



12th EUROPEAN CONGRESS ON ELECTRON MICROSCOPY

**July 9-14, 2000
Brno, Czech Republic**



SECOND CIRCULAR

AND

CALL FOR ORDERS

FOR THE EXHIBITION AREA AND SERVICES

<http://www.eurem2000.isibrno.cz>

**Full information on EUREM 12, Brno 2000
is available at
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The congress secretariat:

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Important deadlines:

Submission of orders	July 31	1999
Deposit payment	July 31	1999
Booth confirmation	October 15	1999
Advance registration	February 15	2000
Hotel reservation	May 15	2000

Opening hours of the registration desk

(in the lobby of the pavilion E in the Trade Fair Area):

Sunday,	July 9	2000	}	9. ⁰⁰ - 18. ⁰⁰
to				
Wednesday,	July 12	2000	}	9. ⁰⁰ - 12. ⁰⁰
Thursday,	July 13	2000		

Edited by Petr Schauer, Ilona Müllerová, Vladimír Kolařík and Luděk Frank.
Design and printed by Reklamní atelier Kupka.

Cover:

Scenery of the Brno Trade Fair Area from the South.

EUROPEAN MICROSCOPY SOCIETY AND IFSEM

Trade Exhibition at EUREM-2000 in Brno

The European Conferences on Electron Microscopy are held under the aegis of the International Federation of Electron Microscopy Societies and the European Microscopy Society. On behalf of these organizations, we encourage you very strongly to reserve space rapidly in the large Trade Exhibition that forms an integral part of the next EUREM. Having just seen the latest version of the scientific programme, we are confident that it will attract scientists from many branches of the world of microscopy, electron microscopy of course but also the near-field microscopies and confocal microscopy. There is no better shop-window for manufacturers in these areas. European meetings are held only at four-year intervals and we urge you not to miss this occasion, at which the Trade Exhibition, the lectures and the posters will all be situated in a single building. The local organizers are working in close collaboration with the international committee to ensure that this conference is a great success and your participation is an essential element in that objective.



Archie Howie
President of IFSEM



Peter Hawkes
President of the EMS



Dear colleagues, ladies and gentlemen,

Allow me to cordially invite you, on behalf of the Czechoslovak Society for Electron Microscopy and the Institute of Scientific Instruments ASCR, to participation in EUREM 12 in Brno. Nearly three years ago the representatives of European national societies for microscopy or electron microscopy voted about the venue of the next congress and the success of Brno in this competition was obviously a surprise to many. Perhaps some doubts were felt whether the period, available for a country behind the "iron curtain" for the recovery of its democracy, had been long enough to create conditions necessary to organise the congress properly. In between, significant steps forward on this way have been made and although many aspects of everyday life and services available should still and hopefully soon will be improved, I am inviting you with absolute confidence.

Although not too large in population and not bragging of too many historical glories, Brno can consider itself the city of electron microscopy. This year we could celebrate the 50th anniversary of the first Czechoslovak electron microscope, which was put into operation by a group of students of Brno Technical University. From that time, electron microscopy was continuously under development, as a scientific discipline and as a production activity, and both took place in Brno. The Institute of Scientific Instruments of the Academy of Sciences, formerly the Czechoslovak one and now that of the Czech Republic, has been dealing with the theory, methodology and instrumentation of electron microscopy for more than forty years. The majority of the Institute's history was connected with the name of Professor Armin Delong, the leading member of the group of young creators of the first microscope and for thirty years the Institute's Director. The Brno factory of Tesla was for decades the supplier of electron microscopes, which were sold all over the world. The most famous of these, a small table-top TEM Tesla BS 242, was awarded Gold Medal at EXPO in Brussels in 1956, and had cumulative sales of over one thousand.

One of crucial establishments of trade and industry in Brno is the Brno Fairs and Exhibitions company, settled on the Trade Fair Area (Výstaviště). The tradition of exhibitions in this area started as early as 1928 when the Jubilee Exhibition was organised there, to celebrate the 10th anniversary of the independent Czechoslovak Republic. The large pavilion, built for this purpose, is a huge airy concrete construction, designed with admirable invention, and has been famous since that time. You will enjoy this building during the congress welcome party. The Trade Fair Area now incorporates several tens of other modern pavilions and one of them will be the site of the congress. The extent of the space available in this single pavilion enables us not only to build a number of lecture rooms for symposia, tutorials and other events, to exhibit the posters during the full congress duration, but not surprisingly it will also offer ideal environment for the exhibition of instruments. Catering is available on site and in the immediate neighbourhood, two large hotels offer accommodation. Cheap accommodation in large College blocks is within a comfortable walking distance. You will find in Brno all what is needed for a compact congress enabling a participant to schedule his/her time at a highly economical level.

We are looking forward to meeting you in Brno at EUREM 12.

Luděk Frank
President of EUREM 12

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Organised by the Czechoslovak Society for Electron Microscopy under the auspices of the European Microscopy Society and the International Federation of Societies for Electron Microscopy and in co-operation with the Institute of Scientific Instruments AS CR under the Patronage of Professor Rudolf Zahradník, President of AS CR, and Dr Petr Duchoň, Mayor of the City of Brno.

GENERAL INFORMATION

Scope of Congress

The 12th European Congress on Electron Microscopy is intended to provide an overview of present achievements and expected future trends in electron microscopy and related fields. This is to include the instrumentation and methodology and all main application areas, particularly in life and material sciences. The Congress will also cover scanning probe microscopies and modern methods of optical microscopy including the near-field techniques.

Scientific Programme

The Congress will be organised into scientific symposia, grouped in families dedicated to Biological Sciences, Physical Sciences and Instrumentation and Methodology. Keynote lectures will be prepared on selected topics of broad interest and presented as plenary lectures with prominence in the programme timetable. Carefully selected chairpersons will conduct the symposia and, together with other leading scientists, give introductory overview lectures to them. These will be complemented with selected oral contributions and with posters exhibited throughout the congress duration. Among the special events, the EMS (European Microscopy Society) symposium can be found. The scientific programme will be complemented with tutorials and with open labs organised by manufacturers.

Venue

The Congress will take place in Brno, the second largest city in the Czech Republic. This traditional centre of development and production of Tesla electron microscopes and a large university centre with two large and four smaller universities has 400 thousand inhabitants. The summertime congress brings an opportunity to also visit the beautiful Moravian countryside and historical monuments. The Congress will

take place on the Trade-Fair Grounds with its multitude of large pavilions, including lecture halls and full catering. Two large hotels immediately adjacent to the main congress building, and a university dormitory within a comfortable walking distance, will easily house all participants.

Proceedings

The proceedings will be printed in three volumes. They will contain all papers (the keynote lectures, introductory lectures to symposia, oral contributions and posters) from all symposia on Biological Sciences, Physical Sciences, and Instrumentation and Methodology, respectively. Early registrants can choose two volumes of these three as the proceedings included in the registration fee. Alternatively, they can select one volume and a CD-ROM containing all papers. Late registrants will receive a combination of the printed volume(s) and CD-ROM according to availability. Additional copies of the CD-ROM version of the proceedings will be available at extra cost.

Exhibition

As usual at large electron-microscopy congresses, an extensive exhibition will be an important part. It will span such topics as the latest commercial electron microscopes and their accessories, related imaging and analytical techniques, computer and control techniques, devices and materials for image archiving and processing, and laboratory equipment, tools and materials for various kinds of specimen preparation. Software for electron optical computations and scientific literature will also be presented. The exhibition will be organised in one building together with the poster exhibition and the congress symposia. The professional background of the trade fair grounds will ensure a smooth course for the exhibition, including all associated scientific, technical, advertising and social events organised by exhibitors.

Financial Support

The general policy of the organisers is to make the Congress fee as low as possible. In particular, the fee for full-time undergraduate and graduate students is significantly decreased. Moreover, a limited number of bursaries will also be awarded to active young participants as decided by the Congress President. Applications for the bursaries should be sent in the form of a letter together with the manuscript of a contributed paper by **December 31, 1999**. The bursary will include free congress registration and free accommodation in the College Vinařská for six nights.

Social Events, Tours

Social events will include the Sunday evening welcome party, hosted by the organisers, which will be held in the historical pavilion A in the Trade-Fair Grounds. Furthermore, the participants will be invited to the "theatre evening" which will include a symphonic concert of classical music followed by a reception. Participants will also be offered the opportunity to book a broad range of half-day, full day and longer trips and excursions during and after the congress. The special offer of BVV Fair Travel, Ltd. can be found as a separate section of this brochure. The tours will be sold in a special booth "Tours" in the lobby of the pavilion E (the congress site) from Sunday, July 9, 2000 until they are fully booked. In order to secure your participation in a selected tour, we recommend that you use the **advance booking** form on page 24. For more-day tours and some most attractive shorter trips, utilising services that have to be reserved in advance, an advance **deposit** is essential. These tours are indicated on page 24. When you tick any of the tours requiring a deposit, the travel agency will contact you in due course.

Programme for accompanying persons

We decided not to prepare any fix scheduled social programme for accompanying persons. Instead, we assume that they will broadly utilise the offer of tours and excursions. The fee required for the accompanying persons includes only the social events available for the congress participants, i.e. the welcome party in the pavilion A on Sunday evening, and the "theatre evening" on Wednesday. Accordingly, the fee for the accompanying persons has been established on a minimal level.

Transportation

Brno is positioned on the busy railway route Berlin - Praha - Brno - Bratislava - Budapest, with direct trains to Vienna and a small international airport. Frequent bus service is available from Praha by motorway (2.5 hours).

Useful tips:

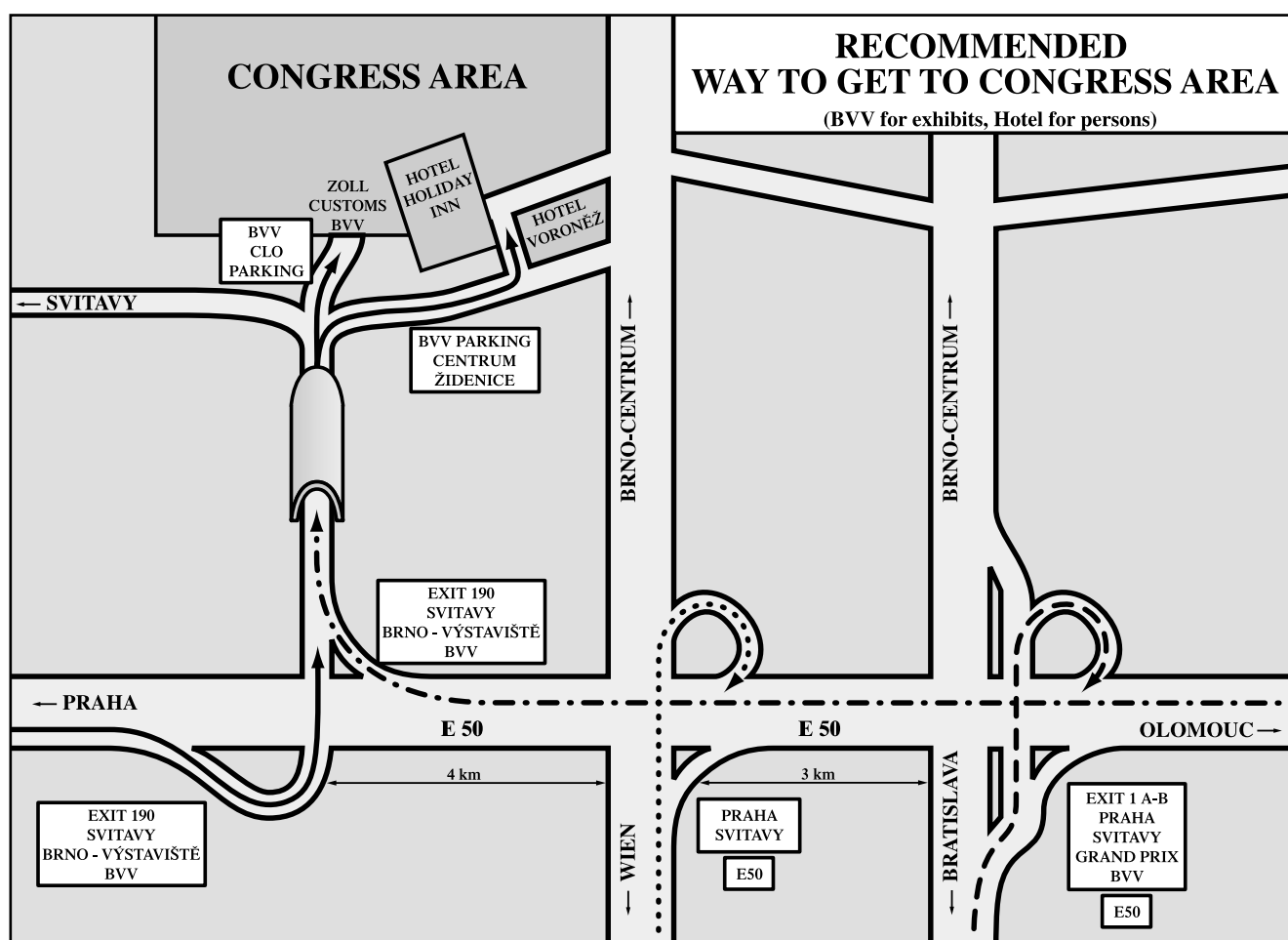
- From the international airport Praha-Ruzyně, bus transport will be organised on Saturday, July 8, and Sunday, July 9, directly to the congress site and adjacent hotels. The scheduled departures are:

Saturday	July 8	15. ⁰⁰	19. ⁰⁰	
Sunday	July 9	11. ⁰⁰	13. ⁰⁰	15. ⁰⁰

Seats in the scheduled buses will be reserved until 15 minutes before the departure for those making **advance bookings** with the form on page 24. Then

the remaining places will be sold to persons interested. In case the demand exceeds the capacity, advice will be available at the booth "EUREM 12" in the airport arrival hall or even extra buses will be provided.

- From the Brno Main railway station, you can reach the congress site by using the tram no.1 in the direction "Bystrc Ečerova". The frequencies are every 4 minutes in the rush hour, otherwise every 10 to 18 minutes between 5 a.m. to 10 p.m. and every hour during the night (when a taxi is recommended). The destination tram station name is "Výstaviště", the tickets are sold by the tram driver (change should be prepared, currently the cost is 10 CZK). Your taxi can take you directly to your hotel or College Vinařská or to pavilion E in the Trade Fair Area where the registration will take place.



SCIENTIFIC PROGRAMME

This is a frozen sample of the EUREM 12 Scientific Programme to date of May 12, 1999.

The Programme keeps developing and is continuously updated at www.eurem2000.isibrno.cz/progra.html.

Explanation of symbols: CH – symposium chair, IL – introductory lecture, *name written in italics - not finally confirmed yet*.

SYMPOSIA ON BIOLOGICAL SCIENCES

B1 Nuclear import and export U. Aebl, Basel CH T.D. Allen, Manchester CH, IL D. Stoffler, Basel IL	B2 Membrane traffic M. Pavelka, Vienna CH <i>J. Klumperman, Utrecht CH, IL</i> A. Ellinger, Vienna IL	B3 Progressive detection methods in light and electron microscopy F. Wachtler, Vienna CH	B4 Supermolecular complexes reconstruction and tomography W. Baumeister, Martinsried CH, IL M. van Heel, London CH, IL
B5 Plant cell ultrastructure and signalling pathways M.C. Risueno, Madrid CH M. Čiamporová, Bratislava CH P.S. Testillano, Madrid IL C. Hawes, Oxford IL	B6 Electron microscopy in molecular pathogenesis W. Mosgoeller, Vienna CH J. Slezák, Bratislava CH	B7 Electron and confocal microscopies, correlation methods D. Hernandez-Verdun, Paris CH I. Raška, Prague CH M. Trendelenburg, Heidelberg IL H. Schwarz, Tübingen IL	B8 Progress on biological sample preparation methods G.W. Griffiths, Heidelberg CH, IL M. Thiry, Liege CH, IL
B9 Structure and morphogenesis of viruses J.L. Carrascosa, Madrid CH S. Fuller, Heidelberg CH, IL A.C. Steven, Bethesda IL	B10 Cryo-preparation for EM and cryo-analysis J. Dubochet, Lausanne CH, IL H. Plattner, Konstanz CH, IL	B11 EM microanalysis in biology G. Roomans, Uppsala CH, IL D. Neumann, Halle CH, IL	B12 Cytoskeleton structure and dynamic E. Dráberová, Prague CH K. Holmes, Heidelberg CH
B13 Functional architecture of the cell nucleus P. Hozák, Prague CH C. G. Cremer, Heidelberg CH, IL A. Pompo, Oxford IL	B14 Neurobiology: cells and signal transfer A. Triller, Paris CH J. Maršala, Košice CH, IL <i>J. Cartaud, Paris IL</i>	B15 Electron crystallography of protein crystals A. Brisson, Groningen CH P. Bullough, Sheffield CH	B16 Scanning probe microscopies in biology A. Engel, Basel CH H.E. Gaub, München CH
B17 Stereology and quantitative methods L. Kubínová, Prague CH, IL H.J.G. Gundersen, Aarhus CH, IL	B18 Achievements in multi-photon imaging <i>S. W. Hell, Göttingen</i>	B19 Biomaterials H.K. Koerten, Leiden CH, IL W. Dietz, Erfurt CH, IL	

SYMPOSIA ON PHYSICAL SCIENCES

P1 Metals and alloys H.P. Karnthaler, Vienna CH	P2 Intermetallics D. Caillard, Toulouse CH R. Gotthardt, Lausanne CH J.-L. Martin, Lausanne IL A. Couret, Toulouse IL	P3 Ceramics and composites W. Sigle, Stuttgart CH, IL <i>M. Morris, Neuchatel</i>	P4 Magnetic materials J.N. Chapman, Glasgow CH, IL J. Zweck, Regensburg CH, IL
P5 Perovskites H.W. Zandbergen, Delft CH, IL M. Hervieu, Caen CH, IL	P6 C and C-like materials A. Loiseau, Châtillon CH J. L. Hutchison, Oxford CH	P7 Epitaxial structures P.G. Merli, Bologna CH, IL G. van Tendeloo, Antwerp CH	P8 Artificial nanostructures <i>C.van Haesendonck, Leuven</i> <i>V.V. Aristov, Cernogolovka</i>
P9 Catalysts, clusters, small particles J.O. Bovin, Lund CH C. Colliex, Paris CH	P10 Interfaces and grain boundaries W. Mader, Bonn CH J. Thibault, Grenoble CH	P11 Amorphous materials and quasicrystals M. Vittori-Antisari, Roma CH C. Beeli, Zurich CH	P12 Electron crystallography and CBED I.G. Voigt-Martin, Mainz CH, IL J.R. Fryer, Glasgow CH D.L. Dorset, New York IL

P13
In-situ electron microscopy
 U. Messerschmidt, Halle CH, IL
 A. Aseev, Novosibirsk CH, IL

P14
Specimen preparation in material sciences
 A.Czyrska-Filemonowicz, Kraków CH
 P. Barna, Budapest CH
 A. Barna, Budapest IL

P15
General materials microscopy
 K.M. Knowles, Cambridge CH, IL
 J. van Landuyt, Antwerp CH

P16
EM in geology, archaeology, arts, and in forensic applications
 S. Hansen, Lund CH
 L. Robbiola, Paris CH
 M. San Andrés, Madrid CH, IL

P17
Polymers and radiation sensitive materials
 W. Geymayer, Graz CH
 F. Lednický, Prague CH
 D. C. Martin, Ann Arbor IL
 G. H. Michler, Halle IL

SYMPOSIA ON INSTRUMENTATION AND METHODOLOGY

I1
Wave and particle properties of the electron
 H. Lichte, Dresden CH
 M. Lenc, Brno CH

I2
Advances in electron optics
 B. Lencová, Brno CH
 E. Munro, London CH, IL
 D. Preikszas, Darmstadt, IL

I3
Quantitative electron microscopy
 D. Van Dyck, Antwerp CH
 F. Ernst, Stuttgart CH, IL
 A. Thust, Jülich IL

I4
Correction of aberrations and HR electron microscopes
 A. Delong, Brno CH
 M. Haider, Heidelberg CH, IL
 O.L. Krivanek, Seattle IL

I5
Low energy electron microscopy
 G. Lilienkamp, Clausthal CH, IL
 L. Frank, Brno CH
 J. Zach, Heidelberg IL
 I. Müllerová, Brno IL

I6
Low vacuum microscopy and charging
 J. Cazaux, Reims CH, IL
 R. Autrata, Brno CH

I7
Modern light microscopy techniques
 E.H.K. Stelzer, Heidelberg CH
 P. Tománek, Brno CH

I8
Advances in probe microscopies
 V. Cháb, Prague CH
 E. Meyer, Basel CH
 B. Stipe, Almaden, IL
 G. McClelland, Almaden, IL

I9
Quantitative X-ray spectroscopy in EM
 J. Wernisch, Vienna CH
 J. L. Pouchou, Châtillon

I10
EELS and EFTEM
 F. Hofer, Graz CH
 C. Humphreys, Cambridge CH, IL
 H. Kohl, Münster IL

I11
Surface oriented microanalytical techniques
 M.M. ElGomati, York CH, IL
 G. Schönhense, Mainz CH, IL

I12
Image processing and simulation
 J. M. Carazo, Madrid CH, IL
 W.O. Saxton, Cambridge

I13
Computerised microscopy
 A.J. Koster, Utrecht CH
 I. Daberkow, Münster CH

I14
Electron optical systems, guns and lenses
 P. Kruit, Delft CH, IL
 V. Kolářik, Brno CH

I15
Filters, analysers and detectors
 B.Jouffrey, Chatenay-Malabry CH, IL
 P. Schauer, Brno CH

I16
X-ray microscopy
 J. Baruchel, Grenoble CH

I17
EMS Symposium
 P. Hawkes, Toulouse CH
 A. Howie, Cambridge CH
 A. Maunsbach, Aargau IL
 A. Donald, Cambridge IL
 J. L. Carrascosa, Madrid IL

KEYNOTE LECTURES

L1
Millenium of Electron Microscopy
 Peter W. Hawkes
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The centenary of the electron has recently been celebrated, books have been published on electron microscopy by historians of science and numerous reminiscences have been recorded - the subject has reached maturity. At the same time, new ways of forming images at

resolutions far beyond that of the light microscope have emerged and the electron microscope is now one of a family of complementary instruments. We recall some of the key events in the development of electron instruments and electron image formation and evoke some of the star actors in that long saga. It is scientifically important that a congress such as EUREM should concentrate on the present and the future but it is culturally important that we should never lose sight of the past.

L2
TEM of nanostructured materials
 Gustaaf Van Tendeloo
 EMAT, University of Antwerp (RUCA),
 Groenenborgerlaan 171, B-2020 Antwerpen,
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Micro-technology has been replaced by nano-technology and the local structure of materials becomes increasingly important. A combination of conventional TEM, quantitative HREM, electron diffraction, EDX and EELS provides unique and

unchallenged information on the local structure of functional materials. These techniques are applied to study carbon nanotubes, (magnetic) nanoparticles, thin film superconducting or CMR oxides, substrate-film interfaces and nanostructured alloys.

L3 Prospects of quantitative high resolution electron microscopy

Dirk Van Dyck
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With the resolution becoming sufficient to reveal individual atoms, HREM is now entering the stage where it can compete with X-ray methods to quantitatively determine atomic structures of materials without much prior knowledge, but with the advantage of being applicable to aperiodic objects such as crystal defects. In our view the future electron microscope will be characterised by a large versatility in experimental settings under computer control such as the illumination conditions (TEM-STEM), CBED, detecting conditions (diffraction, image, ptychography) and many other tunable parameters such as focus (g), voltage, spherical aberration (C_s), beam tilt, etc. Since modern detectors can detect single electrons, also the counting statistics is known. The only limiting factor in the experiment will be the total number of electrons that interact with the object during the experiment due to the limitations in the exposure time or in the object damage. However, instrumental potentialities will never be exploited fully if not guided by an experimental strategy. Here intuitive guidelines can be very deceptive. For instance an image made with the best electron microscope ($C_s = 0$) at the best focus ($g=0$) from the best object (phase object) would show no contrast at all. Hence, questions such as what is the best C_s , focus, object thickness, etc. can only be answered properly if done using a method of experiment design.

L4 High-performance electron microscopes of the future

Harald Rose
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Owing to the design of novel correctors, monochromators, imaging energy filters and other electron optical elements and due to the advancement

in technology and computer-aided alignment, the realization of high-performance analytical electron microscopes has become possible recently. As examples the designs of a sub-Å sub-eV medium-voltage TEM and of a mirror-corrected low-energy electron microscope will be outlined. Experimental results of the performance of the components of these instruments will be presented and remaining obstacles which have to be overcome will be discussed. It will be demonstrated that the correction of aberrations is possible with present technology and that its realization will lead to a quantum step in the performance of future electron optical instruments.

L5 Molecular interactions studied in living cells

Julian E. Beesley
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Detection of molecular interactions within cells is important in elucidating function. Microscopical techniques integrate localisation with detection of molecular interactions which can be combined with biochemical and physical measurements to relate cell structure to function. Contributions of confocal microscopy, electron microscopy and scanning probe microscopy to investigate molecular interactions in real time and localisation of these events to cell structure will be reviewed.

L6 Structural and chemical surface electron microscopy with slow electrons

Ernst Bauer
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In the decade which has passed since the Seattle conference surface imaging with slow electrons has made significant progress, mainly due to the increasing availability of very bright synchrotron radiation sources. This has made it possible to combine structural imaging with elastically backscattered slow electrons (LEEM) with spectroscopic imaging with characteristic photoelectrons (XPEEM) and has stimulated the development of improved instruments. Another force driving the progress in the field was the strong interest in thin ferromagnetic film systems, which simulated circular magnetic dichroism XPEEM and spin-polarized LEEM. The talk will briefly review these developments, illustrate the

present state of art by a number of recent studies and end with a short outlook in the future.

Ref.: Surface Review and Letters, December 1998 (LEEM Workshop Proceedings).

L7 Probe microscopies: complementary tools to EM

Andreas Engel
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Biozentrum, CH-4056 Basel, Switzerland,
aengel@ubaclu.unibas.ch

While NMR is the method of choice of study small soluble proteins at atomic scale in solution, X-ray crystallography has produced most protein structures known today. Among these 5000 proteins, only 12 membrane proteins are found. Electron crystallography allows membrane proteins reconstituted into 2D crystals in the presence of lipids to be analyzed. Thus, the native structure of a membrane protein can ultimately be obtained at atomic resolution. Direct observation of protein surfaces in buffer solution has become possible by the development of the atomic force microscope (AFM). The surface topography and chemical properties measured are complementary to the 3D density maps from electron microscopy. In addition, dynamic conformational changes and the flexibility of protein surfaces can be directly observed. In the future, scanning probe microscopes with multifunctional probes will be used to directly assess function related changes of proteins.

L8 Nanoscale Analysis

Joachim Mayer
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The review will focus on the possibilities which energy loss spectroscopy offers for the analysis of the chemistry and bonding of structures on a nanometre scale. The required spatial resolution can be achieved by stepping a small probe across the specimen, or by employing energy filtering TEM. Both lines merge in the new generation of TEMs, which are equipped with a field emission gun (FEG) and an imaging energy filter. The bonding at interfaces can be analysed by comparing the near edge structures (ELNES) with the predictions of ab initio band structure calculations. An outlook will be given on the capabilities of future instruments which will be equipped with a monochromator and a high transmissivity energy filter.

TUTORIALS

T1 TEM Specimen Preparation in the Physical Sciences

Ron Anderson, Lynnette D. Madsen*
IBM, Hopewell Jct., New York, USA,
anderron@us.ibm.com, *Department of
Physics, Linköping University, S-58183
Linköping, Sweden, lynna@ifm.liu.se

The tutorial will be divided into 3 parts:

- I. Deciding when and how to perform TEM specimen preparation including an overview of a range of preparation methods, initial preparation steps common to most specimens, and the control of artifacts.
- II. Detailed explanation of the following methods: mechanical methods for specimen preparation (such as the tripod polisher), ion milling, cleaving, focussed ion beam (FIB)

methods, and a suggested new protocol that combines mechanical polishing with FIB methods.

- III. How to set-up a minimal TEM preparation facility in either a university or industrial environment: maximizing preparation capability at minimum initial cost.

The tutorial will be useful to individuals interested in preparing TEM samples.

T2 Quantitative EELS and EFTEM

Ferdinand Hofer

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This tutorial provides a description of the basic principles of electron energy-loss spectrometry and energy-filtering TEM. The following topics will be covered: spectrum processing, quantitative elemental analysis, edge fine structures (ELNES and EXELFS), energy-filtered imaging and elemental mapping. Typical application examples both from materials science and biological sciences will be used to highlight the possibilities and also the limitations of the technique.

T3 Docking X-ray data into EM structures

Rasmus R. Schroeder

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EM studies of biological macromolecules reach mostly a level of only moderate resolution. This does neither allow an interpretation of the reconstructed density in terms of secondary structure elements nor an ab initio molecular model building. On the other hand, more and more macromolecular models of proteins and DNA or RNA are available from X-ray crystallography. Many of them are also studied individually or as part of larger complexes using the EM. One way to attempt a biological interpretation of such EM data is then to dock the known macromolecular models into the EM derived molecular envelope. The tutorial will discuss the quantitative reconstruction of the object density, interactive and algorithm-based model docking, and different examples of marker-based alignment of model and density. Especially the aspect of quantitative reconstruction will be reviewed for two reasons: the reconstructed density very often depends

- 1 - on the correction of the image contrast (CTF correction) and
- 2 - on missing projections in the collected data set (missing cone, missing wedge).

Such effects on the density have to be distinguished from real conformational differences of the object in the crystallographically derived model and the structure studied by EM. It will be shown how the simulation of projection images and reconstructed density from the known molecular model can help to differentiate between real conformational changes and simple reconstruction artefacts. Since this field is developing rapidly it is hoped that many up-to-date examples can be analysed in the tutorial. It is also planned that a full variety of software available for display and docking can be discussed and demonstrated.

T4 Immunoelectron microscopy and labelling techniques

Julian E. Beesley

Glaxo Wellcome R&D,
Medicines Research Centre,
Gunnels Wood Road, Stevenage SG1 2NY, U.K.,
jeb41302@glaxowellcome.co.uk.

Immunoelectron microscopy techniques are widely established due to the proven reliability and specificity of the antigen-antibody reaction, the commercial availability of many antibodies and gold probes and the many techniques which can be performed in a routine electron microscope laboratory. Techniques to investigate antigens in different localisations within the cell, multiple immunolabelling, quantification and a review of the latest technologies will be presented.

T5 Quantitative high resolution EM and electron diffraction

Henny W. Zandbergen

National Centre for HREM, Delft University
of Technology, Rotterdamseweg 137, 2628AL
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Recent technological improvements of high resolution electron microscopes (HREM) allow one to obtain a resolution of about 0.1 nm, which makes it possible to "see" the individual atomic columns (rows of atoms along the viewing direction (which may be 0.2 to 1 nm separated in the viewing direction)) in a relatively large number of directions. However, the potential power of the technique is still severely limited by remaining difficulties in the quantitative interpretation of the images. For instance, the use of computer simulation, to compare a model with the experimental images, requires much a priori knowledge which makes HREM dependent on other techniques. Recent developments of the processing of HREM images make it possible to retrieve the electron wavefunction (exit wave) at the exit plane of the specimen. Such methods have been suggested by Schiske, Kirkland, Saxton and worked out by Van Dyck and Lichte. Two methods are now in use: through-focus electron holography and off-axis electron holography. Off-axis electron holography uses the interference between an exit wave and a reference wave to determine phase and amplitude of the exit wave. Through-focus electron holography combines the information from a series of high resolution electron microscope images to calculate the exit wave.

Compared to HREM, electron diffraction has the disadvantage that local information is not readily available. However, the information goes much further in g-space. The point-to-point resolution of the intermediate voltage HREMs is 0.16 to 0.20 nm. Using exit wave reconstruction techniques, the information limit of about 0.11 nm is about the best one can obtain with a good electron microscope. Thus at best the information content of HREM images goes to 0.11 nm in real space ($g=9 \text{ nm}^{-1}$ in diffraction space). The information in diffraction space is at least two times better, since reflections with g-values larger

than 20 nm^{-1} can be obtained with some crystal tilt. Since the various types of microscope aberrations do not influence electron diffraction, the recording of high resolution electron diffraction data can be performed with a less expensive microscope. Since one can make the electron beam as small as 1 nm, one can take diffraction data from areas as small as one wants. Thus for the study of single crystalline areas electron diffraction provides more accurate results than HREM, provided one can estimate the phases of the reflections.

The lecture will be focussed on quantitative data analysis in conventional HREM, through focus exit wave reconstruction and electron diffraction. Also combination of exit wave and diffraction analysis will be discussed. In particular the advantages and (less important) the disadvantages of dynamic diffraction will be considered.

T6 Very low energy in a standard SEM

Iлона Müllerová, Luděk Frank

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Královopolská 147, 61264 Brno,
Czech Republic,
ilona@isibrno.cz, ludek@isibrno.cz

The tutorial deals with methods of adaptation of a conventional SEM to the very low energy microscopy (Scanning LEEM). Main issues:

- Overview of behaviour of classical SEM contrasts in the low (<5 keV) and very low (<100 eV) energy range.
- Contrast mechanisms appearing inherently at very low energies.
- High resolution at very low energies, columns with variable beam energy, boosters and retarding field elements.
- SEM with the cathode lens, parameters and properties.
- Adaptation of a SEM to the SLEEM mode, technical solution, parameters.
- Examples of the SLEEM adaptations.
- Applications of the SLEEM mode at various vacuum conditions.

The tutorial will provide motivation and practical guidance to SEM users how to achieve the very low energy imaging in their instruments after a feasible adaptation is made.

EUREM 12 PROGRAM SCHEDULE

TIME	SUNDAY JULY 9, 2000	MONDAY JULY 10, 2000	TUESDAY JULY 11, 2000	WEDNESDAY JULY 12, 2000	THURSDAY JULY 13, 2000	FRIDAY JULY 14, 2000
8. ³⁰ - 9. ³⁰		Opening ceremony	Keynote lecture	Keynote lecture	Keynote lecture	Keynote lecture
9. ³⁰ - 11. ⁰⁰		Lecture, lectures of the Ruska prize laureates	Symposia Open Labs	Symposia Open Labs	Symposia Open Labs	Symposia Open Labs
11. ⁰⁰ - 11. ³⁰		Exhibition opening				
11. ³⁰ - 12. ⁰⁰						
12. ⁰⁰ - 13. ⁰⁰						
13. ⁰⁰ - 13. ³⁰	Tutorial	Tutorial Open Labs	Tutorial Open Labs	Tutorial Open Labs	Tutorial Open Labs	Exhibition closing
13. ³⁰ - 15. ⁰⁰						EMS Symposium
15. ⁰⁰ - 16. ⁰⁰		Keynote lecture	Keynote lecture	Keynote lecture	Keynote lecture	Closing ceremony
16. ⁰⁰ - 16. ³⁰	Tutorial		Symposia Open Labs	Symposia Open Labs	Symposia Open Labs	
16. ³⁰ - 18. ⁰⁰						
18. ⁰⁰ - 18. ³⁰						
18. ³⁰ - 19. ³⁰	Welcome party	Posters	Posters		Posters	
19. ³⁰ - 20. ⁰⁰		Social events	Social events	Evening in theatre	Social events	
20. ⁰⁰ -						

MODULAR SYSTEMS FOR EXHIBITION BOOTHS

STANDARD "COMBI" STRUCTURAL SYSTEM

The built-up system COMBI is manufactured using high quality aluminium alloys, is easy to erect and adaptable for any application. It is suitable for negotiation booths, offices, partition walls, show windows, separate supports, ceilings, daises, interior accessories, table-type show windows, rise-counters, handrails and border assemblies. In addition, this system can be used to erect platforms, stairs, and billboards, and for open-air roofing. The COMBI system is considered to provide a creative freedom for designers and graphic artists who can complete either the interior or exterior by using atypical elements and sets. The ground plan module-type arrangements are in the right angle system having modules of 1000 mm, 500 mm, and 250 mm. The height arrangement is based on stanchion basic heights of 2500 mm and 2970 mm for walls and high show windows, respectively, a height of 1100 mm for bar and information counters, heights of 830 and 570 mm for counter-type show windows and rise counters, respectively, and a height of 100 mm for daises and roofing. The colour of the system elements is aluminium-like and white.

NON-STANDARD EXHIBITION STAND BUILT BY USING OCTANORM STRUCTURAL SYSTEM

The built-up system OCTANORM is, at the present time, the most widely used display system all over the world. The built-up system OCTANORM is easy to assemble. It is a variable display system manufactured using high quality aluminium alloys, which is suitable for any exhibition stand from simple to very complex versions, including both the right-angle and diagonal and arc division of the space. It can be used for stands, offices, show windows, billboards, rise daises, counters, counter-type show windows, rise counters, interior accessories handrails and some other structures. The OCTANORM built-up system is based on the application of the octagonal stanchion that allows creation of various ground-plan arrangements. The system possesses 45° angle graduation possibilities. Thus it is possible to divide the space in the angles 45°, 90°, 135°, 180°, 225°, 270° and 315°. The axial distances of the stanchions are 495 mm, 700 mm, 990 mm and 1400 mm. The module series of arcs is defined by the diameters 990 mm, 1400 mm, 1980 mm and 2800 mm. Also in this case the axial dimensions are considered. The height arrangement is based on the stanchion basic heights of 2480 mm,

1100 mm, 810 mm and 480 mm with the possibility of rectification. Since horizontal elements securing a sufficient strength are used for making a ceiling over a space, it is possible to apply a larger ceiling spacing, compared with that used in the COMBI system. The colour of the system elements is aluminium-like or white. The OCTANORM built-up system can be completed using atypical elements. The OCTANORM system can also be used together with the STRUCTURAL built-up system that is designed to construct ceilings or billboards and is compatible with the basic built-up system.

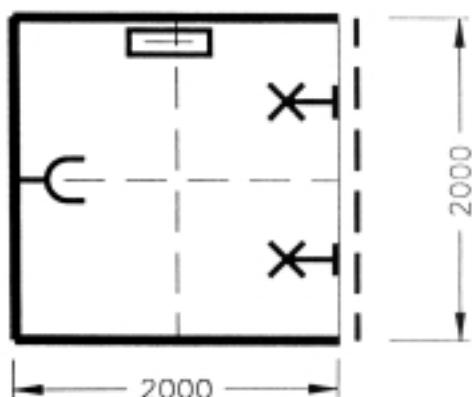
CUSTOM-BUILT STAND

When combining fantasy with high quality materials, an exhibition stand can be created which will not only satisfy the customers individual demands and requirements but which will possess even a high esthetical level. It is a stand individually presenting an ambitious customer. The application of atypical and untraditional exhibition elements will stress the position of the exhibitor in the particular field. We are here to assist you with your participation in a fair or exhibition. Our creative and realisation team is ready to design and realise your exhibition stand any time according to your demand.

Price for the exhibition area includes a fully furnished booth constructed using the Standard COMBI system and designed according to your sketch. If you decide for the OCTANORM system or even for a custom-built stand, you will be invoiced the difference in true costs.

(a few examples from a wide variety of configurations)

MODULAR STAND COMBI C-13

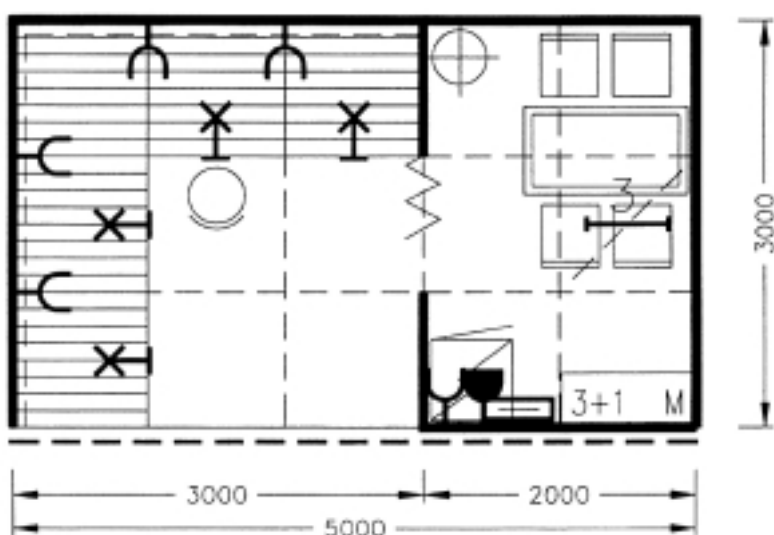


Carpet "jekor" - colour:	4 sqm
Standard wall panel - white	6 m
Roof - aluminium framework	4 sqm
Fascia height = 29 cm - white	2 m

Electrical installation:	
spotlight	2 pcs
socket 220 V	1 pc
switch - board	1 pc

Without equipment

MODULAR STAND COMBI C-17

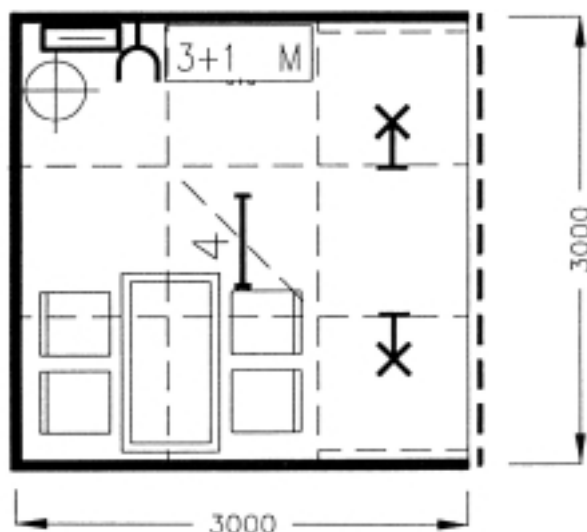


Carpet "jekor" - colour:	15 sqm
Standard wall panel - white	9 m
Graphic wall panel	6 m
Door	1 m
Roof - aluminium framework	15 sqm
Ceiling cloth - white	5 sqm
Display table 100/ 100/ 83 cm	5 pcs
Fascia height = 29 cm - white	5 m

Electrical installation:	
ceiling panel with fluorescent	1 sqm
spotlight	4 pcs
socket 220 V + socket for night power supply	5 + 1 pcs
switch-board	1 pc

Equipment:	
table module 60/ 120 cm + chair expo	1 + 4 pcs
revolving chair	1 pc
configuration module - 3 shelves + cabinet	1 pc
hat and coat stand	1 pc
leaflet holder	1 pc
refrigerator 170 l	1 pc
waste paper basket	1 pc

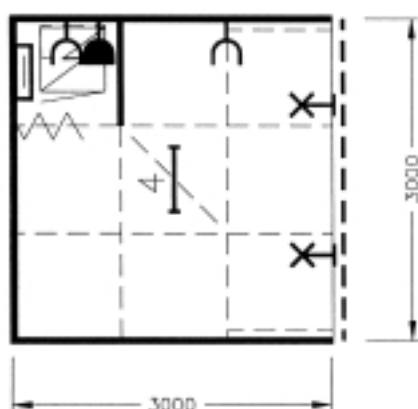
MODULAR STAND COMBI C-28



Carpet "jekor" - colour:	9 sqm
Standard wall panel - white	7 m
Graphic wall panel	2 m
Roof - aluminium framework	9 sqm
Fascia height = 29 cm - white	3 m

Electrical installation:	
ceiling panel with fluorescent	1 sqm
spotlight	2 pcs
socket 220 V	1 pc
switch-board	1 pc

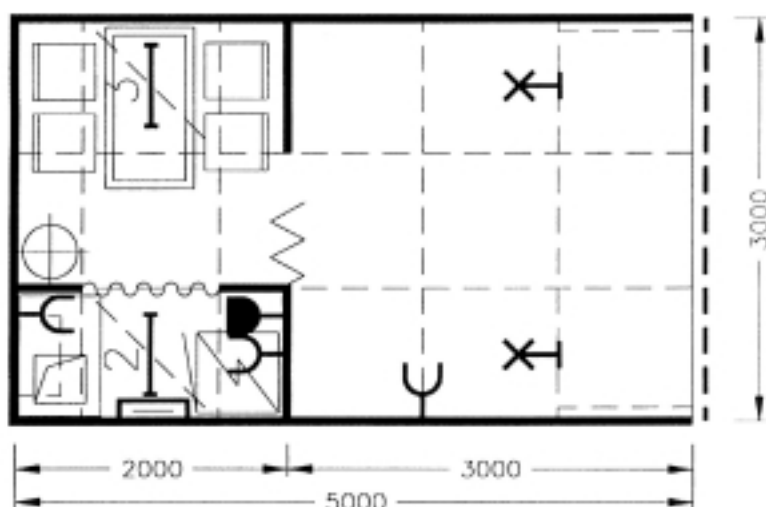
Equipment:	
table module 60/ 120 cm + chair expo	1 + 4 pcs
configuration module - 3 shelves + cabinet	1 pc
hat and coat stand	1 pc
leaflet holder	1 pc
waste paper basket	1 pc

MODULAR STAND COMBI C-40

Carpet "jekor" - colour:	9 sqm
Standard wall panel - white	8 m
Graphic wall panel	2 m
Door	1 m
Roof - aluminium framework	9 sqm
Ceiling cloth - white	1 sqm
Fascia height = 29 cm - white	3 m

Electrical installation:	
ceiling panel with fluorescent	1 sqm
spotlight	2 pcs
socket 220 V + socket for night power supply	2 + 1 pcs
switch-board	1 pc

Equipment:	
hanging cupboard	1 pc
refrigerator 170 l	1 pc
waste paper basket	1 pc

MODULAR STAND COMBI C-46

Carpet "jekor" - colour:	15 sqm
Standard wall panel - white	14 m
Graphic wall panel	2 m
Door	1 m
Curtain - colour:	1 m
Roof - aluminium framework	15 sqm
Ceiling cloth - white	4 sqm
Fascia height = 29 cm - white	3 m

Electrical installation:	
ceiling panel with fluorescent	2 sqm
spotlight	2 pcs
socket 220 V + socket for night power supply	3 + 1 pcs
switch-board	1 pc

Equipment:	
table module 60/ 120 cm	1 pc
chair expo	4 pcs
hat and coat stand	1 pc
leaflet holder	1 pc
refrigerator 170 l	1 pc
waste paper basket	1 pc

Water connection:	
kitchen unit + hanging cupboard	1 + 1 pcs
incl. boiler	





MODULAR STAND COMBI C-48

Carpet "jekor" - colour:	20 sqm
Standard wall panel - white	16 m
Graphic wall panel	2 m
Door	1 m
Curtain - colour:	1 m
Roof - aluminium framework	20 sqm
Ceiling cloth - white	6 sqm
Display table 100/ 100/ 57 cm	5 pcs
Fascia height = 29 cm - white	4 m

Electrical installation:	
ceiling panel with fluorescent	2 sqm
spotlight	5 pcs
socket 220 V + socket for night power supply	3 + 1 pcs
switch-board	1 pc

Equipment:	
table module 60/ 120 cm + chair expo	1 + 4 pc
configuration module - 3 shelves + cabinet	1 pc
hat and coat stand	1 pc
leaflet holder	1 pc
refrigerator 170 l	1 pc
waste paper basket	1 pc

Water connection:	
kitchen unit + hanging cupboard	1 + 1 pcs
incl. boiler	

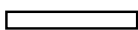
height =  250  110  81  51 cm
stays



panel



graph. panel



glass



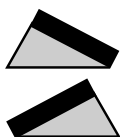
door



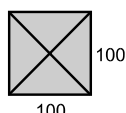
curtain



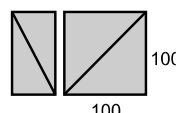
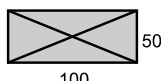
place for logo



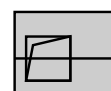
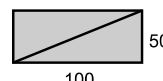
door



cabinet, showcase, etc.



single shelf in various heights



kitchen OMNIA



kitchen Siemens



cooker



bin



flowers



refrigerator



switch-board



fluorescent light



phone



4 lights 100 x 100



light



socket 220 V



refrigerator socket



socket 380 V



chair



bar chair



television



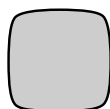
video



clothes stand



table 80 x 80
or 60 x 60



table

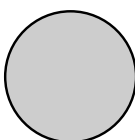


table Ø 120



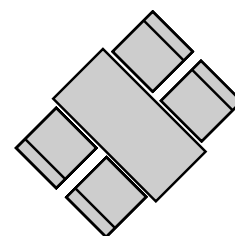
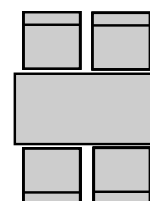
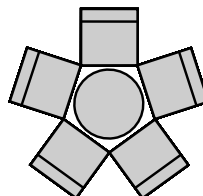
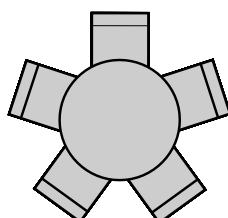
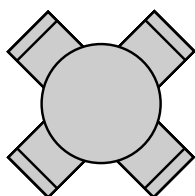
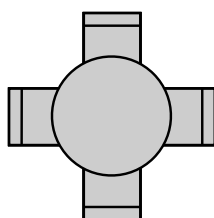
table Ø 90



table 60 x 120

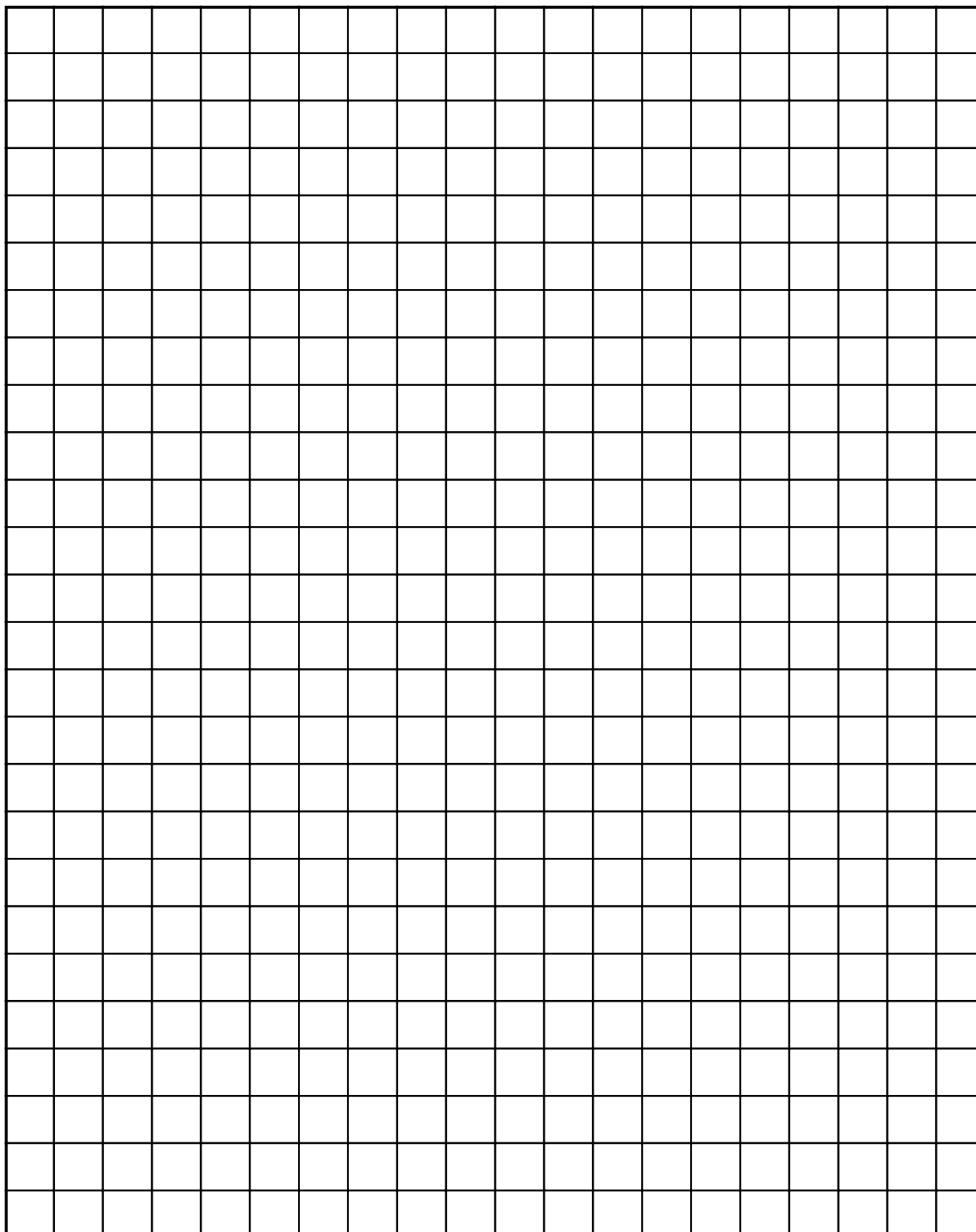


table

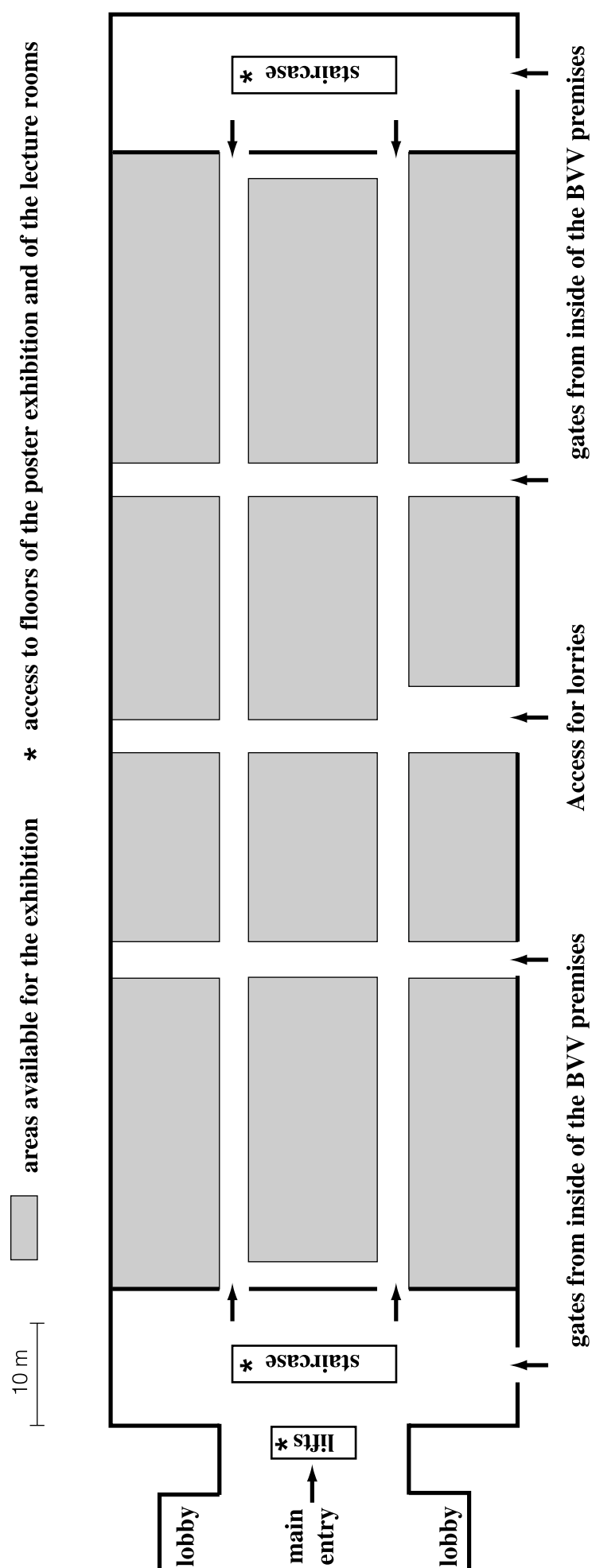


SKETCH OF THE BOOTH LAYOUT

Please sketch your idea about the layout of your exhibition booth. Use the raster below with a pitch of either 1 m or 0.5 m according to the planned booth size. Employ the symbols listed on the left and indicate the range of the booth furnishing and its placement. Do not forget to enclose the drawing with the Order for the exhibition area and services. Refer to the examples of the booths presented on the previous pages.



BVV BRNO, PAVILION E





ORDER

FOR THE EXHIBITION AREA AND SERVICES

12th EUROPEAN CONGRESS ON ELECTRON MICROSCOPY

Brno, Czech Republic, July 9 – 14, 2000

All payments MUST be made by bank transfer as the net payment in **USD** with all charges covered by the sender. The payment should be directed to IPB a.s., Joštova 5, Brno, Czech Republic, account no. 130510703 (SWIFT code 130510703INBACZPP to IPB a.s., Senovážné nám. 32, CZ - 114 03 Praha, Czech Republic, beneficiary: EUREM 2000, Královopolská 147, 612 64 Brno).

The payment date will be that of the payment order – please enclose a copy of your transfer order with this form. **The order will be taken as valid** and acknowledged after the **deposit is received** at the congress account. In order to fall into the first turn of the area allocation, you should send the Order together with the deposit payment by July 31, 1999.

On August 20, 1999 the exhibition area will be allocated to exhibitors who submitted the order and whose deposit payments will have been received. Later orders will be executed promptly, including the area allocation.

Please fill in capital letters or TYPE this Order and send it to:

EUREM 2000, KRÁLOVOPOLSKÁ 147, CZ - 612 64 BRNO, CZECH REPUBLIC

THE CONTACT PERSON:

Last Name: First Name:
 Title (Dr., Mr/ Ms):
 Company, official name:
 Company, name for posting:
 Street Address:
 City: State: Zip Code: Country:
 Phone: () Fax: ()
 e-mail:

Price for the exhibition area: 275 USD per m².

Amount of the deposit: 95 USD per m².

(The price includes a fully furnished booth constructed using the Standard COMBI system and designed according to your sketch, lighting, water and electricity - up to 5.5 kW – outlets and consumption, and assembling and disassembling of the booth. If you decide for the OCTANORM system or even for a custom-built stand, you will be invoiced the difference in true costs. At extra costs, further services can be ordered, as, e.g., telephone or Internet connection in the booth. The price further includes one complimentary student fee waiver per (at least commenced) **12 m²** of the exhibition area.)

Number of the square meters ordered:

Special offers:

- ☐ Poster boards, 766 mm wide and 1719 mm high, will be located in the free spaces among the lecture rooms on the second floor of the pavilion E. They are offered for unattended advertisements to exhibitors. The price is 65 USD for one side and 100 USD for both sides. The number of boards/ board sides ordered:
- ☐ A full-page colour advertisement in the Final Programme brochure distributed at registration, 1000 USD per page. The number of the advertisement pages ordered:

(Boards hire and advertisement in the final Programme will be invoiced separately.)

Name of the competent company representative:

Date of the order:

Signature of the company representative:

ADVANCE REGISTRATION FORM

12th EUROPEAN CONGRESS ON ELECTRON MICROSCOPY

Brno, Czech Republic, July 9 – 14, 2000

Use this form to register **each registrant separately**. The payment **MUST** be made by bank transfer as the net payment in **USD** with all charges covered by the sender. The payment should be directed to IPB a.s., Joštova 5, Brno, Czech Republic, account no. 130510703 (SWIFT code 130510703INBACZPP to IPB a.s., Senovážné nám. 32, 11403 Praha, Czech Republic, beneficiary: EUREM 2000, Královopolská 147, CZ - 612 64 Brno). **A copy of the payment order must be enclosed with the Form; do not send the payment separately. Do not send cash or checks.** The payment for more than one registrant can be combined in a single payment, but use a separate form for each registrant, including the accompanying person. Acknowledgements of advance registration will be sent promptly.

The payment date will be that of the payment order. The registration will be taken as valid and acknowledged after it is received at the congress account. Late payments with a date after **February 15, 2000** will have to respect the **increased rates** as shown below. A refund request will be honoured if received in writing but expenditures will be subtracted which will amount to 90 USD for requests received before June 15, 2000 and to 140 USD after this date.

**Please fill in capital letters or TYPE this Registration Form and send it to:
EUREM 2000, KRÁLOVOPOLSKÁ 147, CZ - 612 64 BRNO, CZECH REPUBLIC**

Last Name: First Name:
 Titel (Professor, Dr., Student, etc., Mr/ Ms):
 Company, official name:
 Company, name for posting:
 Street Address:
 City: State: Zip Code: Country:
 Phone: () Fax: ()
 e-mail:

Registration Fee (one choice only)	Before February 15, 2000	Later or on site	USD
<input type="checkbox"/> Free ^{1) 2)}	0 USD	0 USD	
<input type="checkbox"/> Regular Exhibitor Fee ²⁾	250 USD	320 USD	
<input type="checkbox"/> Accompanying person ³⁾	70 USD	90 USD	
Tutorials (see back)			
Number of courses: <input type="text"/>	25 USD per course	35 USD per course	
		Total Payment:	

¹⁾ One person per (at least commenced) 12 m² of the exhibition area.

²⁾ Includes the CD-ROM Proceedings only.

³⁾ Includes the welcome party and the theatre evening

TUTORIALS

Please tick the Tutorials you want to participate in. The Tutorial Fee (see the front side) should be paid together with the congress fee. The tutorial booking will be made upon receipt of the payment. The advance booking is strongly recommended; only a few vacancies will be left for bookings upon arrival.

THE TUTORIAL SUMMARIES ARE PRESENTED IN THE SCIENTIFIC PROGRAMME SECTION.

- ☐ **T1 TEM Specimen Preparation in the Physical Sciences (Tuesday, July 11, 12.00-15.00)**
Ron Anderson, Lynnette D. Madsen*
IBM, Hopewell Jct., New York, USA, anderron@us.ibm.com, *Department of Physics, Linköping University, S-58183, Sweden, lynma@ifm.ln.se
- ☐ **T2 Quantitative EELS and EFTEM (Sunday, July 9, 15.00-18.00)**
Ferdinand Hofer
Research Institute for Electron Microscopy, Technical University Graz, Steyrergasse 17, A-8010 Graz, Austria, f705hofe@mbbox.tu-graz.ac.at
- ☐ **T3 Docking X-ray data into EM structures (Wednesday, July 12, 12.00-15.00)**
Rasmus R. Schroeder
Max-Planck-Institute for Medical Research, Jahnstr. 29, D-69120 Heidelberg, Germany, Rasmus.Schroeder@mpimf-heidelberg.mpg.de
- ☐ **T4 Immunoelectron microscopy and labelling techniques (Thursday, July 13, 12.00-15.00)**
Julian E. Beesley
Glaxo Wellcome R&D, Medicines Research Centre, Gunnels Wood Road, Stevenage SG1 2NY, U.K., jeb41302@glaxowellcome.co.uk.
- ☐ **T5 Quantitative high resolution EM and electron diffraction (Monday, July 10, 12.00-15.00)**
Henny W. Zandbergen
National Centre for HREM, Delft University of Technology, Rotterdamseweg 137, 2628AL Delft, The Netherlands, h.w.zandbergen@stm.tudelft.nl
- ☐ **T6 Very low energy in a standard SEM (Sunday, July 9, 12.00-15.00)**
Ilona Müllerová, Luděk Frank
Institute of Scientific Instruments AS CR, Královopolská 147, 61264 Brno, Czech Republic, ilona@isibrno.cz, ludek@isibrno.cz

OPEN LABS

Please tick the Open Labs you want to participate in. This is the preliminary booking for the workshops organised by companies. The time and place of each Open Lab will be announced in advance at www.eurem2000.isibrno.cz and advertised in the congress building. The list of Open Labs is likely not complete yet.

- | | |
|--|--|
| <input type="checkbox"/> High resolution TEM
(FEI/ Philips Electron Optics) | <input type="checkbox"/> Automatic particle analysis
(LEO Electron Microscopy) |
| <input type="checkbox"/> TEM sample preparation with focused ion beams (FEI/ Philips Electron Optics) | <input type="checkbox"/> User interfaces
(Oxford Instruments, Microanalysis Group) |
| <input type="checkbox"/> Novel applications of environmental SEM
(FEI/ Philips Electron Optics) | <input type="checkbox"/> Cryo-SEM
(Oxford Instruments, Research Instruments) |
| <input type="checkbox"/> Ultramicrotomy of industrial materials
(Diatome/ Leica) | <input type="checkbox"/> TEM specimen preparation for materials science
(South Bay Technology) |
| <input type="checkbox"/> PEEM/LEEM: Applications to materials and life sciences (Focus) | <input type="checkbox"/> TEM sample preparation
(Technoorg Linda) |
| <input type="checkbox"/> Specimen preparation for TEM
(Gatan) | <input type="checkbox"/> Digital image processing and electron tomography
(Tietz Video&Image Processing Systems) |



ACCOMMODATION RESERVATION FORM

12th EUROPEAN CONGRESS ON ELECTRON MICROSCOPY

Brno, Czech Republic, July 9 – 14, 2000

Please complete this form and send it before May 15, 2000 to:
EUREM 2000, KRÁLOVOPOLSKÁ 147, CZ - 612 64 BRNO, CZECH REPUBLIC

or fax it to
++420 5 4151 4337

- Telephone reservations WILL NOT BE accepted.
- If more than one room is required, this form may be photocopied.
- Reservation acknowledgements will be sent by mail, fax or e-mail (if a number is entered below).

- Hotel room reservation will be **guaranteed** only if the copy of the payment order, issued to the amount covering the first night price, is enclosed. Otherwise, the booking will be recorded on the first-come first-served basis but all deposit-accompanied bookings will prevail.

NAME OF OCCUPANT:

Last Name: First Name:
 Title (Professor, Dr., Student, etc., Mr/ Ms):
 Institution:
 Department:
 Mailing Address:
 City: State/ Prov.: Zip Code: Country:
 Phone: () Fax: ()
 e-mail:

HOTEL PREFERENCE:

Holiday Inn, Voroněž 1, Voroněž 2

1st

2nd

☐ **Single** ☐ **Double** ☐ **No smoking room (when available)**

Roommate: (If you choose a double room, please name the other occupant)

Name:

Date of arrival:

Date of departure:

..... / / / /

The payment **MUST** be made by bank transfer as the net payment with all charges covered by the sender. The amount in CZK (see page 25) is to be converted into USD according to current rate. The payment should be directed to IPB a.s., Joštova 5, Brno, Czech Republic, account no. 130510703 (SWIFT code 130510703INBACZPP to IPB a.s., Senovážné nám. 32, CZ - 114 03 Praha, Czech Republic, beneficiary: EUREM 2000, Královopolská 147, CZ - 612 64 Brno). **A copy of the payment order has to be enclosed with the Form; do not send the payment separately. Do not send cash or checks.** The payment for more than one room can be combined in a single payment, but use a separate form for each room.

TOURS, TRIPS, EXCURSIONS

Please tick the tours you want to participate in. If you tick a tour for which a deposit is requested, the travel agency will contact you in due course.

Details about the tours are given in a separate section.

<input type="checkbox"/> A01	morning/afternoon:	date:
<input type="checkbox"/> A01B	morning/afternoon:	date:
<input type="checkbox"/> A02		date:
<input type="checkbox"/> A03		date:
<input type="checkbox"/> A04	morning/afternoon:	date:
<input type="checkbox"/> A05		date:
<input type="checkbox"/> A06		date:
<input type="checkbox"/> A07	morning/afternoon:	date:
<input type="checkbox"/> A08		date:
<input type="checkbox"/> B01	(deposit requested)	date:
<input type="checkbox"/> B02	(deposit requested)	date:
<input type="checkbox"/> B03	(deposit requested)	dates:
<input type="checkbox"/> B04	(deposit requested)	dates:

NOTE: In order to be able to choose the time for your tour you should know the schedule of the Symposia.
This information will be available at www.eurem2000.isibrno.cz sufficiently long before the deadline for this form.

Tours B03 and B04 have to be booked by February 15, 2000.

BUS TRANSPORT FROM PRAHA-RUZYŇ INTERNATIONAL AIRPORT

From the Praha-Ruzyně international airport, the bus transport will be organised on Saturday, July 8, and Sunday, July 9, directly to the congress site and adjacent hotels. If you want to make use of this advantageous opportunity, please tick **only one** of the following scheduled departures:

Saturday, July 8	<input type="checkbox"/> 15. ⁰⁰	<input type="checkbox"/> 19. ⁰⁰
Sunday, July 9	<input type="checkbox"/> 11. ⁰⁰	<input type="checkbox"/> 13. ⁰⁰ <input type="checkbox"/> 15. ⁰⁰

IMPORTANT: Seats in the scheduled buses will be reserved until 15 minutes before the departure for those who will use this advance booking. Then the remaining places will be sold to persons interested. In case the demand exceeds the capacity, advice will be available at the booth „EUREM 12“ in the airport arrival hall or even extra buses will be provided.

ACCOMMODATION

The main congress building is the pavilion E of the Trade Fairs Area (see the cover page and Figure 1 in the Instructions for authors). Immediately adjacent to the pavilion are two large hotels, Holiday Inn and Voroněž 1 and 2. Approximately 800 m distant (see the photos) is the College Vinařská belonging to the Masaryk University.

The full capacity of these hotels and College was reserved for the congress participants and special prices were negotiated which are significantly lower than the counter prices. These **special prices are available only for accommodation ordered through EUREM 2000.**

For both hotels a **guaranteed booking** can be made upon receipt of the **deposit** covering the first night price. A hotel reservation form not accompanied by a deposit will lead to a provisional booking only which will retain some precedence but will give way to all guaranteed bookings. All bookings will be made on a first-come first-served basis.

(Prices in Czech crowns per room and night, breakfast included, X/Y = single use/ double use.)

HOTEL HOLIDAY INN

(<http://www.holiday-inn-brno.cz>)

190 double rooms 1700 CZK/ 2500 CZK (standard)
2000 CZK/ 2850 CZK (executive)

HOTEL VORONĚŽ 2

110 double rooms 1245 CZK/ 1550 CZK

HOTEL VORONĚŽ 1

(<http://www.voronez.cz>)

310 double rooms 1570 CZK/ 1824 CZK
46 single rooms 1428 CZK

THE COLLEGE VINAŘSKÁ

(Summer hotel of the Masaryk University)

535 double rooms 480 CZK/ 660 CZK

ADVANCE BOOKING ON PAGE 23 IS STRONGLY RECOMMENDED!

Hotel Reservation Form accompanied with the deposit covering the first night price will secure your accommodation at a discount price!

TOURS, TRIPS, EXCURSIONS

Special offer of BVV Fair Travel, Ltd. for EUREM 12 participants

Price categories:

A minibus Ford Transit (6 seats)
- price per person, valid if at least 4 persons take part

C bus MAN (50 seats)
- price per person, valid if at least 35 persons take part

B minibus Mercedes (14 seats)
- price per person, valid if at least 10 persons take part

D bus Karosa (43 seats)
- price per person, valid if at least 35 persons take part

A01

**A walking tour of Brno
- small circle through the centre
of the town**

Špilberk Castle, Petrov - St. Peter and Paul's Cathedral, the Old Town Hall, the

New Town Hall, the Capuchin Monastery, Zelný trh (the Cabbage Market), St. Jacob's Church, etc. The tour takes about 3 hours.

Price: 1800 CZK for a group regardless of the number of persons

A01B

Big circle: walking and bus

Besides the previously mentioned sights you will see the Mendel Square with the brewery, Brno's exhibition grounds, Brno's dam, etc. The tour takes about

4 hours. Prices for the sight-seeing tour including transport (admission to the sights is not included): A 900 CZK, B 480 CZK, C 200 CZK, D 160 CZK

A02 Moravian Karst

The trip takes about 4 – 5 hours. Program:

- a drive in an "eco" road train and a cableway cabin
- upper and lower bridge of Macocha abyss
- a visit to the Punkva Caves (walking and boat).



Prices include transport, charges in Moravian Karst, a foreign-language-speaking guide: A 1250 CZK, B 800 CZK, C 500 CZK, D 470 CZK. An extra fee for the dinner: 280 CZK per person.

ECONOMY CLASS: Prices include the transport from and back to Brno, charges in Moravian Karst, guide looking after organisational matters only: A 800 CZK, B 600 CZK.

B01 Slavkov Castle (Austerlitz) and the Peace Monument (deposit requested)

The trip takes about 4 – 5 hours. Program:

- a visit to the hill Žuráň, from where Napoleon Bonaparte commanded the Battle of Three Emperors,
- Peace Monument,
- Slavkov Castle,
- visit to the Old Post (restaurant) – the seat of Napoleon during the Battle of Three Emperors – dinner.

Prices include the admission to the sights, transport and a foreign-language-speaking guide:

A 1065 CZK, B 670 CZK, C 380 CZK, D 330 CZK. An extra fee for the dinner: 390 CZK per person.

ECONOMY CLASS: Prices include the admission to the sights, transport and guide



looking after organisational matters only: A 770 CZK, B 500 CZK.

A03 Castle in Lednice with a large garden and park with minaret, Castle in Valtice

The trip takes about 5 – 6 hours. Prices include admission to the castles with foreign-language explanation, guide providing comments during travel, transport: A 1490 CZK, B 880 CZK,



C 540 CZK, D 510 CZK. An extra fee for the dinner: 280 CZK per person.

ECONOMY CLASS: Prices include admission to the castles with foreign-language explanation, guide looking after organisational matters only, transport: A 860 CZK, B 720 CZK.

B02 A visit to the Knights Templars wine cellar in Čejkovice (deposit requested)

A large system of wine cellars, founded in the 13th century by the Knights Templars.

The trip takes about 5 hours. Program:

- small food is served after the arrival to the wine bar,
- commented visit to the wine cellars,
- dinner including a 0,7 l bottle of wine per person.

Prices: A 1800 CZK, B 1210 CZK, C 880 CZK, D 850 CZK. An extra fee for a traditional music band: 1430 CZK per hour.

The ECONOMY CLASS price is not possible.



A04 Pernštejn and Porta Coeli

The trip takes about 4 – 5 hours. Program: a visit to the Pernštejn Castle and "Porta Coeli" convent in Předklášteří u Tišnova. Prices include transport, admission to the sights, foreign-language-speaking guide: A 1460 CZK, B 725 CZK, C 390 CZK.

ECONOMY CLASS: Prices include transport, guide looking after organisational matters only, and admission to the sights: A 1000 CZK, B 640 CZK

A05 Kunštát region

The trip takes about 5 – 6 hours. Program: a visit to the ceramic workshop in Kunštát, a possibility of purchasing ceramic products, a walking tour (10 km long) to the cave in Rudka (an artificial cave with many sculptures).

Prices include transport, admission, foreign-language-speaking guide: A 1530 CZK, B 880 CZK, C 400 CZK

A06 Castle in Buchlovice, excursion to the ceramic workshop in Tupesy, Buchlov Castle

The trip takes about 6 hours. The castle in Buchlovice was built in the style of an Italian baroque villa. It is surrounded with



a large park. Tupesy is the most famous pottery village in south-eastern Moravia. The beginnings of pottery go back to the 9th century. The Buchlov Castle is one of the oldest castles in the Czech Republic. The legend About the Lime of Innocent and the myth About Black Lady are associated with this castle. Prices include transport, admission to the sights, foreign-language-speaking guide: A 1460 CZK, B 725 CZK, C 390 CZK. An extra fee for the dinner: 250 CZK per person.

ECONOMY CLASS: Prices include transport, guide looking after organisational matters only and admission to the sights: A 1000 CZK, B 640 CZK

A07

Castle in Strážnice, open-air museum in Strážnice

The castle was built in the late Renaissance style. In the open-air museum the visitors can see how the common people lived in the 16th – 19th centuries in south-eastern Moravia. The trip takes about 5 hours.

Prices include transport, admission to the sights, foreign-language-speaking guide: A 1490 CZK, B 745 CZK, C 410 CZK

ECONOMY CLASS: Prices include transport, guide looking after organisational matters only, and admission to the sights. A 1050 CZK, B 660 CZK

B03

A three-day trip round eastern Moravia (deposit requested)

1st day:

- departure from Brno to Olomouc, visit to the historical centre of the town, dinner,
- departure for Teplice nad Bečvou, spa



town, visit to the caves and the deepest Czech abyss,

- departure for Rožnov pod Radhoštěm, accommodation.

2nd day:

- a visit to the Rožnov open-air museum, dinner,
- departure for Vizovice, excursion to Jelínek distillery, the tasting of the traditional slivovitz (plum brandy),
- departure for the spa town Luhačovice, accommodation,
- in the evening a visit to the Moravian wine cellar, supper.



3rd day:

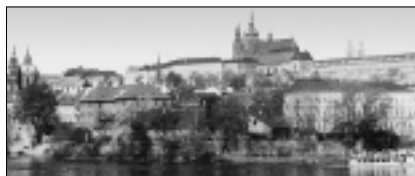
- in the morning departure for Kroměříž, sightseeing in the town and visit to the castle, dinner,
- departure for Brno in the afternoon.

Prices include transport by bus during the whole trip, 2 nights at hotels, foreign-language-speaking guide, 3 dinners, admission to the caves, museum, castle in Kroměříž, excursion in Jelínek distillery, supper in the wine cellar.

A minimum of 35 persons is required for this tour.

Prices: C 6640 CZK per person in 1/1 room, 6030 CZK per person in 1/2 room

D 6490 CZK per person in 1/1 room, 5880 CZK per person in 1/2 room



A08

A whole-day trip to Prague

Prices include transport Brno-Prague -Brno,

foreign-language-speaking guide, sightseeing tour in Prague, dinner:

A 2640 CZK, B 1760 CZK, C 980 CZK, D 820 CZK

B04

More-day trips to Prague (deposit requested)

Prices: sum of the whole-day trip to Prague + accommodation + extra program prices.

Accommodation in Prague - prices depend



on the location and category of the hotel

*** hotel outside the centre of the town: from 1900 CZK for 1/1 room + breakfast

*** hotel in the centre of the town: from 3300 CZK for 1/1 room + breakfast

**** hotel outside the centre of the town: from 4400 CZK for 1/1 room + breakfast

**** hotel in the centre of the town: from 5000 CZK for 1/1 room + breakfast

Prices for the extra programs (minimum of 4 persons is required):

- half-day sightseeing tour in Prague (various programs), transport and guide: 1500 CZK,
- cruise on Vltava: 500 CZK per person,
- Karlovy Vary and Lidice: 2300 CZK per person,
- Konopiště and Karlštejn castles: 2300 CZK per person.

Advance booking on page 24 is strongly recommended! If you book for a tour for which a deposit is requested, the travel agency will contact you in due time.

Tours B03 and B04 have to be booked by February 15, 2000.