersenne**

*Paulo T. Silva*

**The Concept of Speed by Descartes**

*Gyula Kistüttősi*

**Euler's Cartographical Works and Occurrence of Differential Geometry in XVIII Century**

*Inessa I.V. Ignatushina*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Petr E. Levkovsky*

**Pedro Giannini (fl. 1773-1800)**

*Juan M. Navarro-Loidi*

**Jacopo Riccati's Research on Differential Equations**

*Silvia Mazzone*

**Johann Bernoulli's Research on Mechanics**

*Satoshi Nozawa*

**Charles Bossut, an Outstanding French Mechanic and Mathematician of the XVIII Century**

*Petr E. Levkovsky, Vadim I. Yakovlev*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Katalin Munkácsy*

**Mathematical Education in Walachia, Moldavia and Transylvania in the 18th Century. European Mobility of Highly Cultivated People.**

*Eufrosina Otlacan, Romulus-Petru Otlacan*

**The Decimalization of Traditional Oral Numeration Systems across Languages and Culture: A Diachronic and Synchronic Overview**

*Dominique A. Vellard*

**T08-02 Physics and Astronomy in the Classical Period (1543-1800)**

Room: A11

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Péter Szegedi*

**The Astronomical Observations, Hypothesis, and Demonstrations in Chongzhen Lishu**

*Kehui Deng*

**Tycho Brahe and Kepler in Prague: Multifold Reflections on Astronomy**

*Manolis K. Kartsonakis*

**Notes on Johannes Kepler's Book "Harmonice Mundi"**

*Marina V. Voinova*

**Astronomy and Optics: the Development of the Optics of Moving Bodies**

*Arnaud Mayrague*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Lila Rakoczy*

**Georg Markgraf in Dutch Brazil: His Pioneering Astronomical Activities in the New World**

*Oscar T. Matsuura*

**Isaac Newton: The Exoteric and Esoteric Knowledge of the Principia**

*Tessa Morrison*

**Transformation of Proposition VII in Book I of Newton's Principia with Special Reference to the Adjoining Figures**

*Takeshi Sugimoto*

**Stars, Births, and Kings: Astrophysics and Mythmaking in Seventeenth-century England**

*Lila Rakoczy, Martin Lunn*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Tessa Morrison*

**Analogies of Sound and Light in the Scientific Writings of Athanasius Kircher**

*Oona Leganovic*

**The Status of the Milky Way in William Herschel's Work and How did Science Historians of the Nineteenth Century Focus the Question.**

*Victória Flório Pires de Andrade*

**T08-05 Biological and Medical Sciences in the Classical Period  
(1543-1800)**

Room: A10

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Margaret E. Carlyle*

**How Aldrovandi Read, and Looked at, His Lycosthenes: Reading Practices, Images, and the Persistence of Knowledge in Sixteenth-century Natural History**

*Fabian Krämer*

**The Medical Library of the Secretary of the King of Sweden: Henrik Matsson Huggut (ca. 1540-1617): Authors from the Antiquity to the Renaissance**

*Terhi Kiiskinen*

**Midwives Modelling Mannequins: Obstetrical Machinery and Medical Knowledge in the French Enlightenment**

*Margaret E. Carlyle*

**Anatomy and Its Artefacts: Visualising the Body in the Eighteenth Century**

*Lucia Dacome*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Nuria Pérez-Pérez*

**Instrumental Use of Experimental Physics in Medicine at the Royal College of Surgery of Barcelona (1760-1843)**

*Nuria Pérez-Pérez*

**El Conocimiento Científico De La Naturaleza. El Saber Médico En Los Remedios Populares En El Yucatan Del Siglo XVII**

*Pedro Miranda Ojeda, Genny M. Negroe Sierra*

**Giovanni Borelli (1608-79) on Animal Movement**

*Jarmo Pulkkinen*



## **T08-06 Technology and Engineering in the Classical Period (1543-1800)**

Room: A6

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Robert Fox*

**Technology and Engineering in the Council House Tower of Medieval Brasov**  
*Viorel Ene, Tibor Bedő, Marius Bența*

**Port Engineering in the 17th Century. Construction Innovations and Later Developments.**  
*Sandro Stura, Erminio Raiteri, Giulio Scarsi, Sandro Stura*

**Acoustique Physique et Procédés Techniques aux XVIIème et XVIIIème Siècles**  
*François Baskevitch*

**Euler Meets Dutch Windmills: an Intersection between Mathematics and Experimental Philosophy in the 18th Century**  
*Satoshi Nakazawa*

**Wolfgang von Kempelen – A Master of Engineering in the Age of Enlightenment**  
*Alice Reiningger*

## **T09-01 Mathematics in the Contemporary Period (1800-)**

Room: A10

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Josipa G. Petrunić*

**Kolmogorov Program on Foundations of Mathematics**  
*Alexander S. Kuzichev*

**Kazimierz Żorawski, his Work and the Creation of the Cracow Mathematical School**  
*Zdzisław Pogoda*

**Quaternion Engagements and Terrains of Knowledge (1858-1880): A Comparative Social History of Peter Guthrie Tait and William Kingdon Clifford**  
*Josipa G. Petrunić*

**One or More Definitions of Number in Gottlob Frege's Papers?**  
*Gabriela Besler*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Péter Gábor Szabó*

**The Emergence of Fractional Calculus**  
*Luisa F. Vargas Jimenez*

**From a Measure Theory to a Theory of Measures**  
*Carmen Martínez Adame*

**The Riesz Brothers's Correspondence**  
*Péter Gábor Szabó*

**The Baire Class and the Surgimiento of the Theory of Functions**  
*Luis Recalde*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Christian Gerini*

**La «Mémoire sur les Méthodes Générales d'Intégration» de Joaquim Gomes de Souza (1829-1864)**

*Marcos Vieira Teixeira*

**Les Commencements de la Science Statistique à l'Espagne et Portugal**

*Gabriela M. Fernández Barberis, M. Carmen Escribano Ródenas*

**Le Père de la Recherche Opérationnelle en Espagne: Sixto Ríos García**

*M. Carmen Escribano Ródenas, Ana I. Busto Caballero*

**La Mixité du Philosophique et du Mathématique au Début du 19<sup>ème</sup> Siècle: J.-B.-E. Du Bourguet et ses Traités de Calcul Différentiel et Intégral (1810).**

*Christian Gerini*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Katalin Munkácsy*

**Is Science Discovering Nature or “Vice Versa”?**

*Jasna Fempl Madjarevic*

**Vaclav Simerka-mathematician, Teacher, Priest**

*Karel Lepka*

**Des Ponts Entre L'est et L'ouest: Variations Austro-hongroises, Pétersbourgeoises et Königsbourgeoises**

*Norbert Verdier*

**T09-02 Physics and Astronomy in the Contemporary Period (1800-)**

Room: A12

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Péter Szegedi*

**Thomson versus Clausius: What is the Share of Each One in the Creation of the 2nd Law of Thermodynamics?**

*Mayane L. Nobrega, Suani T.R. Pinho*

**A History of Entropy through Various Methods**

*Eri Yagi, Rika T. Okamoto*

**La Réception Française de la Théorie Cinétique des Gaz**

*João P. Principe*

**The Relationship between Gibbs' Theory of Thermodynamics and that of Statistical Mechanics**

*Hajime Inaba*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Ricardo L. Coelho*

**On Hertz's Principles of Mechanics**

*Ricardo L. Coelho*

**Hertz's Experiments on Electromagnetic Waves from Modern Retrospective: Serious Indications on Incomplete Approach**

*Roman Smirnov-Rueda, Alexandr Kholmetskii, Oleg Missevitch*

**Interaction of Experimental Programs: The Development of Experimental Research on Thermal Radiation in Germany at the End of the 19th Century**

*Daisuke Konagaya*

**Piazzzi Smyth's mapping of the solar spectrum in Lisbon, Sintra and Madeira: analysis of results and instruments**

*Fernanda M. Costa, Isabel M. Peres, Maria E. Jardim*

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Matthew Stanley*

**Past as Prediction: Victorian Scientists on Ancient Eclipses and the Power of Science**

*Matthew Stanley*

**The Road to the West Goes South. International Exchange in Astronomy in the Early 20th Century**

*David M. Baneke*

**Danjon and French Astronomy during the Second Part of the 20th Century**

*Suzanne Débarbat*

**The Aether Drag Experiment in Three Different Contexts: Fizeau (1851), Michelson and Morley (1886), and Zeeman (1914)**

*Roberto A. Pimentel, Carlos B. G. Koehler, Carlos E. Fellows*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Helge Kragh*

**Fringe Cosmo-(a)-gonies : French and British “Cosmogonists” Facing Scientific Standardization**

*Volny Fages*

**The Revival of the Oscillating Universe**

*Helge Kragh*

**About a New Periodisation of the History of Neutrino and Weak Interactions from the Discovery of  $\beta$ -radioactivity up to the Solution of Solar Neutrino puzzle (SUDBURY, KamLAND)**

*Tibor Toro*

**Looking through the Microscope in the Context of Vienna Indeterminism – On a Local Way to Conceptualize Brownian Motion**

*Michael Stoeltzner*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Arcangelo Rossi*

**Jun Ishiwara as a Forerunner of Bose on Statistics, de Broglie on Phase-Wave, and Einstein on Quantum Condition**

*Seiya Abiko*

**Compton's Large Electron as an Example of His Classical Approach to X Ray Scattering**

*Indianara L. Silva, Ana Paula Bispo. Silva*

**The Foundational Side of Italian Physics in the First Half of the XX Century**

*Arcangelo Rossi*

**Researches and Studies in Mathematical Non-classical Physics (Quantum; Relativist)  
Achieved in the Period cca. 1900 – cca. 1939/1940 by Scientists from Carpathean-  
Danubean-Pontean / Romanian / Space**

*Liviu Alexandru Sofonea, Elena Helerea, Sofia Hagia, Horia Salca*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Juraj Šebesta*

**Contributions to Analyse of Life and Work of any Hungarian Origine Scientistits From  
Former Austro-Hungariyn Monarchy**

*Huba Laszlo Szoecs*

**N.N. Bogoliubov – The Great Scientist and Humanist of XX Century**

*Olga N. Golubjeva, László L. Jenkovszky, Aleksandr Dmitrievich Sukhanov*

**Principles of Physical Theories – Past and Present**

*Juraj Šebesta*

**Casimir Effect, the Spread of Research on it, and the Quantum Vacuum Ontology  
From 1948 to 1975**

*Thiago H. Maia, Reinaldo F. de Melo e Souza*

**T09-03 Earth Sciences in the Contemporary Period (1800-)**

Room: A11

**Saturday, 1 August, 09.00 – 11.00**

*Chair: H. Torrens*

**The Social Aspects of Natural-science World Outlook and the Evolution of the Ideas  
about the Age of the Earth**

*S.Kh. Maghidov*

**Two Centuries of Oil Industry of Chechen Republic**

*Ibragim Akhmedovich Kerimov*

**Forgotten Colonial Seismology: The Introduction of Instrumental Seismology in the  
Philippine Islands (1865-1910)**

*Josep Batlló*

**Changes in State Directed Assessment and the Role of 'Conclusive Evidence': The  
NYS HS Earth Science Regents Exam Replaces 'Polar Wandering' with 'Plate  
Tectonics' as the Accepted Explanatory Theory for Observed Macro-Crustal Changes**

*Michael D. Sunderland*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: H. Torrens*

**Geothermal Heat Flow as a Problem: The History of Observations and Theories**

*Alexander Nicolai Zemtsov*

**The Trails of Roman Symonowicz' Mineralogical Travel (1803) to Transylvania  
(Ziemia Siedmiogrodzka)**

*Algimantas Grigelis*

**To the History of Water Supply in Moscow**

*Nadezhda Ozerova*

**The Search of Gold in America in XVI Century – The Combination of Knowledge and Experience of Nations**

*Jury Mihajlovich Bazhenov*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Károly Brezsnayánszky*

**History of the Meteorological Observation in Buda(Pest) Since 1781**

*Zoltan A. Dunkel*

**The First Detailed Geological Map of the Polish Kingdom's Coal Basin (1856)**

*Andrzej J. Wojcik*

**T09-04 Chemistry in the Contemporary Period (1800-)**

Room: B2

**Friday, 31 July, 11.30 – 13.30**

*Chair: Andres L. Lundgren*

**The Relationship between Chemistry and Alchemy in the Age of the Enlightenment**

*Halina Lichocka*

**The Mineral Chemistry Laboratory of the Polytechnic School of Lisbon**

*Maria Elisa Maia*

**The Problematic Accommodation of the Rare Earth Elements in the Periodic Table from 1869 to 1913**

*Pieter Thyssen*

**Study of Water-ethanol Systems from Dmitriy Mendeleev to Nowadays**

*Svetlana Patsaeva, Vera Z. Grigorieva*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Halina Lichocka*

**To Do Research with Nose and Tongue: Some Reflections on the Role of Smell and Taste in the History of Chemistry**

**L Anders Lundgren**

**The 50th Anniversary of the Heyrovský's Nobel Prize**

*Jiří Jindra*

**The Same Discipline in Different Places: Electrochemistry in Spain in the First Third of XXth Century**

*Angel Toca*

**Contribution of Russian Chemists to Development of Russian Spirit and Vodka Production Industry in the 19th and the Early 20th Century**

*Vera Z. Grigorieva, Svetlana Patsaeva*

**The Development of Macromolecular Chemistry in Belgium and His Contribution to It in the International Polymer Chemistry Community**

*Ali Gharib*

**Controversies on the Nature of Caloric in the Greek-speaking Journal Hermes the Scholar, at the Turn of the Nineteenth Century**

*Efthymios Bokaris*

## **T09-05 Biological Sciences in the Contemporary Period (1800-)**

Room: A12

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Miklós Müller*

**Advances in Modern Biology Can Be Accelerated by Meaningful Crosstalk between Physicists and Biologists**

*Sukhendu B. Dev*

**Ervin Bauer and General Biology in the All-Union Institute of Experimental Medicine: Rise and Fall of a Major Soviet Laboratory**

*Miklós Müller, Gábor Elek, Sergey S. Zhebrovsky*

**Russian Biologists at the Mediterranean. Second Part of the 19th – the Beginning of 20th Centuries.**

*Sergei I. Fokin*

**Between Science and Technology: The Catalan Structuralist School, the Nucleohistone Structure and the Development of X-Ray Diffraction Cameras**

*Francesc-Xavier Calvó-Monreal*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Janina Wellmann*

**Affiliation and Collaboration Networks in the Biomedical Sciences in Portugal in the Inter-war Period (1920-1940)**

*José Pedro Sousa-Dias, Ricardo S.R. Santos*

**Critical Thinking: Historical Perspective and Present Situation in Turkey**

*Melih Tumuçin*

**Embryology Takes Form. Christian Heinrich Pander, Karl Ernst von Baer and the Concept of the Embryological Fold.**

*Janina Wellmann*

**History of National Institute of Genetics in Japan**

*Hajime Mizoguchi*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Miguel Garcia-Sancho*

**Edward Janczewski's Work on Monographie des Groseilliers, a Monograph on Genus Ribes (1907)**

*Kamil Kulpinski*

**Historiographical Issues in the Introduction of Protein Sequencing into Spanish Biomedical Research, 1970-1990**

*Miguel Garcia-Sancho*

**The Significance of Science Instruments in the Research Progress and Development Plant Physiology in Nineteenth Century. Research Instruments of Polish Scientist Emil Godlewski Senior (1847-1930)**

*Izabela Krzeptowska-Moszkowicz*

**Polish Botanical and Mycological Research in Terrestrial Ecosystems of Antarctica Since 1977**

*Piotr Köhler*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Tomohisa Sumida*

**Lithuanian Space Plant Biology Researches in 1975–1990**

*Aurika Ričkienė*

**Comparative Anatomy, the Chain of Beings, and French Zoology after Lamarck**

*Emmanuel D'Hombres*

**Ecological Science and Nature Conservation in Japan 1906 – 1975: Focusing on Two Transitions in 1959**

*Tomohisa Sumida*

**Early Apparatus-based Experimental Psychology**

*Maximilian Wontorra, Ingrid Kästner, Erich Schröger*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Jakov Dulčić*

**Brief History of Ichthyology in Croatia**

*Jakov Dulčić*

**Electrography of Living Systems or So-called Kirlian Photography, Reconstruction of Historical Fairness and Present Potential**

*Olga A. Gaponenko, S. Raikov*

**The Finnish Tradition of Developmental Biology**

*Anto Leikola*

**Morgan's Change of View on Evolution, 1903-1932**

*Lilian Al-Chueyr Pereira Martins*

**T09-06 Medicine in the Contemporary Period (1800-)**

Room: A1

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Claude Debru*

**Laboratories at the Medicine Faculty of Coimbra University in the XIX Century**

*Maria Carvalho Burguete*

**The Appliance of Science? The Laboratory and Clinic in Early-twentieth-century Scottish Psychiatry**

*Gayle L. Davis*

**Personnel Monitoring and Evaluation Dosimetry**

*Anthony K. Shadrack*

**Ramon y Cajal and the Law of the Dynamic Polarisation of the Neuron**

*José Luis González Recio, Francisco José Serrano Bosquet*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Benedek Varga*

**The Development of Pharmaceutical Industry in Serbia**

*Irena Mandić, Dusanka Krajinović*

**Historical Development of the Emergency Medicine in Turkey**

*Ozgur Tatli*

**Medical Science in XIX Century in Georgia and its Social-Cultural Framework**

*Nino Chikhladze, Ramaz Shengelia, Nato Pitskhelauri*

**Aspirations and Conflicts: The 'Professionalisation' of Medicine in Colonial Banaras**

*Madhuri Sharma*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: József Honti*

**Odessa City Hospital (the 1st Century of Activities)**

*Svitlana Ruda*

**Serotherapy and Modernity in Turn-of-the-century Paris**

*Jonathan Simon*

**Computer Tomography Scanner: A Revolutionary Instrument**

*Mei Zhou*

**New Medical Ideas in Old History of Medicine**

*Nato Pitskhelauri*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Maria Carvalho Burguete*

**Language, Information, Instruments and Medical Treatment – The Medical Assessment by Japanese Doctors at the Beginning of the Meiji Era, Japan**

*Miyoko Tsukisawa*

**Cut up and Imaged: Late 19th-century Representations of the Cortex**

*Heini Hakosalo*

**Chinese Medicine and Western Medicine on the Way of Scientific Advances and Integration.**

*Yulia Petrovna Chukova*

**A Quest for the 'Modern': Localizing versus Universalizing Knowledge**

*EunJeong Ma*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Dénes Karasszon*

**Wagner-Jauregg and the Heredity of Mental Illness. On Special Features of the Viennese Research Programme in Psychiatric Genetics in the First Half of the 20th Century.**

*Veronika Hofer*

**US 'Shopping List' of Human Experimentation Data Presented by Former Japanese B.W. Units, Ishii Organization**

*Keiichi Tsuneishi*

**La Circulation d'Idées Scientifiques: Une "Assemblée de Liens" dans les Premières Revues Médicales de São Paulo**

*Márcia Regina Barros da Silva*

**L'Appareil Enregistreur Générale de François-Franck (1849-1921)**

*Liborio Dibattista*



## **T09-07 Technology in the Contemporary Period (1800-)**

Room: A6

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Alexandre Herlea*

**Micro-alloying in Early Iron Age: A Case Study from Badmal, Orissa**

*Pradeep K Behera, Subhayu Chattopadhyay, Prasanta K. Datta*

**Making of Sound Recording in Late XIX Century and Modern Problems of Restoration and Preservation of Old Audio Media**

*Roman V. Artemenko*

**Development Trend and Results of Industry in the Era of the Dual Monarchy of Austria-Hungary**

*Zsuzsanna Bognár*

**The Ways of Searching “Rusalka” Coast Guard Battleship (1893-1894)**

*Vladimir O. Chikin*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Alex Keller*

**270 Years of Lightning: A Historical Review**

*Javier Lopez-Herrera, David de la Vega, María de las Mercedes Maruri*

**Large Infrastructural Systems in the Extreme North: Learning from the Build-up of Water- and Wastewater Systems and Railway Electrification in Sweden**

*Kristina Söderholm, Roine Wiklund*

**The Complexity of the Concept Materia Technica**

*Elena I. Helerea, Liviu Alexandru Sofonea, Laura Rab, Daniel Calin*

**Evolution of e-Books in Turkey and in the World**

*Sakine Sensoy-Ongoz, Adnan Baki*

**Wireless Phone in Szombathely at the Turn of the 19th and 20th Centuries**

*József Nemes*

## **T09-08 Engineering in the Contemporary Period (1800-)**

Room: A13

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Zoltán Galántai*

**Caloric Theory and Watt’s Law: High Hopes for the High Pressure Steam Engine in the Early 19th Century**

*Manabu Kobayashi*

**The International Context of the Technological Changes of the Slovak Power Engineering Base in the First Half of the 20th Century**

*Miroslav Sabol, Ludovit Hallon*

**From LEDs to Solid-state White Lighting Devices, Another Semiconductor Revolution**

*Vasilica Schiopu, Ileana Cernica, Alina Matei*

**Engineers and Conservatives in the Creation of State Hydroelectric Power in Canada**

*Langins Janis*

**T09-09 Space Exploration and Research in the Contemporary  
Period (1800-)**

Room: C2

**Friday, 31 July, 17.30 – 19.30**

*Chair: Attila Szabó T.*

**Hubble Space Telescope's Several Lives and Unexpected Career**

*Joseph N. Tatarewicz*

**“The Social Life of Spacecraft”: Instruments, Ideas, and Investigators on  
Interplanetary Robotic Missions, 1970-2008**

*Janet Vértési*

**Space Exploration and Research in the Contemporary Period**

*Ven. Dharmananda Shraman*

**The Three Heroes of Spaceflight: The Rise of the Tsiolkovsky-Goddard-Oberth  
Interpretation and its Current Validity**

*Michael J. Neufeld*

**T09-10 Computing Sciences and the Internet in the Contemporary  
Period (1800-)**

Room: A9

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Bálint Dömölki*

**The First Hungarian Electronic (Tube) Computer – the M-3 – is 50 Years Old**

*Győző Kovács*

**The Cultural History of Character Encoding**

*Daniel L. Golden*

**The Social Construction of Computers Aided by Social Network Analysis**

*Éva Borbély*

**Searching Methods in Artificial Intelligence**

*Angel Garrido*

**History of Computer Science in Russia**

*Yakov I. Fet*

**T09-11 Geography in the Contemporary Period (1800-)**

Room: A11

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Alexey Postnikov*

**Paper Fortresses: Renaissance Military Architecture in the Context of Hapsburg  
Cartography**

*Zsolt G. Török*

**Experience and Rhetoric in Sixteenth Century Spanish Atlantic Cartography: Utility  
and Conformity in Double Graduation Charts**

*Antonio Sánchez*

**Perception of Geographical Features and the General Concept of “Shui-kou” in the Feng-Shui Thought of East Asia**

*Shizuaki Shibuya*

**The English and Americans in the Eastern Siberia and the Russian Far East (Nineteenth - Early Twentieth Centuries): On History of Geographical Exploration and Geopolitics Dreams**

*Alexey Postnikov*

**T09-12 Social Sciences in the Contemporary Period (1800-)**

Room: C3

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Jenny Bangham*

**Option Pricing Theory and the Construction of Mathematical Finance in the 1970s: an Idea, Instruments and a Context**

*Ghislaine Idabouk*

**On the Threshold of Modernity. Alva and Gunnar Myrdal vs. Eli and Ebba Heckscher on the Subject of Science and Social Welfare.**

*Ylva J.E. Hasselberg*

**Epistemological Conditions for a Successful Transfer of Policy Relevant Knowledge: A Lesson from the History of Central Banking**

*Arie Krampf*

**Helmholtz Resonators and the Mechanistic Revolution in Psychology**

*Zuraya Monroy-Nasr*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Arie Krampf*

**Hungarian-Chuvash Economic and Cultural Contacts in the Current Context**

*Marina Grigoryeva*

**The Evolution of Man in the Late Nineteenth Century: Darwinism and the History of Human Marriage**

*Jenny Bangham*

**T09-13 Natural History in the Contemporary Period (1800-)**

Room: A16

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Adriana T. do A. Martins Keuller*

**Sir Robert Schomburgk's Biodiversity Science Legacy in Guyana**

*John Cartey Caesar*

**Emergency of the Mexican Physical Anthropology in 19th Century, within the Context of the European Imperialistic Expansion**

*Miguel Garcia Murcia*

**Zoology in the Library of Martorell Museum of Natural Sciences of Barcelona, since 1882 to 1915**

*Jose J. Varela Restrepo*

**The Anthropology Laboratory at the National Museum of Rio de Janeiro (1909-1935)**  
*Adriana T. do A. Martins Keuller*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Ewa Kaczmarzyk*

**Seeing Past Specific Behaviors: Classical Ethology's Failure**  
*Jean-Sébastien Bolduc*

**Floristic Research of the Częstochowa Upland (Poland) between the Middle of the 19th Century and the End of the First World War**  
*Ewa Kaczmarzyk*

## **T09-14 Environmental Studies in the Contemporary Period (1800-)**

Room: A6

**Friday, 31 July, 11.30 – 13.30**

*Chair: Libby Robin*

**A History of Resilience Science. From Rangeland Ecology to Global Change 1973-2008.**  
*Libby Robin*

**Sustainable Development on Community Livestock. A Case of North Eastern Province, Kenya.**  
*Gordon Nyabade*

**La Crise Environnementale Globale et la Nouvelle Dynamique du Développement dans des Régions Périphériques**  
*Marcionila Fernandes*

**The Teleconnection between Sea Surface Temperature Analysis from in Situ Data at East Mole, Lagos and Global Warming**  
*Okuku Archibong Eding*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Baisakhi Bandyopadhyay*

**A Study of the History of Environmental Science in Social Context in the First Half of Twentieth Century**  
*Baisakhi Bandyopadhyay*

**Historical Ozone Measurements Made in the Habsburg Empire**  
*Tamas Weidinger, Joseph Pinto, Gyorgyi Baranka, Anett Ivady*

**Ancient Waterways and Hydrotechnical Constructions of the European Part of Russia (Historical and Ecological Aspects)**  
*Vera A. Shirokova, Vassili M. Chesnov*

## **T10 International Scientific Exchange**

Room: A6

**Friday, 31 July, 17.30 – 19.30**

*Chair: László Szögi*

**The Research on Radioactivity in Portugal and the Institut Curie du Radium**  
*Isabel M Serra*

**The Moscow Colloquium on Electroencephalography of Higher Nervous Activity (1958) and Its Impact on International Brain Research**

*Boleslav L. Lichterman*

**Conservation Science in Context: Humphry Davy and the Herculaneum Papyri**

*Frank A.J.L. James*

**The International Commission on Mathematical Instruction. The Italian Contribution from the Founding to the 1950s.**

*Livia Giacardi*

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Isabel Serra*

**The Brazil-Germany Relations in the Context of Psychiatry**

*Cristiana Facchinetti*

**International Eugenics: Reexamining the Relationship between British and German Eugenicists prior to the Second World War**

*Bradley W. Hart*

**T11 Scientific and Technical Museums**

Room: A3

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Elisabeth Kóczian-Szentpéteri*

**A Collections Development Strategy: Selecting Artifacts for the Interpretation of Canadian Agricultural Science and Technology**

*Franz M. Klingender*

**National Technical Museum in Prague for the Future: Reconstruction of Historical Buildings and New Exhibitions, the Architectural Heritage Centre**

*Ivana Lorencova*

**The Research and Public Diffusion of Science and Technology in the Museums**

*Myriam Garcia, Belen Laspra*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Judit Berta-Varga*

**Early History of the Geological Museum of China: Witness of the Early Development of Geological Work in China**

*Xiping Cao, Erping Zhang*

**Science and Technology Museum and Archives – A Joint Study of Funds for Obtaining New Information**

*Yuriy Ivanovich Krivonosov*

**Engines and Society: Museological Interpretation of Industrial Heritage**

*Joan Muñoz Vicente, Santiago Vallmitjana*

**Table Top Physics: Old Science, New Audience**

*Jane Wess*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Éva Vámos*

**The Role of Small Technical Museums in Preserving the Cultural Heritage**

*Ante Sekso-Telento, Ivan Sekso-Telento, Josip Trbus, Sándor Jeszenszky*

**Microscope History Virtual Museum**

*Nikolay Koltovoy*

## **T12 The Formation of Scientific Languages**

Room: A2

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Teodora Daniela Sechel*

**The Development of Symbolic Languages in the Field of Logic (1854-1903)**

*Amirouche Moktefi*

**The Birth of the Mediaeval Hebrew Mathematical Language**

*Ilana Wartenberg*

**Medicine and the National Languages in the Habsburg Monarchy (1770 -1830)**

*Teodora Daniela Sechel*

**Semantic Reflectiveness in Developing English Pharmaceutical Terminology**

*Leontina Kerničan, Dušanka Krajnović*

## **T13 The Evolution of Teaching and Public Involvement**

Room: A10

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Felicitas Seebacher*

**Learning in the Lab: High School Science Teaching in Ontario, 1880-1921**

*Michelle D. Hoffman*

**The Teaching of Radiochemistry in Portugal**

*Francisca Viegas, Cristina Felizardo, Elisa Maia*

**Kant Meets Comte amidst Industrial Confusion: The Formulation of the Idea of Applied Science in 19th Century Britain**

*Robert Bud*

**“Elementary” Texts as a Scientific Genre in Eighteenth-century France**

*Jeffrey L. Schwegman*

**Ideas of Modern Natural Sciences as the Instrument for Formation of People Rational Thinking**

*Olga Naumovna Golubjeva*

**Modern Mathematics at the Center for the Teaching of Sciences of Bahia (Brazil), 1965-1969**

*Freire Inês, André Luís Mattedi Dias*

## **T14 Scientific Institutions - Learned Societies**

Room: A6

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Jozas Algimantas Krikstopaitis*

**Academies of Science in 18th-century Europe and the Application of Scientific Methods on Exploration – A Comparative Study**

*Jan E.A. Vandersmissen*

**Academic Drift among Scientific Institutions – Necessity or Serendipity?**

*Thomas Kaiserfeld*

**The Missing Link in Science Communication: The Role of Learned Societies and Popular Journals**

*Jørgen Burchardt*

**Saint-Petersburg Academy of Sciences in 1855-1917: Projects of Reform**

*Ekaterina Yu. Basargina*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Jørgen Burchardt*

**École Polytechnique de Lisbonne versus École Polytechnique de Paris**

*Pilar B.G. Pereira*

**The Role of the Japanese Cultural Background in the Formation of Engineering Education: In the Case of the Imperial College of Engineering, 1871-1886**

*Masanori Wada*

**Moscow Society of the Friends of Natural Sciences, Anthropology and Ethnography and Popularisation of Scientific Knowledge in the 19th Century Russia**

*Galina G. Krivosheina*

**Learned Society as Promoter of Education and Intellectual Activity: Baltic Case**

*Juozas Algimantas Krikstopaitis*

## **T15 Art and Science**

Room: A14

**Wednesday, 29 July, 09.00 – 11.00**

*Chairs: Dénes Nagy, Assimina Kaniari*

**Art and Science in a Split Culture – A General Outlook and a Case Study: Breaking Leonardo's Vitruvian "Code" and the Golden Section with Less "Gold"**

*Dénes Nagy*

**Post-war Biology, Avant-Garde Art and the Social Life of Scientific Ideas at the Festival of Britain 1951: L.L. Whyte, D'Arcy Thompson and 'Form'**

*Assimina Kaniari*

**Carnap's Universal Metaphor: Art and Structural Objectivity between the Wars**

*Boris Jardine*

**Imre Lakatos' and Emmanuel Levinas'. Approaches to the Natural and Human Sciences.**

*Natalie E. Ross*

**Wednesday, 29 July, 11.30 – 13.30**

*Chairs: Dénes Nagy, Geert Vanpaemel*

**Bringing the Laboratory into the Museum of Fine Arts**

*Geert Vanpaemel*

**L'Architecte, le Dessin et la Science, Formes du Savoir dans la Construction**

*Nathalie Huyghues des Etages*

**New Results of the Arthistorical Researches of the Renaissance Frescoes of the Archbishop Johannes Vitéz's Studiolo in Esztergom /Hungary/**

*Mária Prokopp*

**The Restoration of the Renaissance Mural Painting „Virtues”, in the Studiolo of Johannes Vitéz, at the Castle Museum of Esztergom, New Researches and Results**

*Zsuzsanna Wierdl*

**Wednesday, 29 July, 15.00 – 17.00**

*Chairs: Dénes Nagy, Oscar Joao Abdounur*

**Prospective Dwelling: From Utopian to Iconic Habitats**

*Jorge Croce Rivera*

**An Exhibition on the History of the Interrelationships between Mathematics and Music**

*Oscar Joao Abdounur*

**The Art, Science, and Technology of Electrifying Music**

*Pierfrancesco Lostia*

**A Literary Figuration of Alchemy; Novelist Park, Sang-ryoong's 'A Study of Death'**

*Myungshin Kim*

**Wednesday, 29 July, 17.30 – 19.30**

*Chairs: Iván Urbán, Bogdan Zemanek*

**Caravaggio's "Boy Bitten by a Lizard", an Epileptic Contagion between History of Medicine and Folklore**

*Mauro Di Vito*

**History of Botany and Science - Nature - Culture Relations; Interdisciplinary Symposia in Cracow (Poland)**

*Alicja Zemanek, Bogdan Zemanek*

**T16 Science and Society**

Room: A1

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Tihamér Margitay*

**Preliminary Notes for a History of the Popularization of Quantum Physics in Spain**

*María C. Boscá*

**Science and Society in the Context of Contemporary Socio-economical and Ecological Problems**

*Zulfira Sherpaevna Gagaeva*



**The Professional and Public Recognition of Scholar**

*Oleksandr Fedorovych Konovets*

**Organizing Nordic Eugenics in the 1920s**

*Sven Widmalm*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Sven Widmalm*

**The Institute of Race Biology in Sweden – Social Networks and Media Strategies**

*Maria Björkman*

**A Survey of Objective Transfer of Science and Technology Policy in European Union**

*Xinying Fang*

**Role of Nanotechnology in Optoengineering Development**

*Vladimir Gurikov*

**The Nobel Prize Complex in South Korea: Historical and Sociological Considerations**

*Sungook Hong*

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Sungook Hong*

**Transition to Post-academic Science: Performance Indicators and Trust in Science**

*Tihamér Margitay*

**The Architectural History of a Chinese Village**

*Yuan Wang*

**Not Only Fermi. Edoardo Amaldi and the Rebirth of the Italian Physic**

*Luca Malagoli*

**The Biodiversity and Ecosystem Function Research Field: Intersections between Science, Politics, and the Public**

*Marcela Zalamea*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Marcela Zalamea*

**Public Concern about Animal Experimentation and the Russian Academy of Sciences in 1904-1906**

*Natalia E. Beregoy*

**Women and Civilization in the Thought of Edvard Westermarck (1862–1939)**

*Niina M. Timosaari*

**Investigative Report of State-owned Coal Mines for the Purpose of Understanding the Relationship of Science and Society in Mainland China**

*Li He*

**The Role of Shipbuilding and Navigation in the Development and Expansion of Mankind Civilization**

*Vladimir Nikitich Krasnov*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Natalia E. Beregoy*

**The Role of Science-documentary Movies in the 1930s' in Hungary**

*Soma Redey*

**A Comparative History of the Formation of Passive Building Technology**

*Naoki Takuma, Hideto Nakajima, Naoki Yamano*

**The Relationship between Science Journals and the Media: A Lasting Marriage**

*Germana F. Barata*

**Social Phenomenon of Continuity of Scientific Schools of Statistical Physics in Ukraine**

*Alla S. Lytvynko*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Soma Redey*

**Critical Assessment of Nikola Tesla's Legacy for Contemporary Science and Society**

*Tomislav Petkovic*

**The Role of the Referee in Royal Society of London at Nineteenth Century**

*Adriana Mattos*

**Image, Scientific Expedition, the Public, and Nation in Brazil (1870-1930)**

*Moema de R. Vergara*

**The 1853-1856 Cholera Morbus Epidemic in Portugal as Seen by the Press**

*Maria Antónia P. Almeida*

**T17 Science and Culture**

Room: B3

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Roger Hahn*

**Measurement of Time, Length and Area in Southern India around 10th Century AD**

*B.S. Shylaja*

**Laboratory Culture in Academia**

*Truus Van Bosstraeten*

**Narrating the Beehive**

*Tania Munz*

**Credit for Idea, Credit for Experiments: the Authorship of the Doctoral Dissertation in Laboratory Sciences in the Eighteenth Century**

*Ku-ming (Kevin) Chang*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Tania Munz*

**Spinoza's Place in the Genesis of Early Modern Psychology**

*Igor S. Kaufman*

**La Femme et l'Univers Végétal dans la Botanique Mise à la Portée de Tout le Monde**

*Fernando Calderón*

**Visuality and Portentous Weather in Early Modern Culture**

*Maija Kallinen*

**Collecting Practices and Circulating Objects: The Material Culture of Sciences in Mid 19th Century England**

*Anastasia Filippopoliti*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Mihály Beck*

**Japanese Chemical Industry and the “Chemicalization of Everyday Life” in East Asia, 1895-1945**

*Shao-li Lu*

**The Former Headquarters of the Board of Public Health and Its Role in Sanitary Reform at the Beginning of the 20th Century**

*Benedito Tadeu Oliveira*

**Biopolitics and Cultural Heritage in Brazil: The Nation Versions between World Wars**

*Joel Birman*

**Danjon and French Astronomy during the Second Part of the 20th Century**

*John T. Blackmore*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: B.S. Shylaja*

**Science in Culture and Culture in Science: Intertwining Experiences for Stimulating Curiosity in Children**

*Breda Čebulj Sajko*

**The Language of Science in a Globalizing World**

*Anna N. Gorodishcheva*

**Anti-Science: Its History and Features**

*Hongxia Sun*

**Bringing Science Communication to Public Behavior**

*Junping Hu*

## **T18 Trans-cultural Diffusion of Science**

Room: A12

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Imre Hronszky*

**Transformation and Assimilation: The Response of Chinese Literati to Western Crystalline Sphere in the Late Ming and Early Qing Period**

*Chengsheng Sun*

**Cultural Controversy in 18th Century England: The Transmission of Variolation**

*Alicia Grant*

**The Introduction of the Smithsonian Meteorological System in Japan**

*Kae Takarabe*

**Des Objets aux Gestes: Une Archéologie de l'École de Pharmacie de l'Ouro Preto, Minas Gerais, Brésil: 1890-1920**

*Myriam Bahia Lopes*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Myriam Bahia Lopes*

**Les Enjeux d'Un Média Visuel dans l'Entre-deux-guerres**

*Florence Riou*

**Paradigm of Transference of Sciences for Example Andalusia in Final of Medieval**  
*Mohamadreza Pak*

**La Géologie en Algérie (fin XIXe-milieu XXe siècles): Origines et Développement  
d'Une Discipline au Service de l'État en Contexte Colonial**

*Yamina Bettahar*

## **T19 Technology Transfer**

Room: C4

**Friday, 31 July, 17.30 – 19.30**

*Chair: Maria Elvira Callapez*

**The US Foreign Policy in the Early Period of the Cold War and the Introduction of  
Television Broadcasting and Atomic Energy to Japan**

*Kenzo Okuda*

**Digitization like Science**

*Rimvydas Lauzikas*

**Technology Transfer Constraints and the Portuguese Polymer Industry**

*Maria Elvira Callapez*

**Mercury Amalgamation in Hispanic America: Globalization of a Mining Technique in  
the Sixteenth Century**

*Jeannette Graulau*

**How a Guild Apprentice Became an Architect in the 19th Century? – On the Example  
of János Prokop's Journeys**

*Ákos Varga*

**Analysis of the Soviet Technology Transfer in the Development of China's Nuclear  
Weapons**

*Yanqiong Liu*

## **T20 Gender in Science and Technology**

Room: A3

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Éva Vámos*

**Women Investigators at the Institute for Heredity Research in Berlin 1912-1928/33;  
First Results**

*Ida H. Stamhuis*

**Women Scientists and the Culture of Different Laboratory Practices – From the  
Industry to the Kaiser Wilhelm Society and Vice Versa**

*Annette B. Vogt*

**Women-scientists as an Object of the Governmental Propaganda in Soviet Union  
before the World War II**

*Olga A. Valkova*

**The Current Situation of Female Researchers in Japan**

*Mariko Ogawa*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Ida Stamhuis*

**Gendered Elements in Chemical Thermodynamics: A Model for Conceptualizing Gender Ideology in the Content of the Physical Sciences**

*Ágnes Kovács*

**A Gender Perspective on Research Careers in Science and Technology during the Economical Transition in Russia**

*Anne-Sophie Godfroy-Genin, Vera Uvarova*

**Empowerment Process in the Rural Woman Promoting by Public Policies**

*Maria Almanza, Paola Olivares*

**Pain and Child Birth: A Journey through the History of Obstetrics' Anaesthetics in the 19th Century**

*Maria Alexandra Valadas*

**Gender, Culture and Power in the Social Construction of Menopause**

*Rebeca B. Ferrin, Lea Velho*

## **T21 Science and Political Context**

Room: C2

**Friday, 31 July, 11.30 – 13.30**

*Chair: Péter Szegedi*

**Ottoman Decadence Reflected in Dr. Essad's Ophthalmoscope**

*Seref Etker*

**History of Science and Nation-building: Identifying the “Turkish Contributions to Science,” 1870-1950**

*M. Alper Yalcinkaya*

**“For Paupers only!” The General Polyclinic Vienna: Policy Laboratory and Counter University**

*Felicitas Seebacher*

**Did G. Mendel's Political Involvement Interfere with His Scientific Achievements during the Period 1853-1865?**

*Christiane L. Nivet*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Mitchell Ash*

**Science, Nationalism and (Multi)Culturalism in the Late Habsburg Monarchy 1848-1918: A Preliminary Overview of the Issues**

*Mitchell Ash*

**Complementary or Competitive? National and International Science in 19th Century Habsburg Monarchy.**

*Jan J. Surman*

**„Staatsnation“, „Kulturnation“, „Nationalstaat“. Chances or Risks for Science and Scholarship in the Late Habsburg Monarchy?**

*Johannes Feichtinger*

**Scientific Nationalism**

*Gábor Palló*

**Saturday, 1 August, 09.00 – 11.00**

*Chair: Mitchell Ash*

**Patriotism, Nationalism and Internationalism. Chemists in the Czech National Enlightenment.**

*Soňa Štrbáňová*

**To Be a Good Son of One's Nation... Czech Historians between National Program and Scientific Style**

*Antonín Kostlan*

**Racial Sciences in Hungary in the Decades around 1900**

*Emese Lafferton*

**Anthropological Disciplines in the Late Habsburg Monarchy**

*Irene Ranzmaier*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Joao Rangel de Almeida*

**Instruments of Paper, Overseas Agents, Distant Natural Objects: On the Spanish Instructions of the 18th Century**

*Marcelo Fabián Figueroa*

**Vinegar, Fire and Smoke. Quarantine and Purification in the 1830-1851 Mediterranean Sea.**

*Joao Rangel de Almeida*

**Nurses during the Spanish Civil War: The Political Participation of Women through Medical and Welfare Care**

*Dolores Martín Moruno*

**Archaeology in the Tropics: Science and the 20th Century Portuguese Colonial Agenda**

*Ana Cristina Martins*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Valentin Bazhanov*

**Popular Medical Manuals and Guidebooks in Late-18th Early-19th Century**

*Betania Goncalves Figueiredo*

**Ideology and Mathematical Logic: The History of Soviet-Hungarian Ties before and after World War II**

*Valentin A. Bazhanov*

**Imperial Ears: Ogawa Naoyoshi and the Colonial Linguistics in Early Twentieth Century Taiwan**

*Feng En Tu*

**Philosophical Roots of Boris Hessen: A Criticism against the Myth of Hessen's Externalism**

*Pablo Huerga Melcón*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Fabio de Sio*

**An Ivory Tower Downtown: The Rise and Fall of the "Area per la Ricerca" in Naples (1965-1970)**

*Fabio De Sio, Mauro Capocci*

**The Politics of Anatomy in Vienna**

*Tatjana Buklijas*

**Plague, Cholera and the Expansion of Habsburg Medicine to the Ottoman Empire  
1840-1860**

*Marcel Chahrour*

**The Diaries of an Outstanding Physicist and Historian of Science – Sergey I. Vavilov**

*Vladimir Mihailovich Orel, Yuriy Ivanovich Krivonosov*

**T22 Methodology and Sources for the History of Science and  
Technology**

Room: A6

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Levente Csóka*

**10 Years in the Research of the Water-powered Up-and-down Sawmill Programme in  
Szeklerland (Eastern Transylvania)**

*Tamás Pauló*

**The Role of Old Globes as a Multidisciplinary Source, in the Birth and Emergence of  
Porto University**

*Mónica C. Ramalho Oliveira*

**The Material Culture of the First Experimental Tests of Bell's Theorem: An Analysis  
of the Experimental Apparatus (1972-82)**

*Wilson Fábio de Oliveira Bispo*

**Historical Development of Doors and Windows in the Carpathian Basin**

*Tamás Szemerey, Levente Csóka*

**The Bending Techniques of Wood in a Historical View**

*Sándor László Tóth*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Thomas A. S. Haddad*

**Aesthetic Principles in Evolution of Physics**

*Svitlana D. Gapochenko*

**Taking Practices as an Explanatory Source: Toward a Post-Needham Historiography  
of Chinese Science**

*Xiang Huang, Sergio Martínez*

**Astronomy and History of Astronomy in the Jesuit Mémoires de Trévoux (1701-  
1762): An Assessment of Themes and Modes of Presentation**

*Thomas A.S. Haddad*

**Hipparchus vs. Ptolemy and the Antikythera Mechanism. Pin/Slot Device Models  
Lunar Motions**

*Elias Gourtsyannis*

**On Metrology of Bukhara Emirate of the End of XVIII – The Beginning of XX  
Centuries**

*Mahmudjon Sh. Kholov*

## **T23 Science and Philosophy**

Room: C2

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Wojciech P. Grygiel*

**The Problem of Quality and Quantity in the Development of Science from Ancient Times to Present**

*Erwin Neuenschwander*

**Philosophy of Mathematics in the Warsaw School of Mathematical Logic: Tarski and Mostowski**

*Roman Murawski*

**The Role of Historical Approach in the Emergence of New Humanist Philosophy of Mathematics**

*Olga Kiss*

**Philosophy of Mathematics and Effects on Mathematics Education**

*Tuba Gökçek*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Erwin Neuenschwander*

**Science and Philosophy**

*Kajal Sraman*

**The Relationship between Science and Philosophy – Historical and Theoretical Aspects**

*Boris Chendov*

**Enjeux Entre les Approches Historique et Logique de la Recherche Scientifique**

*Fabio Tenorio de Carvalho*

**Eugene Wigner and Philosophy: The Steps of his Philosophical Formation**

*Frederik M. dos Santos*

**Tuesday, 28 July, 17.00 – 19.30**

*Chair: Boris Chendov*

**Cultural and Historical Coexistence and Irrelevance of Presentist/Eternalist Debate**

*Alain Ulazia*

**Man's Determination of Nature's Cognition**

*Yuriy Kulkov*

**Non-cognitive Values and Applications of Scientific Theories**

*Kelly I. Koide*

**Casus or Philosophy and Representation of the Singular?**

*Natalia A. Kolodiy, Tatiana Konyukhova*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Olga Kiss*

**History of Quarks as the Witness of Instrurealism in Observational-theoretical Distinction: Reconciliation of Scientific Realism and Instrumentalism**

*Musa Akrami*



**Physics-likeness of Science**

*Peeter Müürsepp*

**Historical Reasons and Possible Ways of the New Scientific Synthesis**

*Alexander E. Egoyan*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Peeter Müürsepp*

**Was Einstein Right about Quantum Mechanics?**

*Fátima Masot Conde*

**Le Développement de la Théorie de la Relativité dans le Milieu Philosophique Français dans les Années 1920: Une Étude à Partir de l'Épistémologie Bach**

*José Ernane Carneiro Carvalho Filho, Michel Paty, Elyana Barbosa, Aurino Ribeiro Filho*

**String Theory – The Fall of Science?**

*Wojciech P. Grygiel*

**Einstein and Newton; Two Giant Philosophers – Scholars: Relativity Absorbs Quantum Gravity and Negates Absolute!**

*Shiva Kaviani*

**T24 Science and Military Affairs**

Room: A7

**Friday, 31 July, 17.30 – 19.30**

*Chair: Emese Szoleczky*

**Turning Organic Chemistry into 'a Science rather than an Art': The Role of the US Military during and after World War II**

*Stephen J. Weininger*

**The Quest for National Fuels, an International Matter of the Interwar**

*Camille Molles*

**Working Out of the Laser Weapon under the Program «Star Wars» in the USA**

*Anatoly Djemin*

**T25 Modernization and Development**

Room: A4

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Eldar M. Movsumzad*

**Forgotten “Industrial Warriors”: The Boom of Vocational Training in South Korea, 1967-1986**

*Tae-Ho Kim*

**A Review of the Observations of the Historian Kume Kunitake on Chemistry Education, Mining and Chemical Manufacturing in the West and in Japan in the True Accounts of the Iwakura Embassy to the United States of America and Europe 1871-1873**

*Yona Siderer, Masanori Kaji*

**Development of Transport Systems for Oil and Gas Delivery from Offshore Fields**

*Anna Lokshina, Ildar Shammazov*

**Bulgarian Dairy Industry Meets the (West) European, 1910-1940**

*Elitsa R. Stoilova*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Yona Siderer*

**The Gas Hydrocarbon Stock for Electroenergetic**

*Eldar M. Movsumzade, E.S. Bogacheva, M.Y. Karisalov, A.V. Borodin*

**Development of Mathematical Methods and Information Technology**

*T.A. Aliyev, N.Ch. Movsum-zade, Abdula E. Karayev*

**Development of Helium Industrial Production from Natural and Casing-head Oil Gases in Russia**

*Alik M. Syrkin, E.V. Stolypin, V.I. Stolypin, N.L. Egutkin*

**Evolution of the Technologies and Technical Means for Offshore Oil and Gas Fields Development**

*Boris N. Mastobaev, Ayrat M. Shammazov*

**T26 Technology and Society**

Room: A2

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Lilyia P. Ponomarenko*

**Strategies for Simulation of View in the Production Agroindustry**

*Rubén D. Bonilla Isaza, Milton Mauricio Herrera Ramírez*

**L'Usage du Marbre dans la Construction des Églises: la Technique au Service de la Symbolique dans la Spiritualité Chrétienne**

*Joëlle Petit*

**De la Parade au Changement Climatique: Homme, Habitat et Isolation Thermique**

*Dominique Theile*

**The Plot of Concrete in Brazil: A History of the Technology Diffusion of Reinforced Concrete**

*Roberto Eustaáquio dos Santos*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: László Tóth*

**Risk Assessment and Risk Society: Winners and Losers in Genetic Discourse**

*Maria Alexandra Valadas, Carlos Melendez*

**Shattered Hopes – The Swedish Wood Gas Experience**

*AK Helena Ekerholm*

**A Chain of Technological Development in Japan after the WW II and Social Constructionism of Technology**

*Tadaaki Kimoto*

**Telescola: An Educational Television Project Developed in Portugal, in the 1960's**

*Mária C. Almeida*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: László Tóth*

**A Phenomenological Analysis of Facebook**

*Carlos R. Melendez, M. Alexandra Valadas*

**Development of High-tech and Social Fairness**

*Feng Zhang*

**The Necessity of Control of the Increasing Global Radiation Risk by Way of the Creation of the Complex System of the Two-united Radionuclide-ecological and the Medical-genome Monitoring (REMGM)**

*Alexandr P. Elokhin, Igor Ivanovich Suskov, Alexandr Ivanovich Glushchenko, Alexandr Prokopevich Elokhin, Larisa Stepanovna Baleva, Alla Evgenevna Sipyagina*

**The Most Common Technical Systems in the Service of the Mankind – History of Toilets**

*Petri S. Juuti, Riikka P. Rajala*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Lillian Hoddeson*

**Long-term Thinking in Water Services in Finland**

*Riikka P. Rajala, Petri S Juuti*

**Information Society as Surveillance Society**

*László Molnár*

**Showmanship and Technological Futurism: The Middleton Family at the 1939 New York World's Fair**

*Jaume Sastre-Juan*

**GM Rice Trial in Japan: Its Historical Background and Meaning**

*Takako Nakajima*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: László Molnár*

**Public Opinion towards Biotechnological Applications: Example of Turkey**

*Oguz Ozdemir*

**One of the Ways to Solve Power and Environmental Problems: Application of the Superconductivity**

*Lilyia P. Ponomarenko*

**Social Agendas and Transdisciplinary Education as Engines for Radical Scientific Invention: Stanford Ovshinsky's Energy and Information Inventions**

*Lillian Hoddeson*

**History of Electric Energy in Brazil: The “Electromemory” Project – 1890 to 2005**

*Gildo M. Santos*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Carlos R. Melendez, Sándor Jeszenszky*

**The Public Side of Technology: Patents Publications XVI-XVII Century**

*Luisa Dolza*

**A Brazilian in the Genesis of the Electronics Technology**

*Francisco A. de Queiroz*

**New Rurality: Approaches and Synergies. Emergence of an Alternative Development Model**

*Noriero Escalante Lucio, Almanza Sánchez María, Torres Carral Guillermo, Ramírez Miranda César Adrián*

**Political and Cultural Grounds as Driving Force of Soviet Broadcasting Technologies**

*Nina A. Borisova*

**Technology's Fingerprints on Social Crossroads**

*Elena Lacatus*

**T27 Politics of Technology**

Room:A15

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Imre Hronszky*

**Negotiating Neighbours – National and Transnational Politics of a Natural Gas Pipeline**

*Anna Åberg*

**The Politics of Dust Suppression in Spanish Coal Mining, 1944-1975**

*Alfredo Menéndez-Navarro*

**Leviathan and the Airplane: The Rise and Fall of the Technological State in Indonesia, 1966-1998**

*Sulfikar Amir*

**T28 Approaches to History of Science**

Room: A7

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Hayo Siemsen*

**Different Approaches to the History of Science and an Idea of the Optimal Doctoral Programs in the History of Science**

*Michal Kokowski*

**On the Resistance of the World**

*Ilksen N. Icen*

**Ernst Mach and George Sarton: The Genesis of Ideas in the History of Science**

*Hayo Siemsen, Karl Hayo Siemsen*

**Rosalind Franklin and the DNA Double – Helix: Historiographical Accounts**

*Marcos Rodrigues Da Silva*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Robin W Scheffler*

**From the Local to the Global. The 'Circulation of Knowledge', a Promising Perspective?**

*Bart Karstens*

**Yangzhou 揚州 Scholars' Eyes On Jesuit Science: Reflections on the Chouren zhuan**

*Ling-Hsuan Shih*

**Le « Degré Zéro » de la Nanotechnologie : à Propos de Feynman Comme Précurseur**  
*Marcos A.G. Nalli*

**Interests and Instrument: A Micro-history of Object Wh. 3469 (X-ray Diffraction Powder Camera c. 1940)**

*Robin W. Scheffler*

## **T29 Darwin 1809-1859-2009**

Room: A7

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: György Kampis*

**The Dialectical Structure of Darwin's Argumentation**

*Anna Carolina Regner*

**History and Philosophy of Science on Trial**

*David W. Mercer*

**The Introduction of Darwin in Portuguese Science and Culture (1865-1914)**

*Ana Leonor Pereira*

**Mendelism Enforcing Darwinism: The Introduction of the Mendelian Laws of Heredity in the Portuguese Scientific Thought of the Early 20th Century**

*Pedro R.G. Fonseca*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: István Mátcskásy*

**The Development of Darwinism by Ukrainian Zoologists (End of XIXth – Beginning of XXth Century)**

*Oleg Pilipchuk*

**What Had Happened if Darwin Had Known Mendel (or Mendel's Work)?**

*Pablo Lorenzano*

**Darwinism and the Study of Behavior: The Case of "Clever Horses from Elberfeld"**

*Marco Stella*

## **T30 Galileo 1609-2009**

Room: A13

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Lajos Bartha*

**On Mechanical Science: Leonardo, Tartaglia, Galilei and Lorini**

*Raffaele Pisano, Danilo Capecchi*

**Galileo's Military Compass and the Context for Mathematical Physics**

*Nikhil Bhattacharya*

**"La Ragione del Vacuo". Why and How Galileo Measured the Resistance of Vacuum**

*Cesare S. Maffioli*

**Observer Point of View as an Argument for Physical Knowledge (from Galileo to Hawking)**

*Igor D. Nevvazhay*

## **T31 History of Science in Education**

Room: C3

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Michael R. Matthews*

**"Les Magiciens de la Lumière" or "Wizards with Light", a Film Tracing the History of the Speed of Light**

*Pierre Lauginie, Serge Guyon, Christine Azémar, Laurent Baraton, Alain Sarfati*

**Historical Artefacts - Direct and Indirect Evidences for Evolution in Biology Curricula**

*Gergely Kertész*

**Science and Worldviews in the Classroom: Joseph Priestley and Photosynthesis**

*Michael R. Matthews*

**George Sarton's Viewpoints on the Teaching of the History of Science**

*Longhu Qiu*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Jan Mikes*

**"The First Days of Electricity": Teaching Proposal for the Exploration of the History of Electricity Using a Scientific Instrument Collection**

*Flora Paparou, Alexandra Karaliota*

**Analyses of the Historical Thermodynamics Contents in the Physical Chemistry Textbooks Used in Brazil**

*Glaucia M. Da Silva, Leo Degreve, Giovana Aline Moi*

**New Attitudes to the Technical History Research, by Way of an Example: Modelling of the Electrotechnical Origins in Czech Countries**

*Jan Mikeš, Marcela Efmertová*

**Invisible Vapor: Electric Motors from the Perspective of the History of Electricity**

*Kemal Yurumezoglu, Ayse Oguz*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Nicla Palladino*

**Science Students' Description of an Atom: A Comparative Epistemological Analysis**

*Ayse Oguz, Husamettin Akcay, Dilek Akyol*

**The Models of Mathematical Surfaces and the Anaglyphs: Their Historical Origin, Didactics Applications, Actual Use in Image Communication**

*Nicla Palladino*

**Coexistence of History of Mathematics and Modern Mathematics**

*Saeed Banihashemi*

**Idea of Universal Mathematical Instrument in Jacobi's Tracts – CANCELLED!!!**

*Milyausha Ananyeva*

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Gergely Kertész*

**Outputs of the Science History Course: The Sample of KTU Department of Computer Education & Instructional Technologies**

*Emine Timuçin, Sakine Sensoy-Öngöz*

**Historical and Scientific Material in Professional Training of Teachers**

*Irina Vlasova*

**A Naturalist Who Became a Pioneer of Experimental Marine Oceanography in Portugal. Assets for Science Education.**

*Cláudia Faria, Gonçalo Pereira, Isabel Chagas*

**A Few Stories from Biochemistry and Molecular Biology**

*Carne Zaragoza Domenech, Josep M. Fernández Novell*

**Wednesday, 29 July, 11.30 – 13.00**

*Chair: Thomas L. Isenhour*

**EPMagazine from the Students to the Students**

*Angelo Rapisarda*

**Can You Tell Me What the Science Is?**

*Zeynep Haliloglu Tatli, Alipaşa Ayas, Rabia Yildiz*

**History of Science and Philosophy of Science: Analysis of Correlations**

*Sergey F. Martynovich*

**The Evolution of Modern Science: Integrating Science into the Humanities**

*Thomas L. Isenhour*

**T32 Science in Social Context**

Room: A11

**Friday, 31 July, 11.30 – 13.30**

*Chair: Luís Miguel Carolino*

**Paradox of Interdisciplinarity Revisited (Curriculum Vitae of a Discipline)**

*György Darvas*

**Popular Interest in Science: The Readers of the Magazine *Ciência Popular* (1948-1960)**

*Catarina C. Silva*

**The Formation of a Space-rocket and Radio Technologies: Personality and Politics**

*Vassili M. Chesnov*

**Friday, 31 July, 15.00 – 17.00**

*Chair: György Darvas*

**The Eclipse, the Astronomer, and His Audience: Federico Oom and the Total Solar Eclipse of 28 May 1900 in Portugal**

*Luís Miguel Carolino*

**Scientific Achievements - The Starting Factor of Country Innovative Development**

*Valeriy Grigoryev*

**Interpreting the Cephaloscope: Instruments, Diagnosis, and the Medicalization of the Deaf, 1800-1850**

*Jaipreet Viridi*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Jaipreet Viridi*

**The Roots of the Modern Social and Welfare State and the Ideas of the Vienna Scientific Essayist on Social Reform Rudolf Goldscheid (1870-1931)**

*Gudrun Exner*

**Romance of an Indigenous Chemical Enterprise in Kolkata – Case of East India  
Pharmaceutical Works Limited**

*Malika Basu(Ghosh)*

**T35 Scientific Instruments**

Room: A2

**Thursday, 30 July, 15.00 – 17.00**

*Chair: Vasily Borisov*

**The Unilever Collection and the Dilemma's of Collecting Modern Scientific  
Instruments**

*Ad Maas*

**The Project "EPMOSPHERE": The Old French Armillary Sphere of Lomonosov  
Museum as the Object of the International Education, Restoration, Research**

*Tatiana M. Moiseeva*

**Gnomon: A Mediating Instrument for Drawing, through Historical Origin,  
Morfological Construction and Use**

*Panagiotis N. Delikanlis*

**Thursday, 30 July, 17.30 – 19.30**

*Chair: Steven Turner*

**Wavefront Sensing. A Non Contact Technique for the Assessment of Optical  
Instruments**

*Santiago Vallmitjana, Carme Ferran*

**An Apparatus for Demonstrating the Imperishability of Forces of Nature**

*Jan Tapdrup*

**How the Interferometer Changed Ideas about Nature**

*Harry H. Mark*

**Controversy over the Reliability of Wind Tunnels in Early British Aeronautical  
Research**

*Takehiko Hashimoto*

**Friday, 31 July, 11.30 – 13.30**

*Chair: Stephen Johnston*

**The Taly Range – An Introduction to a Remarkable Family of Instruments of  
Precision Measurement**

*John S. Reid, Michael A. Player*

**Canterbury Tales: Medieval Instruments in Social Context**

*Silke Ackermann*

**Geography, Astronomy and Mathematical Instruments in 16th-century Europe**

*Katie Taylor*

**The Planetarium by Hartog van Laun**

*Hans Hooijmaijers*

**Friday, 31 July, 15.00 – 17.00**

*Chair: Paolo Brenni*

**Telescopes as Decorative Art**

*Marvin Bolt*



**Scoping Longitude: Optical Designs for Navigation at Sea**

*Richard Dunn*

**Astronomical Instruments for Gazing and Measuring**

*James Caplan*

**The Schmidt Telescope – A Highlight in Astrophotography**

*Gudrun Wolfschmidt*

**Friday, 31 July, 17.30 – 19.30**

*Chair: Gloria Clifton*

**Teaching and Research: Shifting Trajectories of Science at Georgetown University in the Nineteenth Century**

*Dana A. Freiburger*

**Ranking the Stars; the Magnum Opus of J.C.Kapteyn**

*Jan W. Huisman*

**Astronomical Sites and Instruments as World Heritage: The Case of 19th and 20th Century Observatories**

*Françoise C. Le Guet Tully, Jean Davoigneau*

**Advanced Instruments and Informal Scientific Bodies: The First Observations of Venus and Mercury by Radar**

*Vasily P. Borisov*

**Saturday, 1 August, 11.30 – 13.30**

*Chair: Richard Kremer*

**Instruments of Music as Instruments of Science: Hermann von Helmholtz's Sound Sensation Studies, His Classicism, and His Beethoven Sonata**

*Alexandra E. Hui*

**The Early Years of Histological Research at Ghent University (Belgium)**

*Kristel Wautier, Alexander Jonckheere, Danny Segers*

**Bringing Physics to the Physicians**

*Robert D. Hicks*

**What Happened on the East River: The Synergy of Scientific Instrument Development at the Rockefeller Institute and the RF Virus Laboratory**

*Darwin H. Stapleton*

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Peggy Kidwell*

**Doing it by the Book**

*Tacye Phillipson*

**Liebig's Kaliapparat: A Case Study on the Material Culture of Chemistry**

*Sara R.D.S. Carvalho*

**Buying Instruments: Costs of an Experimental Culture. The Case of the Physics Laboratory at Padua University (1847-1857)**

*Christian Carletti*

**En Route to the „German Chronometer“: The Introduction of Precision Timekeeping in the German Mercantile Marine and Imperial Navy in the 19th Century**

*Günther Oestmann*

**Saturday, 1 August, 17.30 – 19.30**

*Chair: Tacye Phillipson*

**Models as Material Ideas. Teaching Useful Knowledge with Irenical Instruments in the Early Enlightenment**

*Kelly J. Whitmer*

**The Inclined Plane: A New Look at a (Very) Old Instrument**

*Steven C. Turner*

**Scientific Instruments in the Polytechnic School of Lisbon: The 19th Century Collection of Optical Instruments**

*I. Marília Peres*

**Skinner Box in Psychology Didactic Laboratories in Brazil**

*Sergio D. Cirino, Kennon A. Lattal, Rodrigo L. Miranda, Robson N. Cruz*

## **T36 Studies in the History of Metrology**

Room: A8

**Wednesday, 29 July, 09.00 – 11.00**

*Chair: Roger Hahn*

**Foundation for Traditional Chinese Metrology Museum**

*Zhelei Xia, Wei Huang, Jiebin Lang, Xinming Jiang*

**Résolution Numérique d'Un Problème Métrologique: le Pied, la Perche et l'Acre d'Angleterre**

*Olivier Reguin*

**La Métrologie Historique en France Depuis un Demi-siècle**

*Jean-Claude Hocquet*

**La Coordination Métrologique et la Spatialité dans le Cas de Quelques Petites Églises Romanes en Bourgogne**

*Masatsugu Nishida*

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Jean-Claude Hocquet*

**A Study on Ying Biao Yi – A New View on the Important Document in the History of Metrology in China**

*Yuzhen Guan*

**On Historical Development of Chinese Metrology**

*Zengjian Guan*

**Material Metrology and the Strange Pyramidology of C. Piazzzi Smyth**

*Michael J. Barany*

**The Management of Chinese Time Metrology in the Period of the Tang Dynasty – Administrative Organs, System and Legal Precedent of Clepsydra**

*Yong-liang Ji*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Lajos Bartha*

**The Emergence of Macroscopic Quantum Effects and the New International System of Units (SI 2011) Based upon Fundamental Constants**

*Heinz Luebbig*

**History of Precise Reading for Measuring Instruments**

*Eiju Matsumoto*

**On the Evolution and its Impact of the Metrological Units of Traditional Chinese Medicine in Ancient China**

*Rentian Ji*

**On the Metrological Legal System in Qin Dynasty: The Initial Formation Times of Ancient Chinese Metrological Legal System.**

*Junlin Yu*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Eiju Matsumoto*

**The Portuguese Marco – The First Measurement Standard Travelling around the World**

*Antonio Cruz*

**The Measurement of the Standard Time in the Republic of China**

*Vilin Sun*

**Historical Review on Pre-metric Metrology in the Netherlands**

*Shigeru Kurosu*

## **T37 Controversies and Methodology in the History of Science**

Room: A5

**Friday, 31 July, 11.30 – 13.30**

*Chair: Gábor Zemplén*

**Leibniz's Method of Conciliation of the Opposites in a Scientific Controversy**

*Marcelo Dascal, Erez Firt*

**Metaphysics, Physics, and Methodology in the Vis Viva Controversy**

*Idan Shimony*

**Hume's Experimental Method**

*Tamás Demeter*

**Discussion**

**Friday, 31 July, 15.00 – 17.00**

*Chair: Marcelo Dascal*

**Methodology as an Argumentative Tool in Debates around Newton's Theory of Light and Colours**

*Gábor Á. Zemplén*

**Controversy Studies: Another Field of Scientific Meta-expertise?**

*Gábor Kutrovátz*

**Discussion**

## **T38 Scientific Controversies**

Room: C4

**Wednesday, 29 July, 11.30 – 13.30**

*Chair: Günther Fleck*

**The Dispute about Culture(s). Controversies in the Social and Cultural Sciences and What We Can Learn from Them.**

*Manfred Fraunlob*

**Science between Emancipation and Adaptation**

*Gernot Stimmer*

**Intuition versus Science: The Limits of Reason in a World of Emotions**

*Rainer Born, Eva Gatarik*

**Wednesday, 29 July, 15.00 – 17.00**

*Chair: Katalin Martinás*

**Psychological or Physiological: Which Suit Should We Wear?**

*Shulamith Kreitler*

**Therapy According to Diagnosis or Vice Versa?**

*Dagmar Eigner*

**Science or Pseudoscience: The Strange Case of Parapsychology**

*Günther Fleck*

**Wednesday, 29 July, 17.30 – 19.30**

*Chair: Rainer Born*

**Miller's Experiments: A Relativistic Controversy**

*Roberto Lalli*

**Energy Controversy**

*Katalin Martinás*

**Controversies in Thermodynamics**

*László Ropolyi*

## **T39 History of Cognitive Science**

Room: C4

**Tuesday, 28 July, 11.30 – 13.30**

*Chair: Lillia Gurova*

**Interdisciplinary Issues in Early Cybernetics**

*Leone Montagnini*

**On the Criterion for Deciding whether Machines Can Think**

*Stefan Riegelnik*

**History of Humanoid Robots**

*Basak Yuksel, Yoshihiko Nakamura*

**Anthropomorphism as a Demarcation Criterion in the History of the Hungarian Cognitive Dog-ethology**

*Katalin Mund*

**Prehistory of Cognitive Science**

*Andrew Brook*

**Tuesday, 28 July, 15.00 – 17.00**

*Chair: Csaba Pléh*

**Behaviourism and Cognitivism - On the Roots of Cognitive Sciences**

*Gabriele M. Mras*

**From Today's Crisis in Cognitive Science to Yesterday's Crisis in Psychology**

*Nicole Rossmannith, Andreas Reichelt*

**Models of the Mind throughout the History of Cognitive Science**

*Sven Walter*

**Thirty Years Cognitive Studies of Categorization: What's behind the Reported Progress**

*Lilia Gurova*

**Tuesday, 28 July, 17.30 – 19.30**

*Chair: Nicole Rossmannith*

**Animal Memory and the Origins of Mind: The Conception of Lajos Kardos, a Hungarian Comparative Psychologist**

*Csaba Pléh*

**Cognitive Science between Biology and the Social Sciences Abstraction, Isolation, Re-opening**

*Andreas F. Reichelt, Nicole Rossmannith*

**Then and Now: Cognitive Science and Economics**

*Filomena De Sousa*

**The Right Hemisphere of Cognitive Science**

*Bálint Forgács*

**T40 Pioneering Ideas and Methods in the History of Earth Sciences**

Room: C1

**Saturday, 1 August, 15.00 – 17.00**

*Chair: Miklós Kázmér*

**History of the Geonomical Concept and the Hungarian School of Geonomy in the Second Half of XX. Century**

*Terézia Póka*

**Giuseppe Folgheraiter the Italian Pioneer of Archaeomagnetism**

*Claudia Principe, Jonas Malfatti, Yves Gallet, Maxime Le Goff, Agnes Genevey*

**Relevant Cartographical Maps Made and Used by Geographers in the Carpathian-Danubian-Pontic Area, in the 17-20th Centuries**

*Horia Salca, Doina Suteu*

## **T41 Some Methodological Aspects of History of Science**

Room: A13

**Friday, 31 August, 17.30 – 19.30**

*Chair: Roberto Angeloni*

**Why does the Traditional Distinction between Internal and External History not Hold?**

*Roberto Angeloni*

**Principles of Determination of Discovery Convention Priorities**

*Aleksandr Pilipenko*

**Methodological Issues of the History of Soviet Psychology between the Two World Wars: Case Study of Vygotsky Circle**

*Anton Yasnitsky*

# **Special Meetings during ICHST 2009**

*(as of 14 July)*

## **Business Meeting of CBD (Commission on Bibliography and Documentation)**

Tuesday, 28 July, 17.30 – 18.30, Room: A6

## **Pioneer's Roundtable**

Tuesday, 28 July, 18.30 – 19.30, Room: D1

## **IASCUD Commission Meeting**

Wednesday, 29 July, 09.00 – 11.00, Room: C4

## **Commission for History of Ancient Medieval Astronomy CHAMA**

Wednesday, 29 July, 09.00 – 11.00, Room: C7

## **ESHS Meeting**

Wednesday, 29 July, 13.30 – 15.00, Room: A9

## **Meeting of editors and journals**

Wednesday, 29 July, 15.00 – 17.00, Room: C7

## **IUHPS/DHST Council Meeting I.**

Wednesday, 29 July, 17.30 – 19.30, Room: C6

## **IUHPS/DHST General Assembly I.**

Thursday, 30 July, 09.00 – 13.00, Room: C7

## **IUHPS/DHS Modern Commission for the History of Modern Physics**

Thursday, 30 July, 15.00 – 16.00, Room: A6

## **Sciences et Empire Commission ICHST/UNESCO**

Thursday, 30 July, 15.00 – 16.00, Room: A7

## **Commission on History of Science and Technology in Islamic Societies**

Thursday, 30 July, 15.00 – 17.00, Room: A4

## **Meeting of the Commission on History of Geography**

Thursday, 30 July, 15.00 – 17.00, Room: A5

## **Business Meeting of Pacific Circle**

Thursday, 30 July, 15.00 – 17.00, Room: A3

## **Women in Science Commission**

Thursday, 30 July, 15.00 – 17.00, Room: A13

## **East Asian Commission**

Thursday, 30 July, 17.30 – 19.30, Room: A6

## **When is a Problem Solved? Round Table Phil Davis Essay**

Thursday, 30 July, 17.30 – 19.30, Room: A5

## **Joint Commission**

Thursday, 30 July, 18.30 – 19.30, Room: A3

## **Teaching Commission**

Thursday, 30 July, 18.30 – 19.30, Room: A13

## **Meeting of ICOHTEC Executive Board**

Thursday, 30 July, 20.00 – 22.00, Room: D1

**DHST-DLMPS Meeting**

Friday, 31 July, 13.30 – 15.00

**CHST Meeting**

Friday, 31 July, 15.00 – 17.00, Room: C7

**Open Session of ICHM**

Friday, 31 July, 17.30 – 19.30, Room: C7

**"For Better or Worse – Co-operative Scientific Couples" Future Project Discussion**

Friday, 31 July, 17.30 – 19.30, Room: A4

**Scientific Instrument Commission**

Saturday, 1 August, 09.00 – 11.00, Room: A2

**General Assembly of ICOHTEC**

Saturday, 1 August, 15.00 – 17.30, Room: D1

**IUHPS/DHST General Assembly II.**

Saturday, 1 August, 15.00 – 19.00, Room: C7

**IUHPS/DHST Council meeting II**

Sunday, 2 August, 12.30 – 13.30, Room: C6

## Field Trips

On July, 30 morning special visits will be organized to places of interest (history, science and culture). The shuttle buses will start at 9.30, meeting point in the registration area.

**FT1 – Hungarian Museum for Science, Technology and Transport, Central Building**

The predecessor of the Central Unit was the Transport Museum, founded in 1896. The collections and exhibitions almost all are related to transportation history. The main units are: Transport on water: maritime and river and railway transportation. Safety and signaling equipment. There exists an independent aviation collection, space research collection and life style collection. We find here more than 200 original objects: coaches, carriages, trams, wagons, airplanes, gliders, space capsules. These objects can be seen in the main building. World famous is the collection of 1- to 5- scale models of locomotives and wagons.

The Kossuth Historic Boat is open to the public. The Coach Museum in Parád is very popular. Near the central building there is Petőfi Hall with the airplane collection and the space research exhibition.

The tour starts with a 20-minute stop at the Budapest Evangelic Secondary School where several of the Nobel-Laureates of Hungarian origin studied.

**FT2 – Hungarian Museum for Science, Technology and Transport, Study Stores**

The predecessor of the Study-stores, the Hungarian Museum for Science and Technology was founded in 1954 as Group for Registering and Collecting of Technical Relics.

The sphere of collecting comprises all the branches of science (except life sciences), and all the branches of technology (except transportation).

The main scientific collections are:

Objects related to mathematics, informatics, and physics are displayed in the study stores. Objects related to chemistry are also shown here. The collections comprises the best set of geodetic instruments in the country and a very good and old collection of astronomy and optics, The collection of office equipment and household are connected to everyday life. A visit to the telecommunication collection makes the tour complete. MOBILEUM the interactive power machine hall is a fascinating part of the Study-stores.



### **FT3 – Foundry Museum of the Hungarian Museum for Science, Technology and Transport**

Foundry Museum preserves the past of a profession in the heart of the capital, in an old foundry shop of Abraham Ganz's erstwhile world famous railway wheels factory.

The exterior of the Foundry Museum building is a treat for the eyes. Entering, visitors meet a wooden structure workshop of a 19th century's factory. All the melting furnaces, pouring ladles, mould boxes, revolving cranes preserved as relics, make the impression of getting into an operating iron foundry.

Take a look at our wonderful relics and documents, 19th century's artistic iron castings, bell show, cast iron lacy spiral stairs, and relics of Abraham Ganz and András Mechwart's lives.

### **FT4 – Electrotechnical Museum of the Hungarian Museum for Science, Technology and Transport**

The museum opened its doors in 1982, and houses exhibitions featuring more than a century's worth of Hungarian contributions to the electric power industry. Electric trains, lighting technologies, and transformer production are on display along with various consumer technologies and a host of other original artifacts.

### **FT5 – Hungarian Natural History Museum**

The Hungarian Natural History Museum is one of the finest institutions of its kind in Europe, an inspirational setting that houses magnificent collections of major historical importance. To promote public understanding and nature conservation the museum collects, classifies, and preserves a wealth of natural artifacts, presenting them according to the latest scientific knowledge.

### **FT6 – Hungarian Geographical Museum**

The Hungarian Geographical Museum presents the heritage of great geographers. Historic documentation from research conducted by Hungarian geographers and geologists, as well as the artefacts from their exotic travels, are displayed in the exhibition.

The Museum presents the heritage of great geographers such as Jenő Cholnoky, Gyula Germanus, Sándor Láng, Lajos Lóczy, János Tulogdi, and, last but not least, of its founder Dénes Balázs. Lóczy's leather boat used for his research on Lake Balaton, as well as the artefacts from Cholnoky's travels in China and objects from Papua New-Guinea, East Africa, and North and South America are all among the exhibits.

Permanent exhibitions: the role of Hungarians in the scientific discovery of Earth from the 13th century to the present day; scientific exploration in the Carpathian Basin - the results of the leading figures in earth sciences, geography, geology, palaeontology and cartography in the natural scientific discovery of Hungary. The pantheon of the Hungarian world-travelling geographers can be seen in the Museum Gardens.

Built around 1840, the Classicist Wimpffen Mansion is home to the Museum.

Temporary exhibitions are also arranged in the Museum which has a public library.

### **FT7 – Geological Institute of Hungary**

The Geological Institute – housed in a purpose-built, spectacular Art Nouveau palace – has been responsible for the geological mapping of Hungary since 1869. This activity is served by a museum of fossils and minerals, a major library of books and maps, and an archive. Exhibitions display old maps, geologists' instruments and books on the Carpathians from the last 400 years.

### **FT8 – Eötvös Loránd Geophysical Institute of Hungary**

The Eötvös Memorial Collection displays the most sensitive gravity instrument of all times, a torsion pendulum, built in 1891 by Eötvös, professor of physics in Budapest. Applied in oil exploration for decades, their 'evolution' is illustrated by original instruments. Personal memorabilia of the professor, the politician, and mountaineer Eötvös are on display. Hungarian-made geophysical devices are exhibited from the 1930s onwards.

### **FT9 – Museum of Natural History of the Loránd Eötvös University of Sciences**

The roots of the Eötvös Museum of Natural History go back to the first University Natural History Museum, open to the public in Pest already in the end of the 18th century. The current structure of the Museum was set up in 2002, when the Faculty of Science moved to the new Danube Riverside Campus (Lágymányos, Budapest). It consists of six collections (mineralogy, petrology, biology, paleontology, mathematics and science history) and two exhibitions. Minerals and rocks are exhibited in the original 19th century Historical Exhibition Hall, transferred to and rebuilt in the new campus, with its atmosphere proudly representing the long tradition of teaching sciences at the Eötvös Loránd University. The Biology and Paleontology Exhibition is hosted by a modern glass pyramid.

The Science History Collection was established to preserve relics of research and science education at the university, historic demonstration models and charts, analytical equipment, personal objects of professors as well as old textbooks and scientific literature.

### **FT10 – Semmelweis Museum, Library and Archives of the History of Medicine**

The museum ranges across the history of medicine, pharmacy, and public health, holding a wealth of instruments. The current temporary exhibition focuses on the history of pathology.

### **FT11 – Hungarian Museum for Commerce and Catering**

The museum was founded in 1966, and started its operation in the World Heritage Buda Castle, in the building of the former Fortuna Inn, where it was in operation until 2005. In September, 2006, the museum opened its gates at a new location in District V, next to the Szent István basilika.

Initially the collection of the museum contained only catering-industry relics, which was later extended with a collection of trade history relics. The institution has the functions of an industry history museum, and meets the requirements of specialized-museology.

## **Book Exhibition**

The book exhibition is held in the Aula next to the registration and coffee break area. List of exhibitors include: Ashgate Publishing Group, Birkhäuser Verlag AG, Brepols Publishers NV, Casa Editrice Leo S. Olschiki S.r.l., Harvard University Press, Maney Publishing, Oxford University Press/Oxford Journals, Pickering & Chatto Publishers, Taylor & Francis, Templeton Press, The Johns Hopkins University Press, The MIT Press, The University of Chicago Press, University of Toronto Press, World Scientific Publishing.

In addition, a bronze model of the Antikythera Mechanism, the oldest known scientific instrument and mechanical universe is exhibited.

## **Evening Programs** (for all registered participants)

### **Welcome Reception**

27 July, Monday, 19.00 – 21.00

The Welcome Reception will be held from 19.00 in the Main Hall of the University (the Congress venue).

### **Galileo meets Kepler: Motion on Earth and in the Heavens**

29 July, Wednesday, 19.30, Room: C7

*Authors:*

Art Stinner in collaboration with Juergen Teichmann.

*Personae Dramatis:*

Galileo Galilei (Scientist and Astronomer) – Peter Heering

Johannes Kepler (Imperial Mathematician and Astronomer) – Juergen Teichmann

Cardinal Robert Bellarmine (Master of Controversial Questions) – Gábor Zemplén

In the spring of 1611, Galileo came to Rome to “exhibit the new discoveries and to explain their great consequences”. Clearly he was referring to the recent discoveries he made about motion and especially the celestial observations of 1609 with his new optical instrument. While in Rome, Galileo also had an audience with Cardinal Bellarmine, a Jesuit and an admirer of Galileo. In the play, Galileo succeeds to arrange a meeting with the Cardinal and Johannes Kepler, who was persuaded to come to Italy for this auspicious occasion. The Cardinal first declines but he is curious to meet the great Kepler and discuss motion on Earth and in the Heavens with the two acknowledged masters of terrestrial and celestial motion. The play is about this fictitious meeting but the discussion is based on the extensive correspondence between Galileo and Kepler and between Galileo and Cardinal Bellarmine.

### **Organ Concert**

30 July, Thursday, 20.00 – 21.00

The organ concert organized exclusively for the participants of the ICHST 2009 Congress will take place at St Stephen’s Basilica. The concert of Istvan Koloss organist, who was honoured with the Pro Arte Assisi award and the Knight's Cross of the Hungarian Republic in 1982, will surely remain an unforgettable experience for all.

*Program:*

Old Hungarian Music from the XVII Century

János Wohlmuth: Musette

J.S. Bach: Toccata, Adagio and Fuga C-major

T. Albinoni: Adagio

F. Liszt: St. Stanislas-Fantasy

D. Antalffy: Scherzo

L. Boellmann: Suite Gotique

## Optional Evening Programs

### **Dinner on the Boat “Európa”**

28 July, Tuesday, 20.00 – 22.00  
address: 1011 Budapest, Szilágyi Dezső tér  
price: EUR 60

During the cruise on the River Danube you can enjoy magnificent views of historical Budapest and catch a glimpse of Margaret Island, the Parliament, the Hotel Gellért, the Liberation Monument, the graceful bridges and a number of stunning buildings of Budapest. Besides, you may taste traditional Hungarian and special international meals and drinks.

### **Congress Dinner**

1 August, Saturday, 20.00 – 22.00  
address: 1146 Budapest, Dózsa György út 41.  
price: EUR 50

The Congress Dinner will be held in the Museum of Fine Arts. It contains one of the best collections in Central Europe, offering visitors a taste of the glories of the past, alongside the splendors of the present.

## Optional Tours

Limited number of tickets is available at the Registration Desk.  
Meeting point in the registration area.

All tickets are placed in the envelope, which was provided upon registration.  
The expected time of return of the full-day tours is 17.30 to the Congress Venue.

### **Budapest sight-seeing (half-day)**

28 July, afternoon (14.00) or 2 August, morning (09.00)  
price: EUR 30

You may have an overall view of Budapest, one of the most exciting metropolises of the world with a gorgeous geographic location, full of historical monuments and places of interest during the bus trip.

### **The Puszta (full-day, lunch included)**

29 July, morning (09.00)  
price: EUR 80

The tour takes you on a scenic drive through the Great Plains to Kecskemét where you will have a guided walk through the town. Kecskemét is the largest town in the region, with historical monuments, nature reserves and a thriving cultural life.

On the way to Vargatanya, you will be greeted with a traditional welcome drink. During the horse carriage riding you will discover the true Hungarian natural phenomenon „Puszta” and visit a true Hungarian farmer country house. In the framework of a spectacular horse show the horse-herder’s tradition will be presented. You’ll then enjoy a Hungarian three-course meal with wine at a regular tavern, accompanied with stirring gypsy music.

### **The Danube Bend / Dunakanyar** (full-day, lunch included)

30 July, morning (09.00)

price: EUR 80

Three small old towns crown the picturesque Danube Bend: Szentendre - a unique artists' town, Visegrád - a former royal seat, Esztergom - the former capital of Hungary.

### **Eger Wine Tour - City and Cellars** (full-day, lunch included)

31 July, morning (09.00)

price: EUR 80

With its 175 listed historical monuments, wine-making traditions, Eger, in the north of Hungary, is one of the most popular tourist attractions of the country. After visiting the cultural and architectural sites, it is a great pleasure to venture out to the wine cellars in Szépasszony Valley, west of the town.

### **Lake Balaton** (full-day, lunch included)

1 August, morning (09.00)

price: EUR 80

Lake Balaton, the largest lake in Central Europe, is known as "The Hungarian Sea". Before tasting the famous Hungarian wines of the region, it is well worth visiting the historical sites, the magnificent Tihany peninsula and other places of interest.

## **General Information**

### **Congress Venue**

Budapest University of Technology and Economics (BME), Building K

*Address: H-1111 Budapest, Műegyetem rkp. 3-9.*

### **Registration Desk**

The registration desk operates in the Aula of Building K.

On-site payments may be settled in cash (EUR or HUF) only. "In-house" ATMs are available in the university building.

#### *Opening hours:*

Monday, 27 July:	16.00 – 18.30
Tuesday, 28 July:	07.30 – 18.00
Wednesday, 29 July:	08.00 – 18.00
Thursday, 30 July:	08.00 – 18.00
Friday, 31 July:	08.00 – 18.00
Saturday, 1 August:	08.00 – 18.00
Sunday, 2 August:	09.00 – 13.00

### **Lunches**

The self-service canteen of the university is open daily from 13.00 to 15.00 from 28 July to 1 August. (See the map on the back cover of the Program booklet.)

You can find the menu of the canteen, and the list and map of the nearby restaurants in your Congress bag.

## **Badges**

Please, make sure that you wear your badge at every event you participate in, including coffee breaks and the social events.

## **Credit Cards, ATM**

International credit cards (EC/MC, Visa) are accepted at most hotels, restaurants and shops. ATMs are available in the university building and in many locations nearby and throughout the city.

## **Speakers' Instruction**

The lecture rooms are equipped with a beamer and a laptop. Presenters are requested to upload their presentations to the room laptop if possible by using a USB stick. Laptops are equipped with Windows XP Professional, Powerpoint, Adobe Reader, Windows Media Player and VLC Video Player. Technical assistance will be provided in the meeting rooms.

## **Internet Access**

Computers with Internet access and WiFi are available from 28 July during the congress hours in the Internet Room on Level D.

## **Public Transport**

Public transportation (BKV) is extensive and reliable. Tickets - valid for one ride only - should be purchased in advance (e.g. at metro stations, hotels, news-stands, tobacco shops), since drivers do not sell any. The tickets should be validated (on board or at the entrance gates), and kept, since one must produce them if requested by inspectors on board or at the exit gates.

You may consider buying a carnet of 10 tickets or a pass (for 1/7/14 days or for a month), or a Budapest Card, instead of single tickets. The junction of all the three metro lines is Deák tér. Service time is between 4:30 a.m. and 11.00 p.m. Most bus and tramlines operate until 11pm.

## **Taxi**

The most popular and reliable companies in Budapest are: City Taxi, 6x6 Taxi, Buda-Taxi, Főtaxi, Rádiótaxi, Taxi 2000 and Tele5 Taxi, and between the airport and the city, the Zona Taxi Service.

## **Personal Insurance**

The Organizers of the Congress do not provide insurance and do not take responsibility for any loss, accident or illness that might occur during the Congress or in the course of travel to or from the meeting site.

## **Medical Center on Duty at the University**

In minor emergency cases examination and medical attendance will be provided during the congress hours by an English speaking physician on duty, free of charge. Important notice: Congress participants are requested to make sure with their health insurance provider to have health insurance coverage valid for Hungary.

## **Useful Telephone Numbers**

(can be dialed without using a card or coins)

Ambulance: 104

Fire Brigade: 107

Police: 105

Overall Emergency: 112

# Special Acknowledgement



**Federation of Technical and Scientific Societies**



**Hungarian Academy of Sciences**



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