



American Society for Engineering Education

Freshman Programs Division Newsletter

Fall 2005 Edition

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ASEE Vision

Statement

"ASEE will serve as the premier multidisciplinary society for individuals and organizations committed to advancing excellence in all aspects of engineering and engineering technology education."

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A Message from the Chair

**Portland was great;
Chicago's comin' up!**

Whether you favor to savor the coastal climes or your heart is in the heartland, you must admit that ASEE has chosen to send us to some very attractive venues for the annual conference. I must admit that in my early years I spent a great deal of my conference time enjoying the local flavors: Cincinnati, Portland (twice now), Montreal, Albuquerque, Salt Lake City, Toronto, Anaheim, Reno, New Orleans, ... If I left out your favorite, I apologize, and I'm sorry they are in random order; such is my memory these days. These and others have all been fun, and I miss the days when my family would accompany me. As I become a seriously old geezer (at least to my students; I understand that those reading this aren't getting any older, so neither am I, right?), I guess these things are supposed to happen.

Along with the memories merging and blending, I've begun no-



ting the technical program more than in the past. I guess as the Portland FPD Program Chair, I was supposed to do that, though it really began happening many years before. Elsewhere in this newsletter, I noted that we had ten of fourteen available daytime session times covered. With some time set aside for social activities and attendance at sessions sponsored by other divisions, attendance at the FPD technical sessions really was amazing. My guess is that most of us have learned how to do our socializing in the evening time periods,

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Call for Papers – Chicago 2006

In this newsletter is the official Freshman Programs Division (FPD) "call for papers" for the 2006 Annual Conference in Chicago Illinois.

Abstract submission will close on October 5th.

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CALL FOR PAPERS

Freshman Programs Division

ASEE Annual Conference & Exposition

June 18-21, 2006, Chicago, Illinois

The Freshman Programs Division seeks papers relating to educational activities associated with first-year engineering students. Topics under consideration include those below, and papers on other pertinent topics are very welcome.

- Instructional use of computers and computer software
- Creative problem-solving courses
- Project-based and hands-on courses
- Innovative approaches to first-year engineering education
- Integrating design into the freshman year
- Integrated curricula for the freshman year
- Advising and orientation programs
- Retention programs
- Pre-college programs
- Linkages with K-12 education

Peer review occurs for both abstracts and papers. Final papers must be written and accepted in order for the work to be presented at the annual conference, as the Freshman Programs Division has a Publish-to-Present requirement. Submission of abstracts and final papers will be via the new SmoothPaper system. { <http://www.asee.org/smoothpaper> } and according to ASEE deadlines.

Abstract submission closes October 5, 2005. Visit www.ASEE.org

For more information, contact:

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2005 FPD Best Paper Competition



Our first-place and second-place paper award winners, respectively, bracketed the conference. If you missed Ken Brannan and Phil Wankat at the very first FPD session, you missed an excellent paper on the state of the art in first-year programs (“Survey of First Year Programs”).



Likewise, if you missed Eric Soulsby at the very last FPD session presenting his paper on the use of 'advising contours' for placement of first-year students in quantitative courses, you missed another gem (“Using 'Advising Contours' for placement in first-year quantitative courses”).



Upcoming ASEE Conferences

- 2006 ASEE Annual Conference & Exposition
Chicago, IL
June 18 - 21, 2006
- 2007 ASEE Annual Conference & Exposition
Honolulu, HI
June 24 - 27, 2007
- 2008 ASEE Annual Conference & Exposition
Pittsburgh, PA
June 22 – 25, 2008
- 2009 ASEE Annual Conference & Exposition
Austin, TX
June 14-17, 2008

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Call for Papers (cont.)

Abstract submission, the initial step in getting a paper accepted for the conference, has already begun on August 22nd and **abstract submission will close on October 5th**. It is not too late to volunteer to be a reviewer or session moderator – email me at the address below if you are willing (or could be convinced) *even if you think I already know about you*.

Abstracts and papers will be submitted via the *new improved* ASEE SmoothPaper system {<http://www.asee.org/smoothpaper>} according to ASEE deadlines.

Since the system is new, it is important to have abstracts ready somewhat before the deadline, and submit them at least a couple of days early, just to be safe. Leave the last-minute crisis management to others!

Author Deadlines

Abstract Submission	August 22 – October 5, 2005
Abstract Status Notifications	November 9, 2005
Draft Paper Submission	November 16, 2005 – January 18, 2006
Draft Paper Status Notifications	February 17, 2006
Final Paper Submission	February 22 – March 8, 2006
“Accepted Pending Changes”	March 15, 2006
Proceedings/Copyright Transfers	March 22, 2006
Author Registration Deadline	April 12, 2006
Housing Deadline	May 17, 2006

Note that the FPD has a Publish-to-Present requirement. What this means to authors is that if your abstract is accepted, you are **not** guaranteed a spot in a technical session to present your work. To be assured of a place on the program, you must write, submit, and re-submit, if required, a paper deemed acceptable by the reviewers assigned to your paper topic.

All abstracts and papers will be peer-reviewed. The reviewers will include members of the FPD executive board, session chairs for the conference, and volunteer reviewers.

It is not too late to volunteer to be a reviewer or session moderator.

The Freshman Programs Division is proud to encourage quality papers and presentations: in addition to first and second place best paper awards *with new increased \$cash awards\$*, there are awards for the best presentation & for the best STUDENT presentation. The authors and presenters will receive a check and a suitable award at the FPD business meeting in Chicago. We look forward to seeing you there!

Jim Morgan
Texas A&M University
Program Chair
jim-morgan@tamu.edu

Message from Chair (cont.)

(Continued from page 1)

taking advantage of dinner meetings and the like. The FPD sessions offered the opportunity for a wide variety of papers and presentations, with highlights seemingly the rule. All of our award winners should feel very proud of their accomplishment, as they all had to work hard to grab the brass ring.

At the business meeting, we elected two new members to the Executive Board: Kris Craven and Chris Rowe. With another year's passage, the officers change as well: Immediate Past Chair – Bill Koffke, Chair – Bob Montgomery (that would be me ...), Vice Chair / Chair-Elect / Program Chair – Jim Morgan (note that he gets the longest title, probably because he has the biggest job), Vice Program Chair / Program Chair-Elect – Gunter Georgi, and Secretary-Treasurer – Kris Craven. Rotating out of the 'officer corps' are Mara Knott, the previous Immediate Past Chair and Keith Mazachek, the previous Secretary-Treasurer. Thank you very much, Mara and Keith!

Our ASEE Professional Interest Council (PIC) representative has informed us that growth in the number of papers and sessions is becoming a problem, so each division is only guaranteed (**n-1**) technical sessions next year, where **n** is the number of sessions the division had this year. Thus, we are guaranteed only six sessions next year. Our 2006

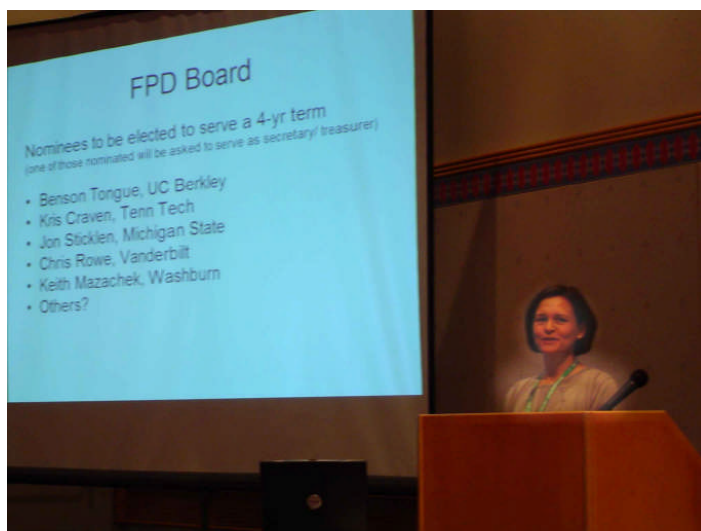


program chair may request as many sessions as he feels we need, be it eight, nine, or whatever, but it is highly unlikely that we will receive approval for more than the seven sessions we had this year, and we *really could* be cut to six. Given the 97 abstracts received this year, the competition for a place on the program is likely to be very vigorous.

I hope by now you have already made tentative plans for attending ASEE 2006 in Chicago. The Windy City is home to many entertainment opportunities, restaurants, museums, and reasons for one's heart to be in the heartland. And, speaking in general terms for all of you, the talent in our division is such that the Society needs to hear from us, so please plan to present a paper, whether in an FPD session or some other. I am certain that the ASEE leadership and the various host city committees will have a superb program in store for us, and the opportunity to take in the seven or so FPD sessions will once again be too good to pass up. I'm certain you will find the quality of the presentations afforded by the other ASEE divisions to be to your liking as well; I've not been disappointed yet. Oh, by the way, don't forget to savor the local flavor ... It certainly sounds like a plan to me.

See you there.

Robert Montgomery
Purdue University
Freshman Programs Division Chair



Meet the Board



Members of the 2005-2006 Executive Committee are (left to right) Bill Koffke (past chair), Chris Rowe, Sandy Wood, Bob Montgomery (chair), Kris Craven (secretary/treasurer), Jim Morgan (program chair), Gunter Georgi (program chair-elect), and Richard Freuler.

Meet the Board

The Freshman Programs Division Bylaws provide for an Executive Committee to administer the affairs of the division and to formulate policy. This committee has eight members elected by the FPD membership for terms of four years each, with the terms staggered so that two members are elected each year. Elections are held each year at the division business meeting during the Annual Conference. Officers for the division are selected by the Executive Committee from its eight members at the Annual Conference prior to the business meeting. The officers include the Chair, Program Chair, Program Chair-Elect, Secretary, and Treasurer. In recent years the positions of Secretary and Treasurer have been combined into a single position. The Bylaws provide for a succession from Program Chair-Elect to Program Chair and then to division Chair over a three-year period. Following a term as Chair, the past chair remains on the Executive Committee for an additional year and becomes the ninth member of the committee unless his/her term on the committee has not yet expired.

We welcome Kris Craven (Tennessee Tech) and Chris Rowe (Vanderbilt), who were elected to the FPD Executive Committee at the Division Meeting in Portland. Kris will be serving as the Secretary/Treasurer for 2005-2006. The entire 2005-2006 Executive Committee is pictured in the photo above which was taken following the Division Business Meeting. Contact information for each member of the executive committee is provided below. The number in parentheses indicates the year each member is scheduled to rotate off the board. Keep in mind that at the 2006 Annual Meeting in Chicago we

will be electing two persons to serve a four year term on the board. If you are interested in being nominated please let the current past chair Bill Koffke know.

Chair

Robert Montgomery (2006)
Engineering Education
Purdue University
rmont@purdue.edu

Program Chair, Vice-Chair, Chair Elect

James Morgan (2006)
Civil Engineering
Texas A & M
jim-morgan@tamu.edu

Vice-Program Chair, Program Chair Elect

Gunter Georgi (2008)
General Engineering
Polytechnic University
georgi@poly.edu

Secretary/Treasurer

Kristine Craven (2009)
Basic Engineering Program
Tennessee Technological University
kcraven@tntech.edu

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Meet the Board (cont.)

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Past Chair

William Koffke (2007)
Mechanical Engineering,
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"Members at Large":

Richard Freuler (2007)
First Year Engineering Program
Ohio State
Rick.Freuler@osu.edu

Sandy Wood (2008)
Freshman Engineering Program
University of Alabama
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Christopher Rowe (2009)
Engineering Science
Vanderbilt University
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By Tamara Knott
Virginia Polytechnic Institute
Past Past Chair



FPD 2005 Business Meeting

Following a presentation and continental breakfast provided by Robert Kross, Vice president of the Manufacturing Solutions Division at Autodesk, the members of the Freshman Programs Division, led by Division Chair Bill Koffke, conducted business at the Division's annual business meeting in Portland, Oregon.

Awards were presented for the 2005 conference best papers. First place was awarded to Kenneth P. Brannan, The Citadel, and Phillip C. Wankat, Purdue University, for their paper titled "Survey of First Year Programs." Second place was awarded to Eric P. Soulsby, University of Connecticut, for his paper titled "Using 'Advising Contours' for placement in first-year quantitative courses."

It was announced that the Executive Committee voted to increase the best paper awards with 1st receiving \$250 and 2nd receiving \$100. Two additional FPD

awards have been created; Best Presentation at the annual conference being awarded \$150 and Best Student Presentation being awarded \$100.

The Division elected two members to the Executive Committee. They are Kris Craven and Chris Rowe. Officers for the upcoming year are:

- ◆ Robert Montgomery (Chair)
- ◆ Jim Morgan (Vice Chair, Program Chair, Chair-Elect)
- ◆ Gunter Georgi (Vice Program Chair, Program Chair-Elect)
- ◆ Kris Craven (Secretary/Treasurer)
- ◆ Bill Koffke (Past Chair, Chair of Nominating Committee)

Keith Mazachek
Washburn University
Secretary/Treasurer

Below is one of a series of articles highlighting freshman engineering courses at different engineering schools. Contact the Editor if you wish to contribute a short article about your school.

Freshman Engineering at University of Colorado, Boulder

For the past few years the College of Engineering and Applied Science at the University of Colorado, Boulder has admitted a new student (freshman) class of approximately 610-630 new students, with about 50 of these new freshmen students advanced to the sophomore or junior year because of college credit earned while in secondary school. These new student classes average twenty percent female, thirty to thirty-five percent non-residents, and six to eight percent underrepresented minority students. Most students are traditional, entering college in the fall semester immediately following their secondary school graduation.

These new students can select a major at the time of their application to the University of Colorado, Boulder, change majors within this College during the summer prior to enrollment, or at any time during the academic year. There are eleven undergraduate degree programs offered by this College and an undecided option for those new students who wish to delay their major selection until the end of the first year of study.

Our new first year students, including transfer students, register for their fall semester courses prior to an orientation program. They are sent detailed registration instructions in June and register on the web during a designated day late in July. We do provide these new students with a tentative schedule plan, telephone numbers for contact with a faculty or staff advisor in their major department, and provide this information as their "first homework assignment in the College." This web-based registration process has been used for the past five years and results in about ninety percent of the new freshman class registering on the designated day. There is a follow-up meeting with the new student and their advisor during our fall orientation program and during the first week of classes to validate the student's course schedule.

This College features a common freshman year to assist our students in adjusting to the collegiate demands of engineering and encouraging them to complete their undergraduate degree in a timely manner.



The common freshman year provides a common set of courses required for all degree programs (calculus, chemistry, physics, an introduction to engineering course, and humanities or social science courses); with optional courses that may be taken during either the fall or spring semesters (an Engineering Projects course, a computer science course, a departmental-specific course, or an additional humanities or social science course). Those new students who enter as sophomores or juniors do not have the option of a common freshman year because of their advanced academic standing.

Our first year academic program is unique because of our Freshman Projects course, GEEN 1400-3, which is offered in our Integrated Teaching and Learning Laboratory. This course provides the first year student with an opportunity to apply their mathematics and scientific skills in an interdisciplinary engineering team, designing and building select projects under the guidance of engineering faculty. See <http://itll.colorado.edu/ITLL> for additional information on this course and the ITLL. This course has recently been designated by the National Academy of Engineering as the prototype freshman engineering projects course in the nation and research has shown this course to increase student retention in engineering, especially with minority and female students. We usually offer nine sections of this course during the fall semester and five sections during the spring semesters; enrollment is limited to no more than 32 students per course section.

Our new students go through adjustment difficulties facing all new engineering students; adjusting to a

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Perspectives -

A Message from the Past Chair

Another Annual Conference has come and gone. The 2005 Conference at Portland, OR has again given members the opportunities to share ideas in the broad area of freshmen programs and curriculum. The CAPS system has been replaced with a new online submission system, good luck to next year's Program Chair Jim Morgan.

See incoming Chair Bob Montgomery's Program Chair's report elsewhere in this issue for the FPD programs at this conference. We were pleased that there were seven division technical sessions and two session cosponsored with other Divisions to accommodate all this interest this year. I hope you 'stole' as many ideas as I have from the presenters in the sessions and by networking with others dealing with the challenges in freshman programs.

We are anxious to receive your input on ways the Freshman Programs Division can serve you better or how you can serve the division. If you are interested in serving on the executive board or want to nominate a colleague or provide help with an electronic journal, website or e-forum, please contact a board member.

At this years business meeting we formed three committees. Tamara Knott, Robert Montgomery, Richard Freuler, and I will form the bylaws committee. Christopher J. Rowe, the new division Webmaster, and Newsletter Editor, Gunter Georgi will form the communications committee. The third committee chaired by Kenneth Brannan will be looking into placing the division survey data on the division website.

Christopher J. Rowe and Kris Craven are our new board member serving through to 2009.

William C. Koffke
Villanova University
Past Chair, Freshman Programs Division



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University of Colorado, Boulder (cont.)

new level of academic demands, balancing school responsibilities and their new personal freedoms, adjusting to a group living environment, a separation from home (eased by cell telephone contact with parents and friends), and adjustment to a new academic community. Most cope students make this adjustment with minimal difficulty but we do interact with some students whom are not making this transition without personal difficulty. Our objective is to assist all students to the best of our ability in having a successful first year transition to the College of Engineering and Applied Science and the University of Colorado, Boulder.

James C. Sherman
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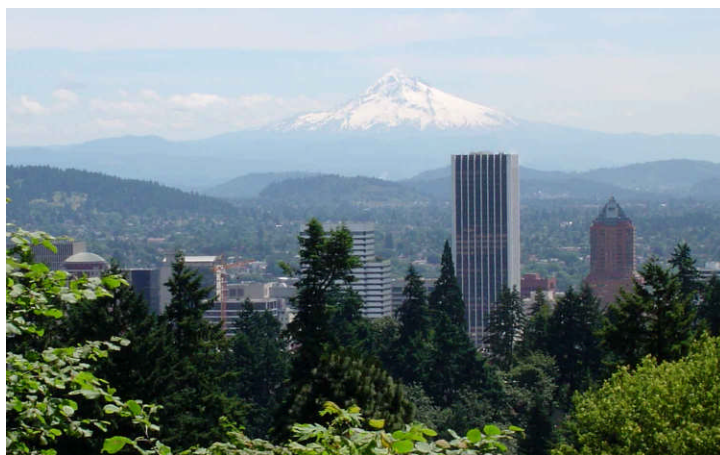


Thank you for making Portland (ASEE 2005) great!

From the beginning, the ASEE 2005 Conference in Portland was destined to be a good one, at least from the Freshman Programs Division (FPD) point of view. All you wonderful writers, researchers and educators came through like champs when the Call for Papers hit the street. FPD received 97 abstracts this year (yes, folks, I finally found my records; sorry I didn't have the number in Portland), way more than we had technical sessions to showcase. In spite of my request for eight, we were given seven technical sessions, and shared two others. We also had a business breakfast, sponsored by the good folks at AutoDesk, for a total of ten sessions. When you consider that there are only six available non-evening session times each day for three days, and that four of those are reserved for Society-wide activities, we had ten of fourteen session times covered! Great!!!

However, when you narrow 97 abstracts to 50-something papers, and reduce these further to the forty-one we ultimately accepted, the competition is fierce (but in a friendly, collegial way, of course). Obviously, not all of the submitted efforts bore fruit for the authors. Having experienced this kind of rejection on numerous occasions, I am certain that most of those papers not accepted simply became stronger for the next submission, and have probably by now been granted audience at another venue.

Given the excellent coverage of the available session times, it should be noted that most of us have split loyalties, with one foot in FPD and one in

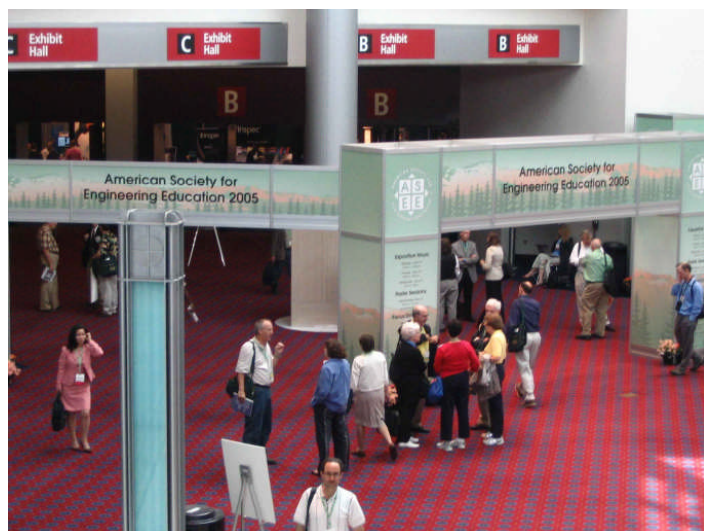


another division of the Society. It is especially because of this that our excellent attendance at the FPD sessions in Portland is so pleasing to me and, I'm sure, all on the executive board. The seven FPD technical sessions had, by my count, an average of about 75 persons in attendance. Where else can you go to get that many listeners in an audience? Think about this if you didn't present a paper at the 2005 ASEE Conference. Next year, those audiences could be listening to *you*.

The sessions offered something for everyone, but while many attended because of the variety of topics, the quality of both papers and presentations was amazing. The first-place and second-place paper award winners of the 2005 FPD Best Paper Competition are described in an article on page 3.

The presentations themselves were similarly high-quality. The volunteer evaluators had a difficult time at many sessions differentiating the quality of the presentations, making award determination very difficult. That has been completed, and next year's program will include a plaque presentation to Beverly Jaeger and her teammates from Northeastern University for the best presentation: "Get with the Program: Integrated Project Instead of a Comprehensive Final Exam in a First Programming Course."

A certificate will be presented to our best student presentation award winner, Tamara Moore, a PhD student in Purdue's new Engineering Education graduate program, for "First-Year Engineering Themed Seminar – A Mechanism for Conveying the Interdisciplinary Nature of Engineering." By the



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Making Portland (ASEE 2005) great! (cont.)

way, the winners will receive their checks long before next year's conference.

Congratulations to all of you who made ASEE 2005 great!

Robert Montgomery
Purdue University
Freshman Programs Division Chair

2005 ASEE (Portland) – FPD Program

Following is the program for the ASEE Annual Meeting June 12-15 in Portland, Oregon. A full slate of sessions is planned, including seven full technical sessions, two shared technical sessions, an Executive Board meeting, and the Division meeting, now a breakfast, first thing Monday morning on June 13. A few of the technical sessions include presentations that may seem a bit off-topic; this is in order to accommodate presenters' schedules. All sessions are in the Oregon Conference Center (OCC) and the rooms are noted in the session list.

Session # 0553 – Sunday June 12, 2005 – 2:30-4:15 pm – FPD Executive Board Meeting (OCC B112)

Session # 1153 – Monday June 13, 2005 – 7:00-8:15 am – FPD Business Meeting (Breakfast) (OCC B116)

Session # 1353 – Monday June 13, 2005 – 10:30 am-12:00 pm – FPD Technical Session: State of the Art in 1st-Year Programs; Moderator – Jean Kampe (OCC E145)

- New Paradigm for Foundational Engineering Education, Jenny Lo
- Supporting Innovative Freshman Study: The Engineering Workshop Program, Denise Drane
- Survey of First Year Programs, Phillip Wankat
- Identifying Student Differences in a First-Year Engineering Course: A Comparison of Mid-Year Survey Responses, Leo McWilliams
- The Millennial Trail: Parental Involvement in Their Children's Engineering Education, James Sherman

Session # 1453 – Monday June 13, 2005 – 12:30-2:00 pm – FPD Technical Session: Social Responsibility & Professionalism; Moderator – Kenneth Brannan (OCC E143)

- Development and Assessment of a Freshman Seminar to Address Societal Context, Maura Borrego
- Ethics for First-Year Engineers: The Struggle to Build a Solid Foundation, Margot Vigeant
- An Experimental Course for First-Year Students: Leadership In Engineering, Mary Goodwin

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- Institutionalizing Service-Learning into a First-Year Engineering Curriculum, William Oakes
- Focus on Tar Creek: Making an Introductory Course Interesting, Christi Luks

Session # 2192 – Tuesday June 14, 2005 – 7:00-8:15 am – Women in Engineering & FPD joint Technical Session: Early College Retention Programs; Moderators – Teri Rhoads & Judy Valyo (OCC F151)

- Can a Women in Technology Freshman Seminar Change Student Attitudes? A Pilot Study, Mara Wasburn
- Does Gender Affect Student Perception of Engineering Courses in a Common First Year Program?, Gretchen Hein
- Monolith or Mosaic: Using Demographics and Detailed Surveys to Understand the Many and Varied Dimensions of First-Year Female Engineering Students, Catherine Pieronek
- Moving Towards a More Systems Approach in a Robotics Based Introductory Engineering Course at Mount Holyoke College, Orin Hoffman
- Taste of Engineering: Integrating engineering into a liberal arts institution, Yvonne Ng

Session # 2265 – Tuesday June 14, 2005 – 8:30-10:15 am – Mathematics, K-12, & FPD joint Technical Session: Math and K-12-Freshman Transitions; Moderator – Phillip Smith (OCC E146)

- Calculus Intervention for First-Semester Engineering Students, Jerome Lavelle
- Incorporating Math and Design in High School Physics, Fengfeng Zhou
- Math, Engineering, and Science; Applications for Grades 4 – 8, Mary Hofle
- Teaching Freshman Engineering Students to Solve Hard Problems, Robert Leland
- Significant Improvements in Statewide Test Results As A Consequence of Using A Japanese-Based Supplemental Mathematics System, Kumon Mathematics, in an Inner-Urban School District, Barbara Oakley
- Successfully Building Bridges Between Education and Engineering Programs at a 4-year Comprehensive University, Philip Parker

Session # 2453 – Tuesday June 14, 2005 – 12:30-2:00 pm – FPD Technical Session: Recruitment, Retention & Advising; Moderator – Kristine Craven (OCC E143)

- Teamwork is Academic: The Gateway Approach to Teaching Engineering Freshman, Richard Whalen
- Engineering Exploration Days – Recruiting High School Students into Engineering through focused K-12 Outreach Efforts, Donald Carpenter
- Residentially-Based Learning Communities to Enhance Engineering Retention and Academic Performance, Thomas Marrero
- Do Engineering Freshmen Find Value in Extracurricular Seminars Designed to Enhance Collegiate Success?, Rick Olson

Unifying Assessment of Freshman Design Teams with Team Project Management, Pierre Larochelle

Session # 2653 – Tuesday June 14, 2005 – 4:30-6:00 pm – FPD Technical Session: Curriculum Innovation & Assessment; Moderator – Thomas Walker (OCC E144)

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- Addressing Program Outcomes in a Freshman Introduction to Engineering Course, Ronald Barr
- Curricular Integration of Computational Tools: A First Step, Timothy Hinds
- Interdisciplinary Approach to First-Year Engineering Curricula, Kristi Shryock
- Core Engineering Renaissance at Rensselaer: Engineering Discovery - A Pilot First-Year Course, Kevin Craig

Get with the Program: Integrated Project Instead of a Comprehensive Final Exam in a First Programming Course, Beverly Jaeger

Session # 3153 – Wednesday June 15, 2005 – 7:00-8:15 am – FPD Technical Session: Problem-Solving & Project-Based Learning; Moderator – Christopher Rowe (OCC E142)

- Introducing Presentation Skills in Freshman Engineering, Elisa Linsky
- Project Based Learning Design Projects for Introduction to Engineering Design Courses, Taryn Bayles
- Problem Solving and Creativity Experiences for Freshman Engineers, Karen High
- The George Fox University Freshman Experience: A Projects Based Integrative Approach to Engineering Design, John Natzke

Helping Students Recognize and Solve Different Problem Types in Engineering, Mathematics, and Physics, John Demel

Session # 3253 – Wednesday June 15, 2005 – 8:30-10:15 am – FPD Technical Session: First-Year Design Experiences; Moderator – James Sherman (OCC E142)

- Inside the Box: Teaching Engineering Design through Theatrical Special Effects, P. Paxton Marshall
- Engineering Problem Solving Design Project: Emergency/Homeless Shelter Design, Julie Jessop
- Engineering Design in Five Weeks – Designing a Wind Chime, S. Scott Moor
- A Versatile Weather Station: Engineering Design from the Viewpoint of a First-Year Team, Robert Knecht
- Three Freshman Team Design Projects, Teodora Shuman

Peanut Butter Cracker Sandwich Manufacturing Module, Amy Moll

Session # 3653 – Wednesday June 15, 2005 – 4:30-6:00 pm – FPD Technical Session: Assessment Issues in 1st-Yr Engineering; Moderator – Jon Sticklen (OCC E143)

- Using 'Advising Contours' for placement in first-year quantitative courses, Eric Soulsby
- First-Year Engineering Themed Seminar – A Mechanism for Conveying the Interdisciplinary Nature of Engineering, Heidi Diefes-Dux
- A Comparison between Collaborative Learning and Situated Learning Teams in Two Freshman Engineering Design Experiences, Helen Qammar
- Assessing a Freshman Engineering Course, Christopher Rowe
- Multi-section Freshman Classes with Labs: Lecture as Intro vs. Lecture as Wrap-up, Jon Sticklen