

Preliminary Program

**The Future
of
Materials Science and Engineering Education**

April 4-8, 2004

**OHANA Keauhou Beach Resort
78-6740 Alii Drive
Kailua-Kona, HI 96740
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Conference Co-Chairs

Conference Chair
Prof. Gerhard E. Fuchs
Materials Science & Engineering Department
University of Florida

Co-Chairs
Prof. Reza Abbaschian
Materials Science & Engineering Department
University of Florida

Dr. K.L. Murty
National Science Foundation

Prof. Malcolm McLean
Imperial College of Science, Technology & Medicine

ECI

**Engineering Conferences International
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Brooklyn, NY 11201
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Sunday, April 4, 2004

16:00 – 18:00 Registration
17:30 – 18:00 Reception
18:00 – 19:00 Dinner
19:00 – 20:00 Social Hour

Monday, April 5, 2004

07:30 – 08:30 Breakfast
08:30 – 09:00 Welcome and Introductions
09:00 – 12:00 **Session I: Information Technology**
09:00 - 9:40 S. Wolf (DARPA)
Keynote: TBA
09:40 - 10:20 P. Goodhew (UK Centre for Mat'l Edu)
Keynote: New Teaching Approaches and Support for Them in the UK
10:20 – 10:40 Coffee break
10:40 - 11:10 Z. Barber (Cambridge University)
The DoITpoMS
11:10 - 11:40 A.R. Chambers (Univ. of Southampton)
A Web-based Approach for Tutoring Large Groups
11:40 – 12:00 Discussion
12:00 – 13:00 Lunch
13:00 – 17:00 *ad hoc* Sessions/Free time
18:00 – 19:00 Dinner
19:00 – 22:00 **Session II: Design and Education**
19:00 - 19:40 L. Haworth (NSF)
Keynote: TBA
19:40 - 20:20 J. Williams (OSU)
Keynote: TBA
20:20 - 20:40 Break
20:40 - 21:10 S. Prior (Middlesex University)
Mechatronic Design Education

- 21:10 - 21:40 J. Parker (Sheffield)
Curriculum Developments at Sheffield University in a Changing World
- 21:40 - 22:10 D.A. Anthony Worsley (Univ. of Wales – Swansea)
Materials Innovation Through Research and Training Partnerships
- 22:10 – 23:00 Social Hour

Tuesday, April 6, 2004

- 08:00 – 09:00 Breakfast
- 09:00 – 12:00 **Session III: MSE Curriculum for the Future**
- 09:00 - 09:40 C. Hartley (AFOSR)
Keynote: The Challenge for Materials Science and Engineering
- 09:40 - 10:20 M.J. Mayo (MRS)
Keynote: Globalization vs. Materials Science Education
- 10:20 - 10:40 Coffee Break
- 10:40 - 11:10 D.D. Perovic (Univ. of Toronto)
MSE Strategic Planning: From Chopping Block to Canada's Largest
- 11:10 - 11:40 M. Akinc (ISU)
Iowa State University's Flexible Materials Science & Engineering Degree Program – Impact on Enrollment and Accreditation
- 11:40 - 12:10 S.C. Danforth (Rutgers University)
Development of a New Curriculum in Nanomaterials Science and Engineering
- 12:10 – 13:00 Lunch
- 13:00 – 17:00 *ad hoc* sessions / Free time
- 18:00 – 19:00 Dinner
- 19:00 – 22:00 **Session IV: Specialization and Funding Opportunities**
- 19:00 - 19:40 R. Abbaschian (UF) – Keynote
Trends in MSE Education and Enrollment
- 19:40 - 20:20 A. Carim (DOE)
Keynote: TBA
- 20:20 - 20:40 Break
- 20:40 - 21:10 D.D. Perovic (Univ. of Toronto)
Engineering a Nanotechnology Degree Program

- 21:10 - 21:40 R. Freer (Univ. of Manchester)
From Ceramics to Materials Science Education and Beyond?
- 21:40 - 22:10 A. Lupulescu (RPI)
Lecture Modules in Materials Science: NSF – DMR0303813
- 22:10 - 23:00 Social Hour

Wednesday, April 7, 2004

- 07:30 – 08:30 Breakfast
- 08:30 – 17:00 ad hoc sessions / Free time

An optional excursion for the Fair Wind Snorkeling Tour to Kealahou Bay from 14:00 - 17:30 is available. The sign-ups need to be completed by Monday at 12 Noon for guarantee purposes. Please sign up at the ECI Registration Desk. Cost and additional information is located there.

- 09:00 – 11:00 Open Discussion with Coffee
- 18:00 – 19:00 Dinner
- 19:00 - 22:00 **Session V – Web-based Initiatives**
- 19:00 - 19:40 R. Rawlings (Imperial College)
Keynote: Integrating Transferable Skills and Enhancing Writing Skills
- 19:40 - 20:20 R.L Snyder (GT)
Keynote: The Bio-revolution, How Do We Cope?
- 20:20 - 20:40 Break
- 20:40 - 21:10 J. McClure (UTEP)
From Mining to Modernism – Materials At the University of Texas – El Paso
- 21:10 - 21:40 K.P. Constant (ISU)
Assessment of ABET-Aligned Competencies Through OPAL (On-line Performance And Learning)
- 21:40 – 22:00 Discussion
- 22:00 - 23:00 Social Hour

Thursday, April 8, 2004

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| 08:00 – 09:00 | Breakfast |
| 08:30 – 12:00 | Session VI: Outreach and K-12 |
| 09:00 - 09:40 | G.E. Fuchs (UF)
<i>Keynote: MSE Outreach Efforts at the University of Florida</i> |
| 09:40 - 10:20 | T.G. Stoebe (UW)
<i>Keynote: National Resource Center for Materials Education</i> |
| 10:20 - 10:40 | Coffee Break |
| 10:40 - 11:10 | T.G. Stoebe (UW)
<i>Using Materials as the Gateway to Science, Engineering and Technology</i> |
| 11:10 - 11:40 | J.M Rusin (Edmonds Community College)
<i>High School Materials Science: It Really Works!</i> |
| 11:40 - 12:10 | S. Krause (ASU): Materials and Chemistry Concept Inventories for Student Assessment |
| 12:10 - 13:00 | Lunch and Adjournment |