American Society for Engineering Education
Pacific Southwest Section
April 2004 Conference

"PREPARING FUTURE ENGINEERS"

AND
An Audience with Archbishop Desmond Tutu

Hosted by:

University of the Pacific
School of Engineering and Computer Science

April 1 and 2, 2004

ASEE/PSW CONFERENCE 2004
Preparing Future Engineers

Thursday, April 1, 2004

8:00-9:00	**Breakfast and Registration**
	Location: Presidents' Room

9:00-9:15	**Conference Opening**
	Location: Raymond Great Hall

Welcoming Remarks: Rahim Khoie, Professor of Electrical and Computer Engineering
Ravi Jain, Dean of School Engineering and Computer Science
Philip Gilbertson, Provost
University of the Pacific

9:15-10:15	**Panel Discussion I: Vision for the Future of Engineering**
	Location: Raymond Great Hall

Moderator:	TBA
Panelist:	Bruce Wooley, Chair of Electrical Engineering, Stanford University
Panelist:	Roger Howe, Professor and Former Chair of Electrical Engineering, University of California, Berkeley
Panelist:	Jeff Wright, Dean of School of Engineering, University of California, Merced
Panelist:	Dave Fletcher, Professor and Former Associate Dean of Engineering, University of the Pacific

10:15-10:30	**Coffee Break**

10:30-11:15	**Session I: Developing Team-Work Skills in Engineers**
	Location: Raymond Great Hall
	Chair: William Wells, University of Nevada, Las Vegas

Milica Markovic, California State University, Sacramento ``INTEGRATION OF TEAM-WORK IN UNDERGRADUATE ELECTRICAL ENGINEERING CLASSROOM''

Clark Savage Turner, Daniel Stearns, Tim Kearns, John Dalbey, California Polytechnic State University, San Luis Obispo, ``LEARNING SOFTWARE ENGINEERING BY DOING: PROGRESS REPORT ON A CAPSTONE SEQUENCE INVOLVING STUDENT MANAGED TEAMS''

Jeff Burmeister, Abel Fernandez, University of the Pacific, Stockton, California, ``DYNAMIC STATICS: PRELIMINARY COOPERATIVE LEARNING FINDINGS''

11:15-12:00	**Panel Discussion II: Co-op and Internships in Engineering Education**
	Location: Raymond Great Hall

Moderator:	Tod Banister, University of the Pacific
Panelist:	Marty Florian, Cisco Systems
Panelist:	Christine Lindow, MWH Americans, Inc.

Panelist: Paul Sensibaugh, Mountain House Community Services District

12:00-1:15   **Lunch**
Location: Presidents' Room

1:15-2:00   **Session II: Preparing Future Engineers in High School**
Location: Raymond Great Hall
Chair: Celeste Baine, Engineering Education Service Center, Eugene, OR

Sung Hu, San Francisco State University, San Francisco, ``PREPARING HIGH SCHOOL STUDENTS FOR ENGINEERING''

Marc Collard, Jessica Utts, Rebecca Ambrose, Pam Castori, Suzanne Galloway and Dan Chang, University of California, Davis, `` GENDER-BASED TRENDS IN ADVANCED MATH AND SCIENCE ENROLLMENT: WHERE HAVE ALL THE YOUNG MEN GONE?''

Irving Kett, California State University, Los Angeles, Los Angeles, ``A HISTORY OF SCIENCE AND TECHNOLOGY COURSE FOR ENGINEERING STUDENTS''

2:00-3:00   **Session III: Innovation in Engineering Education I**
Location: Raymond Great Hall
Chair: Elizabeth Eschenbach, California State University, Humboldt

Guido Lopez and Vishal Kumar, Northeastern University, Boston, Massachusetts, ``INTEGRATED COMPACT DISC MODULES FOR LABORATORY INSTRUCTION OF MECHANICAL ENGINEERING MAJORS''

Mostafa Ghandehari, Hadi Razavi, the University of Texas at Arlington, `` A GEOMETRICAL PROBLEM IN ENGINEERING MECHANICS''

Robert J. Kamisky, Aashish S. Dalal, University of California, Davis, ``ADVANCED VEHICLE RESEARCH AT THE UNIVERSITY OF CALIFORNIA, DAVIS''

Russ Abbot and Adel Sharif, California State University, Los Angeles, ``TECHNOLOGY MEDIATED INSTRUCTION, A PRO-TECHNOLOGIST NIGHTMARE''

3:00-3:15   **Coffee Break**

3:15-4:00   **Session VI: Industry Speaks with One Voice: A Message to Colleges and Universities**
Location: Raymond Great Hall
Speakers: Ray Haynes, Isadore Davis, Joe O'Brien, Hewlett-Packard Company, Palo Alto, California

4:00-4:45   **Session V: Need for Change in Engineering Education**
Location: Raymond Great Hall
Chair: Tom Kanneman, University of San Diego

Said Shakerin, University of the Pacific, ``IS ESTIMATION GETTING ENOUGH ATTENTION IN ENGINEERING EDUCATION?''

William R. Wells, University of Nevada, Las Vegas, ``TEACHING THE ART OF APPROXIMATION TO ENGINEERING STUDENTS''

Steven De Hass, California State University, Sacramento, ``IN DEPTH LEARNING''

5:00-6:00	**Social Hour**	
	Location: Presidents' Room	

6:00-7:15	**A Public Speech by Archbishop Desmond Tutu**
	Location: Alex Spanos Center
7:30-8:00	**Reception for Archbishop Desmond Tutu**
	Location: Raymond Great Hall

8:00-9:30	**ASEE PSW Banquet**
	Location: Presidents' Room

Friday, April 2, 2004

8:00-9:00	**Breakfast and Registration**
	Location: Presidents' Room

9:00-10:00	**Session VI: Use of Technical Software in Engineering Education**
	Location: Raymond Great Hall
	Chair: Julie Kenrow, University of the Pacific

Derek R. Maxwell, Thomas A. Kanneman, Kathleen A. Kramer, University of San Diego, `` USE OF THE DIGILENT XCRP AND D2XL TO IMPROVE STUDENT LABORATORY EXPERIENCES IN DIGITAL DESIGN''

Richard Turpin, University of the Pacific, `` TOP-DOWN INSTRUCTION, BOTTOM-UP LEARNING IN A MICROCONTROLLER LAB''

John Oldenburg, California State University, Sacramento, `` USING NATIONAL INSTRUMENTS LABVIEW SOFTWARE IN AN INTRODUCTORY ELECTRONIC COURSE – MOSFET TRANSISTOR PARAMETER ESTIMATION AND BIAS CIRCUIT DESIGN''

James Zhang and Kenneth Burbank, Western Carolina University, Cullowhee, North Carolina, ``BRIDGING THE GAP BETWEEN THEORY AND PRACTICE – AN EXAMPLE OF TEACHING COMMUNICATIONS COURSE USING MATLAB''

10:00-10:15	**Coffee Break**

10:15-11:00	**Session VII: Innovation in Engineering Education**
	Location: Raymond Great Hall
	Chair: S.K. Ramesh, California State University, Sacramento

Speaker: Tokunbo Ogunfunmi, Santa Clara University, ``CURRICULUM INNOVATIONS IN DIGITAL SIGNAL PROCESSING EDUCATION''

Speaker: Ashland Brown, University of the Pacific, ``TEACHING FINITE ELEMENTS USING THE KOLB LEARNING CYCLE''

Speaker: Michael Golanbari, University of the Pacific, ``THE POTENTIAL ROLE OF ENGINEERING FACULTY WITH INDUSTRIAL EXPERINCE IN DEVELOPING SOFT SKILLS IN ELECTRICAL AND COMPUTER ENGINEERIG EDUCATION''

11:00-12:00   **Lunch**
                     Location: Presidents' Room

END OF CONFERENCE