### iCEER 2004 Final Programme

<table>
<thead>
<tr>
<th>Pre-conference Workshop - Prague</th>
<th>iCEER 2004 Conference - Olomouc</th>
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<tr>
<td>Friday June 25</td>
<td>Monday June 28</td>
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<tr>
<td>Saturday June 26</td>
<td>Tuesday June 29</td>
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<tr>
<td>Sunday June 27</td>
<td>Wednesday June 30</td>
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<tr>
<td>Thursday July 1</td>
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<tr>
<td>8:00</td>
<td>Transfer to Senate</td>
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<tr>
<td></td>
<td>Security check</td>
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<tr>
<td>9:00</td>
<td>Opening</td>
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<td></td>
<td>Opening Ceremony</td>
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<tr>
<td>10:00</td>
<td>Workshop meeting</td>
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<td></td>
<td>Plenary session A</td>
</tr>
<tr>
<td>11:00</td>
<td>Coffee break</td>
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<tr>
<td></td>
<td>Parallel sessions T01a1, T06a, T05a, T09a, T01a2</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:00</td>
<td>Excursion to Prague</td>
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<tr>
<td>14:00</td>
<td>Individual programme</td>
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<tr>
<td>15:00</td>
<td>Excursion to Prague</td>
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<tr>
<td>16:00</td>
<td>Registration</td>
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<tr>
<td>17:00</td>
<td>Transfer to Olomouc</td>
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<tr>
<td>18:00</td>
<td>Transfer to Prague</td>
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<tr>
<td>19:00</td>
<td>Buffet lunch</td>
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<tr>
<td>20:00</td>
<td>Steering Committee Meeting</td>
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<tr>
<td>21:00</td>
<td>Steiner Concert</td>
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</table>
### Workshop Prague June 26, 2004

- **8.00-8.30** Transfer to Senate  
- **8.30-9.00** Security Check  
- **9.00-9.30** Opening Ceremony - Prof. Roubíček  
  - **The Knights Hall**  
  - Speakers:  
    a) Representative of the Senate of the Czech Republic: Dr. Petra Buzková  
    b) Ministry of Education, Youth and Sports: Dr. Vladimír Kebo  
    c) VSB-TU Ostrava: Dr. Win Aung  
- **9.45-11.30** Workshop - The Government Policy Issues  
  - **The Horse School**  
  - Speakers:  
    a) Rector of Western Bohemia University: Prof. Josef Průša  
    b) US Universities: Dr. John Dunn  
    c) Rector of VUT Brno: Prof. Jan Vrbka  
    d) University of Western Sydney: Prof. Vojislav Ilic  
- **11.30-12.00** Coffee break  
- **12.00-13.00** Excursion to Senate  
- **13.00-14.00** Walk through Prague castle gardens  
- **14.00-17.00** Excursion to Prague or individual programme  
- **19.00-21.00** V.I.P. dinner in Salon 'Tulipan'  
  - 200 meters walk from hotel Mövenpick  
  - by invitation only
# iCEER 2004 Programme

## Monday June 28, 2004

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8.00-8.45</td>
<td>Registration, Hotel Flora</td>
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<tr>
<td>8.30-9.00</td>
<td>Transfer to Convict</td>
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<tr>
<td>9.00-10.00</td>
<td>Opening Ceremony</td>
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<td>Speakers:</td>
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<tr>
<td></td>
<td>a) Rector of VŠB-TU Ostrava:</td>
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<td>b) Ministry of Education, Youth and Sports:</td>
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<td>c) iNEER:</td>
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<td></td>
<td>Prof. Tomáš Čermák</td>
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<td>Dr. Petr Kolář</td>
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<td>Dr. Win Aung</td>
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<tr>
<td>10.00-11.00</td>
<td>Plenary Session A</td>
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<tr>
<td></td>
<td>Speakers:</td>
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<tr>
<td></td>
<td>a) President of NJIT:</td>
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<td>b) Vice Chancellor SIU Carbondale:</td>
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<td>c) Taiwan delegation representative:</td>
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<td>Prof. Robert Altenkirch</td>
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<td>Prof. John Koropchak</td>
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<td></td>
<td>Prof. Mu-Lin Lu</td>
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<tr>
<td>11.00-11.30</td>
<td>Coffee break</td>
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<tr>
<td>11.30-12.30</td>
<td>Plenary Session B</td>
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<tr>
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<td>Speakers:</td>
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<tr>
<td></td>
<td>a) Dr. Chi-Cheng Chang:</td>
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<td></td>
<td>b) Dr. Marios Kassinopoulos:</td>
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<td></td>
<td>c) Prof. Gou-Jen Wang:</td>
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<td></td>
<td>The Development of Professional Certification in Taiwan—Some Strategies for Promoting Students’ Professional Capability</td>
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<td></td>
<td>Academic and Professional recognition of UK Engineering Degrees in Cyprus</td>
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<td></td>
<td>Toward A Comprehensively Interdisciplinary Nanoscience and Nanotechnology Personnel Training Program</td>
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<tr>
<td>12.30-14.00</td>
<td>Transfer to Hotel Flora, lunch</td>
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<tr>
<td>14.00-15.00</td>
<td>Poster session, Hotel Flora</td>
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<tr>
<td>15.30-16.30</td>
<td>Transfer to Bouzov castle</td>
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<tr>
<td>17.00-22.00</td>
<td>Bouzov castle programme</td>
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### Monday June 28, 2004

<table>
<thead>
<tr>
<th>Time</th>
<th>Poster Session</th>
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</table>
| 14.00-15.00 | Core Courses and Core Activities in the Pharmaceutical Engineering Program at NJIT: A Re-evaluation of what Constitutes the Core Knowledge of an Emerging Engineering Field  
*Piero M. ARMENANTE, Joseph J. MANFREDI, Maureen A. HOWLEY & Steven A. OSTROVE* |
| 14.00-15.00 | Some Philosophical and Psychological Aspects of Engineering Problem Solving  
*Zbigniew M. BZYMEK* |
| 14.00-15.00 | The Teaching of Unsteady Heat Conduction Using the Thermo-electric Analogy and the Code pspice. Nonlinear Models  
*Francisco DEL CERRO, Antonio CAMPO & Francisco ALHAMA* |
| 14.00-15.00 | A Multi-Discipline Undergraduate Renewable Energy Engineering Project  
*Jamal RIZK & Mahmood NAGRIAL* |
| 14.00-15.00 | Innovation Technologies in Engineering Education  
*Alexandr MINAYEV, Y. A. BASHKOV & Oleg MOROZ* |
| 14.00-15.00 | Education and Training of Power Engineers in Australia  
*Mahmood NAGRIAL & Jamal RIZK* |
| 14.00-15.00 | A Multi-Discipline Undergraduate Renewable Energy Engineering Project  
*Jamal RIZK & Mahmood NAGRIAL* |
| 14.00-15.00 | Innovative Approach to Teaching an Undergraduate Microprocessor Class  
*Ceyyavash (Jeff) SALEHI* |
| 14.00-15.00 | Incorporation of Biology Knowledge and Skills into a Chemical Engineering Laboratory Course to Address a Biotechnology Professional Profile  
*Lorenzo SALICETI-PIAZZA & Rosa BUXEDA* |
| 14.00-15.00 | Teaching Teachers to Design and Conduct Experiments  
*Jed LYONS* |
| 14.00-15.00 | Teaching Engineering Ethics to Freshmen  
*Keita SUGIHARA* |
| 14.00-15.00 | Spreadsheet as a Tool in Teaching of Buckling Fundamentals  
*Jacek UZIAK, Marian A. GIZEJOWSKI & John D. G. FOSTER* |
| 14.00-15.00 | On the Use of Mathematica in Engineering Education  
*Audun WEIERHOLT* |
| 14.00-15.00 | Solutions to Meet the Requirements of Educational Robotics  
*Uwe GERECKE, Patrick HOHMANN & Bernardo WAGNER* |
| 14.00-15.00 | A Collaborative Program for Development of Frictional Materials Using Industrial Wastes  
*Yoginder P. CHUGH, Peter FILIP, Samrat MOHANTY & Kok-Wai HEE* |
| 14.00-15.00 | Nanotechnology for Engineering Education: a Frontier in Taiwan  
*S. H. CHANG, K. C. FAN & Y. B. YANG* |
| 14.00-15.00 | An Interdisciplinary International Collaboration in Nano-structured Property and Nano-scale Contouring Measurement Research and Education  
*Yeau-Ren JENG* |
| 14.00-15.00 | Physics Status in the Nanotechnology Education Project at the VŠB-Technical University of Ostrava  
*Jiří LUŇÁČEK, Jaromír PIŠTORA & Kamil POSTAVA* |
4 Preparing Nanostructural Materials by ECAP Method of Severe Plastic Deformation
Stanislav RUSZ, Miroslav GREGER, Martin KUBICEK & Martin PASTRNÁK

4 Design of Composite ENF Specimens and Conduct Three-Point Test to Calculate Mode II Fracture Toughness
Gwo-Chung TSAI

5 Experimental and Virtual Laboratories in Information Systems Teaching
Radim FARANA

6 Applications of Virtual Instruments in Electrical Engineering Education
Denise CONSONNI, Márcio F. AZEVEDO, Osvaldo BERNARDO NETO & Ronaldo C. ROGERI

7 A Fourth Year Experimental Course in the Measurement of Unsteady and Turbulent Flows
Peter B. V. JOHANSSON & Knud Erik MEYER

8 An Innovative "Introduction to Research" Workshop for 1st Year PhD Students.
Anthony Phillip BROMLEY, Jim BORAN & Paul John BRUNN

8 Postgraduate Skills Training in Teamwork and Project Planning –
Paul John BRUNN, Jim BORAN & Anthony Phillip BROMLEY

8 Striving for Excellence in Teaching Graduate Software Engineering by Using a Helycoidal-based Educational Program
Justo N. HIDALGO, Jesús PANCORBO, Pilar VÉLEZ & Alberto LÓPEZ

8 Funding of R&D Activities in the Czech Republic – Experiences of Selected Countries
Andrea SAMOLEJOVÁ

8 Experience with Foundation of New Private University
Vladimir STRAKOS & Ivan BARANCIK

8 Structural Funds for Financing of the International Co-operation in Human Resource Development
Šárka VILAMOVÁ, Roman KOZEL & Josef KAŠÍK

9 The Research of Integrating Information Technology with Problem-based Learning in Engineering Education: A Case Study of English Instruction
Shao-Tsu CHU, Yu-Wen CHU & Yo-Ming CHENG

9 English Skills Acquired from the Collaborative Teaching and Supervision
Lenka LANDRYOVÁ & Christopher IRGENS

9 Foreign Languages in Engineering University Education
Emília MIRONOVOVÁ & Juraj MISTINA
**Tuesday June 29, 2004**

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<thead>
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<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Chairperson</th>
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</thead>
<tbody>
<tr>
<td>9.00</td>
<td>T01a1</td>
<td><strong>New Developments in Engineering Education</strong></td>
<td>Vojislav ILIC, Robert ALTENKIRCH</td>
</tr>
<tr>
<td>9.00</td>
<td></td>
<td>A Study of Evaluation of Group Study Quality</td>
<td>Tetsuro FURUKAWA, Masakatu MATSUMI, Shigeo MATSUMOTO, Kazuya TAKEMATA, Takeso YAMAKAWA</td>
</tr>
<tr>
<td>9.15</td>
<td></td>
<td>Hands-on Design and Virtue Experiment Training in Medical Mechatronics</td>
<td>Ming-Yih LEE, Chung-Hsien KUO</td>
</tr>
<tr>
<td>9.30</td>
<td></td>
<td>The use of Functional Modules in the Mechatronics Education of non-Electrical Engineering Students</td>
<td>Victor GIURGIUTIU</td>
</tr>
<tr>
<td>9.45</td>
<td></td>
<td>Empowering Learning in Engineering: A Study of Learning Styles, Strategies, and Success of First-Year Students</td>
<td>Christopher M. ANSON, Leonhard E. BERNOLD, Joni SPURLIN, Cathy CROSSLAND</td>
</tr>
<tr>
<td>10.00</td>
<td></td>
<td>Virtual Instrumentation – Significant Means of Effective Engineering Education</td>
<td>Pavel KLATIL</td>
</tr>
<tr>
<td>10.15</td>
<td></td>
<td>Entrepreneurial Skills for Engineers - An Interdisciplinary, Team Project Approach</td>
<td>Sheryl BALL, George MORGAN, Judy HOOD</td>
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**Tuesday June 29, 2004**

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<tbody>
<tr>
<td>9.00</td>
<td>T06a</td>
<td><strong>Distance Learning</strong></td>
<td>Denis GILLET, Lubomír SMUTNÝ</td>
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<td>9.00</td>
<td></td>
<td>Adaptive Hypermedia in Learning on the Web</td>
<td>Konstantinos MARKELLOS, Penelope MARKELLOU, Maria RIGOU, Spiros SIRMAKESSIS, Athanasios TSAKALIDIS</td>
</tr>
<tr>
<td>9.15</td>
<td></td>
<td>A Personal Learning Tool for Second Language Engineering Vocabulary Acquisition</td>
<td>Hua-Li JIAN, Frode Eika SANDNES</td>
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<tr>
<td>9.30</td>
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<td>SMART CITIZENS, a Virtual Course for Training Tutors in Flexible Learning</td>
<td>Didier HEUMANN, Vanya LOROCH, Denis GILLET</td>
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<td>9.45</td>
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<td>Using Web-Based Technology to Teach a Computer Network Course</td>
<td>Hamid R. MAJLESEIN, Ahmet TAN</td>
</tr>
<tr>
<td>10.00</td>
<td></td>
<td>Considerations in the Development of an Online Teaching Course</td>
<td>Hamid R. MAJLESEIN, Hediye IMAMOGLU-TAN</td>
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<tr>
<td>10.15</td>
<td></td>
<td>e-Physics - the First Multimedia Textbook</td>
<td>Miroslava OŽVOLDOVÁ, Soňa HALUSKOVÁ, Peter BALLO</td>
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Tuesday June 29, 2004

9.00 - 10.30  T05a Information Technology and Computational Mathematics

Chryzantéma  Chairperson: Michael KING, Yury CHEBOTAREVSKY

9.00  Teaching Coupled Differential Equations by the Network Method
      Francisco DEL CERRO & Francisco ALHAMA

9.15  Applications of the Fourier Transform In Chemical Instrumentation: A Computer Simulation With Mathcad
      José Luis GUIÑÓN, Valentin PÉREZ-HERRANZ, José GARCÍA-ANTÓN & Emma ORTEGA

9.30  Combining Engineering Problem Solving with Numerical Methods to Enhance Learning Effectiveness
      Mordechai SHACHAM & Michael B. CUTLIP

9.45  Application of Finite Element Method to Create Animated Simulation of Beam Analysis for the Course of
      Mechanics of Materials
      Gwo-Chung TSAI

10.00  Developing a Countrywide Virtual Facility Center for Opto-Mechatronics Engineering Education in Taiwan
       An-Bang WANG, Long-Sun HUANG, Chi-Kung LEE, I-Ping CHEN, Ming-Chang HSU, Yu-Sin CHEN &
       Jeng-Ywan JENG

10.15  A Virtual Reality Tool in Civil Engineering Education
       Alcínia Z. SAMPAIO, Pedro G. HENRIQUES & Pedro S. FERREIRA

Tuesday June 29, 2004

9.00 - 10.30  T09a International Accreditation and Programs

Učebna  Chairperson: Marios KASSINOPoulos, Dagmar MALÍKOVÁ

9.00  Joint Degree Programs between European and Asian Universities: Concepts, Models, Structures and Tools
      Axel HUNGER, Christian SCHÜTZ, Frank SCHWARZ & Stefan WERNER

9.15  Partnering to Establish an International Joint Engineering Degree Program
      Sheryl A. SORBY, James P. CROSS & Robert O. WARRINGTON

9.30  Engineering Educational and Research Collaboration between a U.S. and a Russian University:
      A Sustainable Model for International Programs
      Darren E. MASON, Ronald S. HARICHANDRAN, Thomas L. MALECK, Vera GALISHNIKOVA, Jason
      MERRILL, David PRESTEL & Paul STRENG

9.45  Exchange Programs as a Means of Increasing Engineering Student's International Study Options
      Thomas K. JEWELL & William W. THOMAS

10.00  Hungarian Participation in International Engineering Exchange Programs
       Peter MOSON

10.15  Doctoral Study at TU Ostrava in the International Context
       Dalibor CIPRIAN, Jaromír PIŠTORA, Martin FOLDYNA & Kamil POSTAVA
### Tuesday June 29, 2004

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<tr>
<td>9.00 - 10.30</td>
<td>T01a2</td>
<td>New Developments in Engineering Education</td>
<td><strong>Chairperson:</strong> Ryszard WILK, Shan-Hwei OU</td>
</tr>
<tr>
<td>9.00</td>
<td></td>
<td>A New Perspective for Improving Quality in Teaching &amp; Learning Processes</td>
<td><em>Fui Tong LEE &amp; Boon Han YEAP</em></td>
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<tr>
<td>9.15</td>
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<td>Some Strategies for Making Problem-based Learning Teaching Plans</td>
<td><em>Shao-Tsu CHU, Yi-Ping LIN &amp; Yu - Wen CHU</em></td>
</tr>
<tr>
<td>9.30</td>
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<td>First Experiences of Teaching of Energy Engineering and Environmental Protection at the Silesian University of Technology</td>
<td><em>Ryszard K. WILK</em></td>
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<tr>
<td>9.45</td>
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<td>Alternative Assessment In Information Systems Engineering Education</td>
<td><em>Paulo Rupino CUNHA, Ana Paula AFONSO &amp; António Dias FIGUEIREDO</em></td>
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<tr>
<td>10.00</td>
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<td>Lab Project Management: A learning Scenario for Experimental Courses</td>
<td><em>Moisès GRAELLS</em></td>
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<tr>
<td>10.15</td>
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<td>The Impact of Course Resource Utilization upon Student Performance</td>
<td><em>Edward E. ANDERSON, Roman TARABAN, Matthew W. HAYES &amp; M. P. SHARMA</em></td>
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<tr>
<td>11.00 - 13.00</td>
<td>T01b</td>
<td>New Developments in Engineering Education</td>
<td><strong>Chairperson:</strong> Timothy SKVARENINA, Wojciech ZIELIŃSKI</td>
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<tr>
<td>11.00</td>
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<td>Development and Implementation of a Practice-Oriented Masters Program in Engineering</td>
<td><em>Leyla CONRAD, Bethany BODO, Rao TUMMALA, Gary MAY &amp; Joseph HOEY</em></td>
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<tr>
<td>11.15</td>
<td></td>
<td>What Makes the Process Engineering Design Project Different</td>
<td><em>M. M. FARID, S. D. OAKLEY, B. THOMPSON &amp; J. J. J. CHEN</em></td>
</tr>
<tr>
<td>11.30</td>
<td></td>
<td>Innovation in Engineering Education</td>
<td><em>Elizabeth M. LAWS</em></td>
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<tr>
<td>11.45</td>
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<td>Requirements for the Integral Design of Experiments through Real Laboratory and Simulations in Engineering Education</td>
<td><em>Eduardo A. MONTERO, Cristina ALONSO, María Jesús GONZÁLEZ, Fernando AGUILAR &amp; Montserrat DÍEZ</em></td>
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<tr>
<td>12.00</td>
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<td>Teaching Wireless Sensor Technology to Undergraduate Students Through Research Projects</td>
<td><em>Manuel TOLEDO-QUIÑONES, Jhon Arvey HENAO-SEPULVEDA, Yi JIA, Manuel JIMÉNEZ &amp; Rogelio PALOMERA</em></td>
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<tr>
<td>12.15</td>
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<td>A Flexible Software Middleware for Interactive Learning Environments</td>
<td><em>Dirk GROENEVELD, Tara C. HUTCHINSON &amp; Falko KUESTER</em></td>
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<tr>
<td>12.30</td>
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<td>Recycling Graduate Coursework to Introduce Freshmen to Engineering Fields</td>
<td><em>Jhon Arvey HENAO-SEPULVEDA, Manuel TOLEDO-QUIÑONES, José G. COLOM-USTÁRIZ &amp; Rafael MEDINA</em></td>
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<tr>
<td>12.45</td>
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<td>Experience on Design of Tests in Robotics by the Students</td>
<td><em>Arturo GARCÍA, José Luis DELGADO, Rubén ROMÁN, Yolanda RODRÍGUEZ &amp; Justo N. HIDALGO</em></td>
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Tuesday June 29, 2004

T06b Distance Learning

11.00 A Distance Education Course with both Lecture and Laboratory Components
Kevin D. TAYLOR, John P. DENTON & Karl A. PERUSICH

11.15 Evaluation of Reduced Perception and Tele-tutorial Support in Remote Automation Technology Laboratories
Nils FALTIN, Andreas BÖHNE & Bernardo WAGNER

11.30 Laboratories in Engineering Courses via Internet
Mamane Moustapha DODO AMADOU, Hamadou SALIAH-HASSANE & Maarouf SAAD

11.45 Pedagogical Engineering Fundamentals to Build Robust Software Components for Online Laboratories
Bouchaib FATTOUH & Hamadou SALIAH-HASSANE

12.00 A Generic 3D Environment to Remotely Drill and Practice on Embedded Automated Systems
Mohamed MHAMDI & Hamadou SALIAH-HASSANE

12.15 Telemeasured Performances of a DSP based CDMA Software Defined Radio
Oreste ANDRISANO, Andrea CONTI, Davide DARDARI & Alberto ROVERSI

12.30 Collaborative Distributed Laboratories: Technical Issues
Oreste ANDRISANO, Andrea CONTI, Davide DARDARI & Alberto ROVERSI

12.45 Web Services and Semantic Web in Remote Control of Laboratory scale and Matlab Simulation Models
Jan TAMAŠ & Bohumil ŠULC

Tuesday June 29, 2004

T05b Information Technology and Computational Mathematics

Chryzantéma

11.00 The Strategy to Enhance the Effectiveness of Software Engineer Training Program in Taiwan
Chyan-Goei CHUNG, Ta-Yu TSENG, Ming-ji WU & Hwi-Min KUO

11.15 The Use of Emotional Intelligence in the Process of Teaching Software Engineering
Justo N. HIDALGO, Maria Eugenia DÍEZ & Pilar VÉLEZ

11.30 Good Bye to Hello World — An Interactive Approach to Java
Ulrike JAEGGER & Jochen SCHMIDT

11.45 Adoption of a Uniform Programming Platform in an Undergraduate Biomedical Engineering Program
Michael R. KING

12.00 Introduction of Information Technologies in Educational Process of the National University of Uzbekistan
Sergey GARNOV, Abdugapur KARIMKHODJAEV, Tursunali NORBOEV & Laurence LEGG

12.15 Higher IT Education: Ways of Development
Yury CHEBOTAREVSKY & Olga DOLININA
### Tuesday June 29, 2004

<table>
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<th>11.00 - 13.00</th>
<th>T09b International Accreditation and Programs</th>
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<td><strong>Chairperson: Thomas K. JEWELL, Ludmila NEUWIRTHOVÁ</strong></td>
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</table>
|               | 11.00 Defining the IT Curriculum: The Results of the Past 2½ Years  
  *Barry M. LUNT, Joseph J. EKSTROM, Edith A. LAWSON, Reza KAMALI, Jacob MILLER, Sandra GORKA & Han REICHELT* |
|               | 11.15 Continuous Improvement Educational Initiative: A Campus-Wide Assessment Effort – Looking Beyond Accreditation  
  *Anand D. SHARMA & Ramón E. VÁSQUEZ ESPINOSA* |
|               | 11.30 Professional Accreditation, Assessment, and Licensing: Fundamentals of Engineering Exam  
  *Enno “Ed” KOEHN & Rajesh D. MALANI* |
|               | 11.45 The Integrated Strategies and Implementing Processes of the Accreditation Criteria in Taiwan  
  *Pei-Fen CHANG, Chia-Hao KO, Chia-Ling HO, Jia-Yush YEN, Andrew M. WO & Yeong-Bin YANG* |
|               | 12.00 Impact of Accreditation on Internationalization of Engineering and Technology Education in the United States  
  *H. Oner YURTSEVEN* |
|               | 12.15 Development of Key Performance Indicators for the Engineering Technology Education Programs in Taiwan  
  *Lung-Sheng LEE & Chun-Chin LAI* |
|               | 12.30 The Correlation in Constituency Assessment Results from EC2000 Based Survey Questionnaire  
  *Thuy T. LE* |

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|               | 11.00 Student and Staff Mobility in European Higher Education Institutions, during the First Years of the Bologna Process  
  *Marios KASSINOPPOULOS* |
|               | 11.15 Towards Transparent, Readable and Comparable Third Degree: Making Doctorate-level Engineering Education a Part of the Bologna Process  
  *Andrzej KRASNIEWSKI* |
|               | 11.30 Higher Engineering Education Reform in the Universities in Serbia  
  *Vojo ANDJUS & Dragoslav STOJIC* |
|               | 11.45 DonNTU’s Experience in Organization of the Inter-University Students’ Exchange and its Development within the Frameworks of the Bologna Declaration  
  *Alexandr MINAYEV, Ilya NAVKA & Oleg MOROZ* |
|               | 12.00 Problems of Link-Up in Structured Study  
  *Jaroslav DVORÁČEK* |
|               | 12.15 Engineering Degree and Competencies  
  *Janos BARSONY & Tibor KUKAI* |
|               | 12.30 A Masters Program in Computational and Experimental Turbulence  
  *T. Gunnar JOHANSSON, William K. GEORGE & Lars DAVIDSON* |
|               | 12.45 The Conception of Higher Education at Donetsk Technical University  
  *Vadim PRISEDSKY* |
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14.00 - 15.30 T01c New Developments in Engineering Education

Kavárna  Chairperson: Benjamin MELAMED, Georgios GRAVANIS

14.00 Education and Research on Sound-Guided 3D CAS Navigation System for Problem Based Learning and Assessment
Chung-Hsien KUO, Ming-Yih LEE & Shuo-Suei HUNG

14.15 Learning to Collaborate in Student Project Teams: Tools and Processes
Reidar KVADSHEIM

14.30 Teaching Micro System Design by Using Multi-User Micro Avionics System Laboratory in Aerospace Educational Reform Program of Taiwan
Tzong-Shyng LEU, Yei-Chin CHAO, Yun-Che WEN & Yu-Jane WU

14.45 Teaching and Design on Smart MEMS Pressure Sensor Module
Jium-Ming LIN

15.00 Educational Robotics in Algorithm Concretization
Javier LÓPEZ, Niko MYLLER & Erkki SUTINEN

15.15 Plagiarism and Pedagogy: Reflections on the Causes and Consequences of Plagiarism among Engineering Students
Christene MOORE & D’Arcy RANDALL

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14.00 - 15.30 T06c Distance Learning

Orchidej  Chairperson: Tetsuro FURUKAWA, Radim FARANA

14.00 Integration and Collaboration of Distance Learning to Conduct the Curricula
Yo-Ping HUANG, Tsun-Wei CHANG & Dankai LIU

14.15 Virtual Technologies with WEB Solutions in e-Learning
Lubomír SMUTNÝ, Radim FARANA & Pavel SMUTNÝ

14.30 Students' Activities in Engineering Design Courses by Using Web Collaboration Tools
Kazuya TAKEMATA, Masakatsu MATSUSHI, Toshiyuki YAMAMOTO, Tetsuro FURUKAWA & Shigeo MATSUMOTO

14.45 Cluster-Based E-Education Network on Precision Mechatronics
Jhy-Cherng TSAI, Wenlung LI, Cheng-Kuo SUNG & Jennie Y. J. WU

15.00 A Web Based Teaching Aid for Reinforced Concrete Design
José Márcio CALIXTO, Gláucia Nolasco ALMEIDA, Elizabeth Vieira MAIA & Frederico RODRIGUES

15.15 Applying Educational Technological Tools to Promote Effective Student Learning in Engineering Education
Fui Tong LEE & Namal SENANAYAKE
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### 14.00 - 15.30 T05c Information Technology and Computational Mathematics

**Chryzantéma**

**Chairperson:** Mordechai SHACHAM, Uwe GERECKE

- **14.00** Virtual Reality Lab in Education of Automation  
  *Oldřich KODYM*

- **14.15** The FAQ Robot – Managing Large-class E-mail Correspondence  
  *Frode Eika SANDNES, Baard H. Rehn JOHANSEN, Nils Einar EIDE & Andreas N. BLAAFLADT*

- **14.30** The Development of WLAN-based Indoor Positioning Systems for Aerospace Engineering Education Improvement Programs  
  *S. J. WU, Chih-Chen YIH & S. H. YEN*

- **14.45** Automatic Management Control-system of Nursing Center in Hospital  
  *Chun-liang HSU, Rwei-ching CHANG & Fu-hsien CHEN*

### 15.00 - 15.15 T03c Role of Advanced Technology Centres

**Učebna**

**Chairperson:** Peter FILIP, Vladimír STRAKOŠ

- **14.00** A Formula for Success in Research Partnerships  
  *Dale E. WITTMER*

- **14.15** Interaction of Research and Engineering Education at the University of Illinois at U/C  
  *H. H. KORST*

- **14.30** Industry Sponsored Practical Undergraduate Learning: Two Case Studies from The University of Puerto Rico  
  *Manuel TOLEDO-QUIÑONES, Manuel JIMÉNEZ & Rogelio PALOMERA*

- **14.45** On the Problem of Utilization of Scientific-technological Potential of Young Researchers  
  *Ján ČOREJ & Tatiana ČOREJOVÁ*

- **15.00** Possibilities of Improving the Transfer of PhD Theses Results from Slovak Universities into the Entrepreneurial Practice of Small and Medium Sized Enterprises  
  *Mária ROSTÁSOVÁ & Danuša VAVRÍKOVÁ*
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14.00 - 15.30  T02c Research in International Context

Pomněnka  Chairperson: Jørgen HANSEN, Wolfgang MELECKÝ

14.00 International Engineering Students in Cross-cultural, Interdisciplinary Teams
  Jørgen HANSEN

14.15 International Cooperation in Engineering Education
  Kazuo HATAKEYAMA & Gudrun JÄGERSBERG

14.30 Sabato’s Triangle and International Academic Cooperation: The Importance of Extra-Relations for the Latin American Enhancement
  Kazuo HATAKEYAMA & Dirlene RUPPEL

14.45 Globalization of Engineering Design Projects
  Wes GREBSKI & Jacek TUROWSKI

15.00 Collaborative Partnership in Education and Research
  Jerzy MOŚCİŃSKI

15.15 Support for Research Teams in Applying for European Union Funds on the Example of the Silesian University of Technology
  Wojciech ZIELIŃSKI

Tuesday June 29, 2004

16.00 - 17.45  T01d New Developments in Engineering Education

Kavárna  Chairperson: Lucyna KORNECKI, John KOROPCHAK

16.00 Multi-functional Laboratory Demonstration System
  Matti VÄÄNÄNEN & Jussi HORELLI

16.15 Self-Test Designs in Devices of Avionics
  Yun-Che WEN, Yei-Chin CHAO, Tzong-Shyng LEU & Yu-Jane WU

16.30 An Integrated Approach to the Teaching of Engineering Design
  Rainer SEIDEL

16.45 Application and Analysis of the use of Outcomes for a Higher Education Course Unit
  Anthony PRIOR & David GLANCE

17.00 Approaches to Graduate World Class Engineers and to Meet the Needs of Next Decades in Colombia
  Jaime Alberto ESCOBAR

17.15 The Role of Business Education in Engineering Curricula
  Robert O. WARRINGTON & Sheryl A. SORBY

17.30 A Phenomenological Approach to Ethics Education
  Veikko PORRA
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16.00 - 17.15  T06d Distance Learning

Orchidej  Chairperson: Jerzy MOŚCIŃSKI, Radim BRIŠ

16.00 Distance Learning and Education Support Tools Development
Jerzy MOŚCIŃSKI

16.15 Development of an e-Learning System for Chemical Engineering Education
Valentin PLESU, Raluca ISOPESCU, Razvan ONOFREI, Ana Maria JOSCEANU, Romulus DIMA & Stefan MORCOV

16.30 A Tool to Construct the “POLI PARA TODOS” Program
Itana STIUBIENER, Ian KOROLKOVAS, Luiz Fernando de BIASE, Gustavo Bianchi CINELLI, Sergio RODRIGO, Regina Melo SILVEIRA, Tereza Cristina de Melo brito CARVALHO & Wilson Vicente RUGGIERO

16.45 Recapitulation of Usage Barborka E-learning System on VŠB – Technical University of Ostrava
Radoslav FASUGA, Jana ŠARMANOVÁ & Libor HOLUB

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Chryzantéma  Chairperson: Kumares C. SINHA, Milena KRHUTOVÁ

16.00 Streaming Video for Enhanced Foreign Language Training in Vocational Education
Hans HEBENSTREIT & Ingrid BURGER

16.15 Engineering Communication (ESL) and Logical Cohesion in Student Papers
Kristin MUNDAY

16.30 Standardising Foreign Language Knowledge in Electrical Engineering Education
Ludmila NEUWIRTHOVA

16.45 An Instruction Tool for Effective Technical/Scientific Writing in English
Dagmar MALÍKOVÁ

17.00 Specific Stylistic Features of English for Electrical Engineering
Milena KRHUTOVÁ

17.15 Civil Engineering Education in the U.S.: What Lies Ahead?
Kumares C. SINHA
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16.00 Internationalizing our Campuses: Multinational Project–Based Approaches  
*Gretchen KALONJI*

16.15 The Current State of Engineering, Science and Mathematics Education Centers in the United States  
*Jed LYONS & Christine EBERT*

16.30 Industry - University Based Curricula to Address Skill Needs in Microelectronics  
*Jugdutt (Jack) SINGH, Ronny VELJANOISKI & Aleksandar STOJCEVSKI*

16.45 Lessons Learned from 10 Years Experience with Remote Laboratories  
*James TREVELYAN*

17.00 Converging Courses to Suit Converging Technologies  
*Trevor LUND & Neil RUSSELL*

17.15 Technical Framework for Robot Platforms in Education  
*Bernardo WAGNER, Patrick HOHMANN, Uwe GERECKE & Christian BRENNKE*

17.30 Effectiveness of Robotics Peer Mentoring Program for Raising Interest in Engineering, Science and Technology  
*Zorica NEDIC, Brenton DANSIE & Andrew NAFALSKI*

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16.00 International Experiences in Sustainable Education for Engineering and Technology Students  
*Patricia FOX, Claudia GROSSMANN, Elizabeth COLES, Stephen HUNDLEY & Řamana PIDAPARTI*

16.15 Combination of Network Computer-Aided and Traditional Teaching Methods in Delivering High-Tech Master’s Degree Courses  
*Tatiana S. PETROVSKAYA, Victor A. KILIN & Sergei A. GORISEV*

16.30 The Review and Future Development of the International Cooperation in Aviation Technology Education in Taiwan  
*Chuan-Sheng LIU, Cheng-Ying LO, Yeong-Ley TSAY, Shih-Ying YANG & Liang-Rui CHEN*

16.45 A US-Czech Republic Cooperative Research Program in Friction Materials  
*Zdeněk WEISS, Václav ROUBIČEK & Peter FILÍP*

17.00 Periodical Structures and International Research Cooperation  
*Jaromír PIŠTORA, Tomuo YAMAGUCHI, Koki WATANABE, Roman ANTOŠ, Jaroslav VLČEK, Monika KŘIŠTOKOVÁ, Ondřej ŽIVOTSKÝ, Kamil POSTAVA & Martin FOLDYNA*

17.15 The Assessment of Hidden Curriculum on Technological Creativity in Technological University  
*Jeh-Lou MENG & Chi-Cheng CHANG*
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**T01e1 New Developments in Engineering Education**

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**9.00 - 10.30** | T04e Nanotechnology in Engineering Education
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Chryzantéma | Chairperson: Gou-Jen WANG, Zdeněk WEISS

**9.00** | Interdisciplinary Collaboration in Teaching Nanotechnology
Mel MENDELSON, Gary KULECK, Jeff SANNY, John BULMAN, Nazmul ULA, Rafiq NOORANI & James ROE

**9:15** | Nanotechnology Education Concept at the VŠB-Technical University of Ostrava
Jaromír PIŠTORA & Zdeněk WEISS

**9:30** | New Method of a Silo Stress/Pressure Observation using the 3Dimensional Indicator
Aleš SLÍVA, Jiří ZEGZULKA & Jaromír POLÁK

**9.45** | Engineering Education in the Nanomachining Technology Curriculum
Hsiharng YANG

**10.00** | Convergent Science and Technology as a New Concept in Engineering Education at Northern Illinois University
Michael J. HAJI-SHEIKHI & Promod VOHRA

**10.15** | Nanotechnology Exposure in a First-Year Engineering Program
Heidi A. DIEFES-DUX, P. K. IMBRIE, Kamyar HAGHIGHI, Gil LEE, Steve WERELEY & Phillip WANKAT

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**9.00 - 10.30** | T08e Government Policy Issues
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Učebna | Chairperson: Sonia M. BARTOLOMEI-SUÁREZ, Andrea SAMOLEJOVÁ

**9.00** | Women at UPR’s College of Engineering: Students and Faculty, Quite a Distinct Reality
Sonia M. BARTOLOMEI-SUÁREZ, Viviana I. CESANÍ-VAZQUEZ, Maria IRIZARRY-SERRANO & Freya TOLEDO-FERIA

**9.15** | Women into Engineering
Kazuo HATAKEYAMA, Irmtraud MUNDER & Marília Gomes de CARVALHO

**9.30** | Using Social Relevance to Recruit and Retain Minority and Women Engineers
Ruth E. DAVIS

**9.45** | UK Government Policy in Postgraduate Skills Training: a model for other nations?
Jim BORAN, Anthony Phillip BROMLEY & Paul John BRUNN

**10.00** | Center for Collaborative Product Design and Development
Sundaram KRISHNAMURTHY & Jesa KREINER

**10.15** | European Research Area and Energy Engineering Education
Václav ROUBÍČEK & Pavel KOLAT
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9.00  Can Ethics Be Taught?  
*Vojislav ILIC*

9.15  Engineering and Social Responsibility: Incorporating Environmental Culture in Management  
*Maria DE MIGUEL MOLINA & Gabriela RIBES GINER*

9.30  Do Technologies Impoverish or Improve the Lives of Those They Touch? A Student’s Perspective on the Ethics of Engineering  
*Gyanam SADANANDA*

9.45  Ethics And Social Responsibility in Engineering Courses  
*Alessandro LA NEVE & Carla Soares DE ARAUJO*

10.00 The Internet Phenomenon – Ethical Challenge in Engineering Education of the Information Age  
*Juraj MIŠTINA & Roman HRMO*

10.15 The Role of Humanities and Social Sciences in Engineering Practice and Engineering Education  
*Josef ROJTER*