SESSION J1: LURING UNDERGRADUATES TO MATERIALS SCIENCE.
Gregory C. Farrington, Department of Materials Science and Engineering, Lehigh University, Bethlehem, PA.


SESSION J3: MATERIALS SCIENCE EDUCATION AT KEIO UNIVERSITY: ADOPTING U.S. INSTRUCTION PRACTICES IN JAPAN.
Kohei M. Itoh, Keio Univ., Dept. of Applied Physics, Yokohama, JAPAN.

SESSION J4: THE NEW MSE CURRICULUM AT THE OHIO STATE UNIVERSITY.
Prabin Gupta, Robert Snyder, The Ohio State University, Dept. of Materials Science and Engineering, Columbus, OH.

SESSION J5: TOWARDS A NEW UNDERGRADUATE CURRICULUM IN MATERIALS SCIENCE & ENGINEERING. Donald R. Sudoway, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA.

SESSION J6: THE CBMM AS AN INSTRUCTIONAL DEVICE FOR MATERIALS EDUCATION. Mary Anne White, Dept. Chemistry and Institute for Research in Materials, Dalhousie University, Halifax, CANADA.

SESSION J7: THE NSF NSDL GREEN DIGITAL LIBRARY: GREEN’S FUNCTIONS RESEARCH AND EDUCATION ENHANCEMENT NETWORK. Laura M. Bierzo, Kent State University, Applied Linguistics Institute, Kent, OH; Adam C. Powell IV, Massachusetts Institute of Technology, Materials Science and Engineering Department, Cambridge, MA; Gregory M. Shreve, Kent State University, Applied Linguistics Institute, Kent, OH; Vinod K. Tewary, National Institute of Standards and Technology, Minerals Reliability Division, Boulder, CO.

SESSION J12.1: THE KEY TO LEARNING ABOUT MATERIALS. John J. Meacholsky Jr., University of Florida, Department of Materials Science & Engineering, Gainesville, FL.

SESSION J12.2: USING INTERACTIVE MULTIMEDIA TOOLS TO TEACH ANALYTICAL TECHNIQUES IN THE UNDERGRADUATE CURRICULUM. Karin Pulier_, Klaus Pingel_, Jens Becker_, Horst-Peter Dressel_, Christof Reiner_, Marc Schloesser_ and Hans-Jurgen Christ_. "Institute for Materials Technology, University of Siegen, GERMANY; Institute of Physics, University of Siegen, GERMANY; Institute of Inorganic Chemistry, University of Siegen, GERMANY.

SESSION J12.3: TECHNIQUES FOR STUDYING SOLIDS: AN ON-LINE APPROACH TO JUST IN TIME LEARNING FOR MATERIALS CHARACTERIZATION. Wayne E. Jones Jr., Chien-Jen Tseng, and M. Stanley Whittingham, Department of Chemistry and Institute for Materials Research, State University of New York at Binghamton, Binghamton, NY.

SESSION J12.4: MANAGING STUDENT GROUP PROJECTS IN AN INTRODUCTORY MATERIALS SCIENCE COURSE.
Jacqueline A. Isaac, Northeastern University, Boston, MA.

SESSION J12.5: A TWO COURSE SEQUENCE FOR INTRODUCTION TO MATERIALS. Elliot P. Dubin, Univ of Florida, Dept of Materials Science and Engineering, Gainesville, FL.

SESSION J12.6: USING INTERDISCIPLINARY EXAMPLES IN NANO TECHNOLOGY TO TEACH CONCEPTS OF MATERIALS SCIENCE AND ENGINEERING. Wendy C. Crane, Department of Engineering Physics, University of Wisconsin-Madison, Madison, WI; Arthur B. Ellis, Department of Chemistry, University of Wisconsin-Madison, Madison, WI; George C. Liesenkamp, Department of Chemistry, Beloit College, Beloit, WI; S. Michael Condren, Department of Chemistry, Christian Brothers University, Memphis, TN; Amy Payne, Department of Chemistry, University of Wisconsin-Madison, Madison, WI; Ken Lux, Department of Engineering Physics, University of Wisconsin-Madison, Madison, WI.

SESSION J3: IN-ROOM POSTER SESSION.
Chair: Oscar D. Dubin
Tuesday Morning, December 3, 2002
11:00 AM
Republic A (Sheraton)

J3.1: TOOLS FOR TEACHING NANO TECHNOLOGY CONCEPTS IN MATERIALS SCIENCE AND ENGINEERING. Wendy C. Crane, Department of Engineering Physics, University of Wisconsin-Madison, Madison, WI; Arthur B. Ellis, Department of Chemistry, University of Wisconsin-Madison, Madison, WI; George C. Liesenkamp, Department of Chemistry, Beloit College, Beloit, WI; S. Michael Condren, Department of Chemistry, Christian Brothers University, Memphis, TN; Amy Payne, Department of Chemistry, University of Wisconsin-Madison, Madison, WI; Ken Lux, Department of Engineering Physics, University of Wisconsin-Madison, Madison, WI.

SESSION J4: J4.1: MATERIALS SCIENCE IN A PROJECT-CENTERED, INTERDISCIPLINARY COURSE BLOCK.
Jonathan Skol, Hillary Berbeco, Robert Martello, Franklin W. Olin College of Engineering, Needham, MA.
1:45 PM J14.2
INCORPORATING MATERIALS SCIENCE INTO AN UNDERGRADUATE APPLIED PHYSICS CURRICULUM. Claudia Guerra-Veliz, University of Puerto Rico at Humacao, Dept of Physics and Electronics, Humacao, PR; Fredy Zygman, Yeshiva Univ, Dept of Physics, New York, NY.

2:00 PM J14.3
INSTRUCTIONAL LABORATORY EXERCISES FOR UNDERGRADUATE STUDENTS IN SOLID-STATE PHYSICS OR MATERIALS SCIENCE. Colin Inglefield, Weber State University, Department of Physics, Ogden, UT; Roger A. Anthon, University of Utah, Department of Physics, Salt Lake City, UT.

2:15 PM J14.4
WEB-BASED DATA ANALYSIS AND FEEDBACK FOR GENERAL CHEMISTRY LABORATORY: IMPROVING ANALYSIS WITH TIMELY, DISTANCE FEEDBACK. Joseph F. Lensar, Debra Dillner, Melanie A. Teichert, U.S. Naval Academy, Chemistry Dept, Annapolis, MD.

2:30 PM J14.5
THE JUNIOR LABORATORY: A PLACE TO INTRODUCE BASICS AS WELL AS NEW FINDINGS. Luz J. Martinez-Miranda, O.C. Wilson Jr. and L.G. Salamanca-Riba, Dept. of Materials and Nuclear Engineering, University of Maryland, College Park, MD.

2:45 PM Break

3:15 PM J14.6
INTRODUCING UPPER DIVISION NON-ENGINEERING STUDENTS TO MATERIALS. D.P. Blake, M.G. Norton, Washington State Univ., Mechanical and Materials Engineering, Pullman, WA.

3:30 PM J14.7
PUR/MSRCC COLLABORATION TO CREATE OPPORTUNITIES FOR WOMEN IN MATERIALS RESEARCH. Yekin Goldberg, Physics Department, Simmons College, Boston, MA; Michael Kaplan, Chemistry and Physics Department, Simmons College, Boston, MA; Leonard Soltzberg, Chemistry Department, Simmons College, Boston, MA; George Malliaras, Materials Science and Engineering Department, Cornell University, Ithaca, NY; Helene Schember, Neeljinder Singhota, Cornell Center for Materials Research (CCMR), Cornell University, Ithaca, NY.

3:45 PM J14.8
LABORATORY ON A COMPUTER. Mikhail I. Mendelev, David J. Srolovitz, Princeton Materials Institute & Dept. of Mechanical & Aerospace Engineering, Princeton University, Princeton, NJ; B.S. Bolstein, Moscow State Institute of Steel and Alloys, Moscow, RUSSIA.

SESSION J16
Chair: William B. Knowlton
Wednesday Morning, December 4, 2002
Republic A (Sheraton)

8:30 AM *J16.1
PREPARING FOR SUCCESS: INDUSTRIAL SKILLS FOR MATERIALS ENGINEERS. K. Dienst, Recording Head Operations, Seagate Technology, Minneapolis, MN.

9:00 AM *J16.2
CHANGING SKILL SET NEEDED FROM MS&E EDUCATION DUE TO EVOLUTION OF THE SEMICONDUCTOR INDUSTRY. Christopher S. Olsen, Applied Materials, TCG, Santa Clara, CA.

9:30 AM J16.3
UTILIZING INDUSTRIAL APPLICATIONS TO DESIGN AN ADVANCED UNDERGRADUATE CHEMISTRY LABORATORY. Jason J. Kekker and Yuzhuo Li, Department of Chemistry Center for Advanced Materials Processing, Clarkson University, Potsdam, NY.

9:45 AM Break

10:15 AM J16.4
ATOMIC MODELING: A CASE STUDY TEACHING MATERIALS SCIENCE IN A VIRTUAL ENVIRONMENT. Frank Chamber, Los Alamos National Laboratory, MST-8, Structure and Property Relations, Los Alamos, NM, Pierre Deymiere, The University of Arizona, Dept of Materials Science and Engineering, Tucson, AZ.

10:30 AM J16.5
APPLICATION OF CDIO METHODS IN THE MSE CURRICULUM. David Bollinger, Massachusetts Institute of Technology, Dept of Materials Science and Engineering, Cambridge, MA.

10:45 AM J16.6
NON-DESTRUCTIVE TECHNIQUES FOR THE CHARACTERIZATION OF STRUCTURAL MATERIALS. Antonia Monopoulou, Nikolaos P. Avdelidis, Eleni Aggelakopoulou, Nat. Tech. Univ. of Athens, Athens, GREECE.

11:00 AM *J15.7
THE UNDERGRADUATE CORE COURSE IN THERMODYNAMICS IN MATERIALS SCIENCE AND ENGINEERING. Robert DeHoff, University of Florida, Dept. of Materials Science and Engineering, Gainesville, FL.

SESSION J16
Chair: Elliot P. Dougherty
Wednesday Afternoon, December 4, 2002
Republic A (Sheraton)

1:30 PM *J16.1
THE INTRODUCTORY MATERIALS SCIENCE AND ENGINEERING COURSE. William D. Callister, University of Utah, Salt Lake City, UT.

2:00 PM *J16.2
A STUDY VERSION OF AN INTRODUCTORY MATERIALS COURSE. Linda S. Schrader, J.B. Halpin, Materials Science and Engineering Department, Rensselaer Polytechnic Institute, Troy, NY.

2:30 PM J16.3
TEACHING GENERAL CHEMISTRY VIA A MATERIALS-CENTERED CURRICULUM REINVENTING ENGINEERING EDUCATION. Donald R. Sadlowski, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA.

2:45 PM J16.4
A MULTIFUNCTIONAL INTRODUCTORY MATERIALS SCIENCE COURSE: EMPIRICAL ENGINEERING AND ACHIEVING ACCREDITATION OBJECTIVES. K.C. Chen, L. Vanneman, and T. Orning, Materials Engineering Department, California Polytechnic State University, San Luis Obispo, CA.

3:00 PM J16.5
EFFECTIVE TEACHING IN THE INTRODUCTORY MATERIALS COURSE. R. Gibala, Department of Materials Science and Engineering, University of Michigan, Ann Arbor, MI.