The LARGEST annual New England conference dedicated specifically to engineering education!

>> Plenary speeches addressing:
- Social Entrepreneurship
- Experiential & Service-Learning

>> Conference Tracks:
- Paper & Abstract Presentations
- Interactive Panels & Unconference
- Student Posters & Presentations

>> Workshops about:
- Engineering pedagogy
- Career strategy & market trends
- New technologies and methods

http://asee2012northeast.eventbrite.com/
A Complete Analog Design Kit for the Price of a Textbook.

The Digilent Analog Discovery™ design kit, developed in conjunction with Analog Devices Inc., is the first in a new line of all-in-one analog design kits that will enable engineering students to quickly and easily experiment with advanced technologies and build and test real-world, functional analog design circuits anytime, anywhere - right on their PCs. For the price of a textbook, students can purchase a low-cost analog hardware development platform and components, with access to downloadable teaching materials, reference designs and lab projects to design and implement analog circuits as a supplement to their core engineering curriculum.

Engineering schools have traditionally had to build and maintain centralized teaching labs. These labs, with their specialized equipment and trained lab assistants, are expensive and hard to maintain. With the Analog Discovery design kit, we're helping schools build distributed labs - labs that can be found in dorm rooms, cafeterias, libraries - anywhere students want to work.

Analog Inputs
- AD9648 dual, 14-bit, 105 MSPS, 1.8 V dual analog-to-digital converter
- 2-channel differential (1 MO, 24 pF), ±20 V max
- 250 μV to 5 V/division with variable gain settings
- 50 MSPS, 5 MHz bandwidth, up to 16k points/channel record length

Analog Outputs
- AD9717 dual, 14-bit, 125 MSPS, low power digital-to-analog converter
- 2-channel, single-ended, arbitrary waves up to ±4 V
- 50 MSPS, 5 MHz bandwidth, up to 16k samples/channel
- Standard and user-defined waveforms
- Sweeps, envelopes, AM and FM modulation

Power Supplies
- 2 fixed ±4.5 V (+50 mA) and –4.5 V (+50 mA)

Digital I/O
- 16 signals shared between logic analyzer, pattern generator, and discrete I/O
- 100 MSPS, buffer size is 4k transitions per pin
- Crosstriggering with scope channels

Software
- Waveforms™ software: full-featured GUI for all instruments
- Virtual Instrument Software Architecture (VISA) compatible
- Windows® XP® or newer
- Linux® and OS X® versions coming soon

www.digilentinc.com/analog
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Participating Institutions

ABET
Accel lent Corporation
Analog Devices
Atel LLC
AutoDesk
Boston University
Bridgewell
Bucknell University
Cambridge Computers
Central Connecticut State Univ.
Chemical Engineering
Columbia University
Daniel Webster College
Dartmouth College
Drexel University
Goodrich Inc.
Gordon College
Greater Lowell Tech. High School
Harvard University
IDEO
Johns Hopkins University
Johnson & Johnson Corporation
JPMorgan Chase
Keene State College
Lawrence High School
Lehigh University
Lowell High School
Massachusetts Bay Community College
Massachusetts Institute of Technology
Mercy Breast Care Center
Merrimack College
Michigan Technological University
NetApp
Northeastern University
Norwich University
Payscale.com
Raytheon
Roger Williams University
Springfield Tech. Community College
Sterilite Corporation
Suffolk University
SUNY Oswego
Swampscott High School
Syracuse University
Technology, Innovation and Entrepreneurship, Inc.
Tufts University
U.S. Military Academy
United States Military Academy
University of Bridgeport
University of Connecticut
University of Hartford
University of Idaho
University of Mass. Amherst
University of Mass. Dartmouth
University of Mass. Lowell
University of New Haven
University of Puerto Rico
University of Southern Maine
University Of Texas
US Army NSRDEC
VMWare
Washington State University
Water Analytics
Wentworth Institute of Technology
West Virginia University
Western New England University
Widener University
Worcester Polytechnic Institute
Yale University
INTRODUCTORY REMARKS

Conference Welcome
UMass Lowell welcomes all participants to the 2012 Northeast Section Conference. The conference has been organized according to professional standards. In total, our submission site received over 4,000 visits that led to 260 submissions from 64 participating institutions. The final conference program includes 2 keynote addresses, 8 professional workshops, 2 student development workshops, 8 panel sessions, 48 professional presentations, 23 student presentations, and 118 student poster presentations. Congratulations on all on your work!

We are thankful to all the participants – authors, presenters, panelists, reviewers, staff, sponsors, and many others – who not only defined this conference but help to shape the future of our profession and society. We are especially thankful to our conference sponsors, Analog Devices and Goodrich, as well as our workshop sponsors, NetApp and Autodesk, whose support has covered all our fixed costs and allowed for a world class event. We hope you enjoy the Conference!

David Kazmer
Conference Chair

Kanti Prasad
Conference Vice - Chair

ASEE Northeast Section
I am honored to serve as the chair of the northeast section of American Society for Engineering Education (ASEE) this year. I am thankful to the dedicated members of this section of ASEE whose commitment towards furthering engineering education has brought us all together to this annual conference at University of Massachusetts, Lowell.

This is an exciting as well as challenging time in our profession. Despite the recession and sluggish economy, unemployment rate in the profession of engineering has dropped significantly over the past few years. At the same time, our colleges and universities face new challenges in finding new funding and government grants to improve and enhance their engineering programs. As engineering educators and professionals, we must strive for excellence in engineering education and research. This conference provides a venue for us to interact and collaborate, resulting in new ideas which can transform engineering education. I hope that we can utilize this opportunity to encourage our students to pursue studies and careers in engineering and engineering technology.

I thank you all for coming to this conference and hope that you will find it transformative. Your participation is much appreciated.

Navarun Gupta
Chair, Northeast Section
## 2012 ASEE NORTHEAST CONFERENCE

**EXPERIENTIAL LEARNING: THEORY & PRACTICE**

### FRIDAY SCHEDULE AT A GLANCE

See [Session Listings](#) for detailed time and room assignments.

<table>
<thead>
<tr>
<th>Time</th>
<th>Concord 1</th>
<th>Concord 2</th>
<th>Concord 3</th>
<th>Junior Ballroom</th>
<th>Hamilton 2</th>
<th>Hamilton 3</th>
<th>Lower Locks 1</th>
<th>Lower Locks 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>8am</td>
<td>Registration Opens in Hotel Lobby – Perpetual Coffee in Lower Locks Lobby</td>
<td></td>
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<tr>
<td>9:30 - 10:50</td>
<td>NSF Performamatics Workshop (9am start)</td>
<td>Problem Based Learning Workshop</td>
<td>Data, Storage, &amp; Clouds Workshop</td>
<td>Open for Setup</td>
<td>Student Papers I</td>
<td>Student Papers II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:00 - 12:00</td>
<td>Lunch &amp; Poster Presentations in Junior Ballroom:</td>
<td>Student Posters I</td>
<td>Student Posters II</td>
<td>Reserved</td>
<td></td>
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</tr>
<tr>
<td>12:30 - 1:20</td>
<td>Lunch &amp; Poster Presentations in Junior Ballroom:</td>
<td>Student Posters II</td>
<td>Student Papers V</td>
<td>Student Papers VI</td>
<td>Panel I: Intro. to Eng’ring</td>
<td>Panel II: High Perform Compute</td>
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<td></td>
</tr>
<tr>
<td>1:30 - 3:00</td>
<td>Learning Through Workshop</td>
<td>Autodesk CAD/CAE Workshop</td>
<td>Student Posters II</td>
<td>Student Papers V</td>
<td>Student Papers VI</td>
<td>Panel III: Service - Learning Innovation</td>
<td>Panel IV: Executive Feedback</td>
<td></td>
</tr>
<tr>
<td>3:15 - 4:45</td>
<td>Reserved</td>
<td>Autodesk Lead The Way Workshop</td>
<td>Real - Life Panel 1 (3 - 4pm)</td>
<td>LinkedIn Workshop 1 (4 - 5pm)</td>
<td>LinkedIn Workshop 2 (4 - 5pm)</td>
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<tr>
<td>5</td>
<td>Social Hour &amp; Student Awards in Lower Locks Courtyard (Ballroom Foyer if rain)</td>
<td></td>
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<tr>
<td>6</td>
<td>Conference Banquet in Pawtucket/Middlesex Ballrooms</td>
<td>Deshpande Keynote &amp; Awards</td>
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<tr>
<td>7</td>
<td>Social Hour &amp; Adjourn</td>
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</tbody>
</table>

*Cover art: Wordle.net word cloud of all words in professional titles.*
**SATURDAY SCHEDULE AT A GLANCE**

See [Session Listings](http://www.asee-ne.org/) for detailed time and room assignments.

<table>
<thead>
<tr>
<th>Time</th>
<th>Concord 1</th>
<th>Concord 2</th>
<th>Concord 3</th>
<th>Middlesex Ballroom</th>
<th>Pawtucket Ballroom</th>
<th>Merrimack 1</th>
<th>Merrimack 2</th>
<th>Merrimack 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 am</td>
<td></td>
<td></td>
<td></td>
<td>Registration Opens in Concord Lobby – Perpetual Continental Breakfast in Ballroom Lobby</td>
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<tr>
<td>8:00 - 8:50</td>
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<td></td>
<td></td>
<td>Prof. John Duffy Keynote on Service Learning in Middlesex Ballroom</td>
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<tr>
<td>2:00</td>
<td></td>
<td></td>
<td></td>
<td>Adjourn – Tours depart at 2:00 PM</td>
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</tr>
</tbody>
</table>

Professional Participants: Help determine the best presentation award by placing your “Like” stickers on the room session listings!
Keynotes

Friday, April 27 – Gururaj 'Desh' Deshpande
The Keynote Speaker at the Conference Banquet on Friday, April 27th, will be Gururaj 'Desh' Deshpande, PhD, PEng, the Founder and Chairman of Sycamore Networks.

Dr. Deshpande is also Chairman of Sparta Group LLC, A123 Systems (AONE), Tejas Networks and HiveFire. Prior to co-founding Sycamore Networks, Dr. Deshpande was founder and chairman of Cascade Communications Corp. Dr. Deshpande serves as a life-member of the MIT Corporation, and his generous donations have made possible MIT’s Deshpande Center for Technological Innovation. He is also widely respected for his contributions to education and the greater community including establishing Deshpande Center for Social Entrepreneurship in India, the Merrimack Valley Sandbox in Lowell/Lawrence Massachusetts and the Pond - Deshpande Center at the University of New Brunswick in Canada.

Dr. Deshpande holds a B.Tech. in Electrical Engineering from the Indian Institute of Technology - Madras, an M.E. from the University of New Brunswick in Canada, and Ph.D from Queens University in Canada.

Saturday, April 28 – John Duffy
The Keynote Speaker at the Breakfast Session on Saturday, April 28th, will be Professor John Duffy. John is a Professor Emeritus in the Mechanical Engineering Department, past Coordinator for the Solar Engineering Graduate Program, and the Director of the Center for Sustainable Energy at the University of Massachusetts Lowell. He has integrated service-learning into eleven of his own courses at the undergraduate and graduate level with local and international projects. Prof. Duffy has lead the effort to integrate service-learning (S-L) into the entire curriculum of the college of engineering at UML and has worked with 35 faculty members in engineering and other disciplines to incorporate S-L into more than 55 courses, partnered with many local community agencies. He also coordinates the Village Empowerment (VE) project which has had over 135 students design and install over 100 systems for communication, lighting, vaccine refrigeration, public health, and water supply and purification in remote areas of the Peruvian Andes, linking S-L projects in 33 courses.
CONFERENCE VENUE

The UMass Lowell Inn & Conference Center (ICC) is Lowell’s only full service hotel featuring lodging, dining, and meeting & event space with a capacity of 750 attendees. Lodging at the Inn & Conference Center features 32 fully renovated, inn-style guestrooms with private patios overlooking the canals, as well as guestrooms offering two double beds or a single king-size bed. All of the ICC rooms feature in-suite amenities like cable TV, complimentary high-speed internet, hair dryers, irons and ironing boards, as well as the use of our newly renovated fitness center. The ASEE conference rate for hotel lodging is $99, per night, plus taxes. Use group code ASEE to reserve online now at: https://booking.ihotelier.com/istay/istay.jsp?groupID=730480&hotelID=73933. Alternatives include: http://www.marriott.com/hotels/travel/bosll-courtyard-boston-lowell-chelmsford/ http://www.radisson.com/chelmsford-hotel-ma-01824/chelmsfo http://www.holidayinn.com/hotels/us/en/tewksbury/andma/hoteldetail

Parking
Parking is at the Lower Locks Parking Garage, 90 Warren Court, Lowell, MA 01852. The GPS coordinates for this location are (42.642625, -71.306065).

Room Locations – Ballroom and Meeting Rooms
SESSION DESCRIPTIONS

Abstract Sessions
Abstract sessions include presentations made by professionals who have provided an appropriate one or two page extended abstract without submission of a peer-reviewed paper. All presentations in these abstract-only sessions will be eligible for the Conference’s Best Presentation Award.

Paper Sessions
Presentations made by professionals who have published a paper through the Conference’s peer-review process. All presentations in the regular peer-reviewed paper sessions are eligible for both the Conference’s Best Paper and Best Presentation Awards.

Student Paper Sessions
Presentations made by undergraduate and graduate students who have published a paper through the Conference’s peer-review process. All presented papers are eligible for the Conference’s Best Student Paper Award.

Student Poster Sessions
Presentations made by undergraduate and graduate students who have provided an appropriate one or two page extended abstract and printed poster. All poster presentations are eligible for the Conference’s Best Poster Award.

Panel Sessions
An interactive session in which panelists first offer a position statement on a specific theme, after which audience participation is facilitated. Strong moderators are chosen to develop panels with opposing points of view and pose challenging and/or polarizing questions. Panel moderators are eligible for the Conference’s Best Presentation Award.

Unconference
A participant-driven meeting where (according to Foo and Bar Camp) "there is no agenda until the attendees make one up." To provide an initial focus, Unconference areas are defined according to discipline. At a minimum, the Unconference is a place to meet fellow participants and engage in discussion over coffee.

Workshops
An experience led by knowledgeable facilitators that encourages attendees to participate actively in order to gain actual practical experience in solving befuddling work related problems. Due to preparation and space limitations, workshop participants must register. See Workshop Descriptions beginning on page 11 for further information.
Award Descriptions

Best Conference Paper
A $500 award made to the best peer-reviewed conference paper. The review criteria considered include originality, significance, technical quality, relevance, presentation, and overall impact. All papers rated by a jury of peers as good and/or honors are considered in a second round review by members of the North East Section Board. The best conference paper award will be presented at the Conference Banquet on April 27; the second and third place papers will be recognized at the Conference with Certificates.

Best Student Paper
A $500 award made to the best peer-reviewed conference paper authored by a student. The review criteria and process are identical to those of the Best Conference Paper. The best conference paper award will be presented at the Social Hour on April 27; the second and third place papers will be recognized at the Conference with Certificates.

Best Student Poster Presentation
A $500 award made to the best poster presentation. Competition placement will be based on a comparison of comments from at least four judges. As a result, the judges will spend time talking to the presenters, asking questions and listening to their descriptions of their project and contributions. The judges will be aware that the projects being presented may not have been completed at the time of competition. Accordingly, physical demonstrations will not be a component of judging.

The selection of the winning presentations will be based on:
- Clarity of poster and oral presentations
- Overall responses to the judges’ questions
- Completeness of work

The best student poster presentation award will be presented at the Social Hour on April 27; the second and third place papers will be recognized at the Conference with Certificates.

Best Conference Presentation
A $500 award made to the best conference presentation as determined by voting of the Conference attendees. Each conference attendee will receive two "Like" stickers for placement on the posted session listings (located at each event room). The presentation or panel with the most votes at the end of the Conference wins the award. The best conference presentation award will be known at the close of the conference, with award and certificates sent by certified mail in the month of May.
**PRESENTATION GUIDELINES – FRIDAY, APRIL 27TH 2012**

**Student Sessions**
All students are welcome to attend student paper presentations, poster presentations, and development workshops A/B as well as the luncheon and social hour. Students may attend the Conference Banquet by purchasing a separate banquet or full conference registration as appropriate.

Student paper presentations are grouped with three speakers in an 80 minute session with a 10 minute break between sessions. All rooms are equipped with projectors & podiums. To be fair to the other speakers, presentations are typically provided in PowerPoint format with between 15 - 25 slides and 18 to 22 minute duration, leaving 5 minutes for questions and transition. Hardware, video, and other demonstrations during the presentation are encouraged.

Student posters are being presented in two 90 minute sessions with setup available for 1 hour prior to the session. Posters may be developed in either landscape or portrait format, though landscape is more prevalent and so preferred in this venue. Hardware demonstrations may be brought to the poster venue, but AC power will not be provided. Here are some tips for poster presentation:

- Introduce yourself to people who you see are reading your poster and let them know you can assist if they have any questions or would like more information.
- Understand the content of your poster and be prepare a 30 second “elevator pitch” that summarized the motivation and impact for the work you are presenting.
- Remember to speak slowly and clearly when presenting your poster – assume that you are presenting the poster to a knowledgeable person in a different field.

The National Science Foundation has some oral and poster presentation guidelines for emerging researchers at [http://www.emerging-researchers.org/ern-guideline/](http://www.emerging-researchers.org/ern-guideline/)

**Professional Sessions**
The professional presentation and panel sessions are scheduled for 90 minutes with a 10 minute break between sessions; all rooms are equipped with projectors & podiums. Professional sessions will typically have 4 presenters, which allows 18 minutes per presentation and 5 minutes for questions/transition. The last author in each session will be the moderator and time - keeper, providing each presenter a two minute warning.

Panel presentation formats vary widely, but panel moderators and panelists are asked to maximize the use of their time as appropriate. Moderators and panelists should be prepared to lead a discussion around the panel topic in the event that the audience participation is lacking.
ABET Program Assessment Workshop – Thursday, April 26, 2012
James Warnock

Develop your program assessment skills with this one-day workshop. Participants will broaden their understanding of the continuous quality improvement of student learning through the design of assessment processes, development of measurable learning outcomes, and application of data collection methods. These workshops will benefit faculty members participating in the development of assessment processes to support their efforts in the continuous improvement of student learning in any academic discipline; attendees are eligible for 7 professional development hours (PDHs). Workshops are facilitated by highly experienced faculty with wide-ranging experience in assessment and evaluation.

The cost of the Program Assessment Workshop is $395 and includes lunch and all materials. If you are attending an ABET event from outside of the United States and need documentation, ABET can provide you a letter to assist with your visa application.

Workshop Outcomes:
- Articulate your own program’s context
- Evaluate program educational objectives
- Develop performance indicators for student outcomes
- Identify appropriate assessment methods
- Develop components of a rubric
- Characterize efficient and effective assessment processes
- Critique approaches to reporting data

Workshop Facilitator:
James Warnock, Ph.D., is an ABET Senior IDEAL Scholar and ABET’s first Adjunct Educational Research and Assessment Director. He received his Ph.D. in chemical engineering from the University of Birmingham, UK. Currently, Warnock is an Associate Professor in the Department of Agricultural and Biological Engineering at Mississippi State University and serves as the Assessment and Accreditation Coordinator in the James W. Bagley College of Engineering. In this latter role, James has responsibility for coordinating the assessment activities of 10 engineering programs within eight departments.
NSF Performamatics Workshop on Interdisciplinary Teaching
Jesse M. Heines and Gena R. Greher of UMass Lowell

The UMass Lowell Depts. of Music and Computer Science are pleased to offer an interdisciplinary workshop on Computational Thinking through Computing and Music. This workshop is an outgrowth of our NSF - funded Performamatics project, an effort to foster Computational Thinking through Computing and Music. A major article on this work was featured in the December 2011 issue of IEEE Computer (www.computer.org/csdl/mags/co/2011/12/mco2011120025 - abs.html), and further information on our project is available at www.performamatics.org.

The workshop is designed to be attended by interdisciplinary pairs of professors and teachers. Its purpose is to share our techniques and materials and to provide an environment in which other pairs of professors can work together to develop interdisciplinary relationships and materials of their own to use in courses at their “home” institutions. One of the pair should be from a science or engineering department and the other from a music or other arts department. The examples and activities we show from our own work will be music - based, but the workshop is really about interdisciplinary teaching in general at least as much as it is about the specific type of interdisciplinary teaching we do in our Sound Thinking course (soundthinking.uml.edu). Perhaps there is an English or Art professor who would be interested in working with you. You and your partner certainly need not be musicians.

During the workshop you will explore our work and develop assignments and materials targeted to your own courses at your own institutions. Other participants will try out and review materials that you develop, and you will likewise try out and review theirs. Sample activities include:

- Creating compositions from digitized sounds,
- Flowcharting songs,
- Sequencing sounds algorithmically,
- Coding songs as lists in such a way that they can be easily transposed, and
- Prototyping physical interfaces for music making.

Workshop Learning Goals:
- To explore possibilities for engaging, interdisciplinary activities within existing courses
- To forge partnerships with professors interested in developing new interdisciplinary courses
- To gain ideas for incorporating the engaging posser of music into technical courses

Workshop Take - aways:
- Examples of music activities in technical courses
- Ideas for adding interdisciplinary activities into one’s own courses
- Knowledge of administrative roadblocks and strategies to overcome them
- Awareness of new possibilities and applications to enliven courses that may have become stale
Problem Based Learning
William (Bill) Lucas of MIT

This two hour workshop will provide attendees with a basic understanding of the self-efficacy concept, provide a survey of its growing use in engineering education, present some tested measures of Design, Teamwork and other scales that are in active use, and provide an introduction to how participants can easily create their own scales for assessment. Time at the close of the workshop will be reserved for a detailed discussion of how interested participants might use self-efficacy in the coming year to demonstrate the effectiveness of courses and activities at their own universities and colleges.

An overview of the self-efficacy concept will present the basic theory of first what causes increased self-efficacy, explaining why it is particularly useful when assessing courses with experiential content, such as project-based learning or engineering problem solving. Then it will review the importance of self-efficacy as a predictor of subsequent student selection and persistence in engineering disciplines. Then there will be a presentation of the 11-point scales used in self-efficacy studies, and why it is important. Examples will be drawn from the Journal of Engineering Education demonstrating its growing use in our literature. Several examples will be distributed to workshop participants to exercise their understanding of best practice, and to understanding of compromises that might make required for some subjects.

Examples of self-efficacy scales in use at MIT and elsewhere will then be distributed to discuss how the scale items were selected, and the results of their use. While other instruments will be available, the discussion will concentrate on self-efficacy for engineering design and for working effectively in teams. Material will be available for measuring self-efficacy for entrepreneurship and innovation should that be requested. The last structured part of the workshop will describe the process of preparing one or more sets of self-efficacy scales for insertion in a questionnaire, and discuss the importance of inter-leaving scale items and maximum item length. Any remaining time will be spent answering questions and providing information about prior art in using self-efficacy for other subject areas of interest.

Workshop Learning Goals:
- To understand the theory of self-efficacy, its causes and effects, and when it is most useful in the assessment of engineering education
- To learn about the content and use of scales that have used successfully in engineering courses
- To acquaint attendees with ways to use simple industry practices to help with curriculum refresh efforts

Workshop Take-aways:
- A set of articles and associated scales on self-efficacy and engineering education (please bring a flash drive that can be loaded, or files can be sent later on request)

Professors teaching courses in these subjects may be interested in the workshop
- Anyone interested in assessing engineering education courses that involve some form of task performance or problem-solving,
This interactive workshop will provide attendees with an understanding of some of the key shifts and trends in today’s enterprise computing. The implications of issues such as the “data explosion”, backup and disaster recovery requirements, unstructured data, Big Data and storage-in-the-cloud services, and how they are driving the importance of storage in enterprise computing will be discussed. More importantly are the implications for today’s CS curricula and why faculty may want to consider adding storage related topics to their courses to better reflect today’s cloud-centric, storage-intensive, computing environments. There are a new set of technologies being adopted by industry – from virtualization & private clouds, to storage compression and de-duplication; with this rapid shift in the IT landscape, students need to be familiar with a new storage-infused vocabulary and set of skills.

NetApp, one of the leading storage and data management solution providers, has developed an Academic Alliances Program to partner with faculty members who are interested in infusing storage content into their course. Examples of storage “teaching modules” will be highlighted and shared with attendees. Other teaching resources – such as web-based training courses and a virtual simulator will be reviewed.

The session will include a syllabus review and discussion where faculty will work to identify areas in existing courses where a storage segment will fit.

Workshop Learning Goals:
- To familiarize participants with some of the major trends in IT and enterprise computing
- To spur a discussion regarding the implications for CS courses and education
- To acquaint attendees with industry resources to help with curriculum refresh efforts

Workshop Take-aways:
- Access to commercial web-based training resources
- Specific opportunities for professional development
- Pre-packed “teaching modules” to facilitate introducing more storage content
- A community of colleagues interested in sharing ideas and teaching resources

Professors teaching courses in these subjects may be interested in the workshop:
- Distributed Computing
- Computer/Data Networks
- Introduction to Computer Systems
- Enterprise Storage
- Information Systems Security
- Cloud Computing
- Operating Systems
Autodesk Workshop
Matt Jaworski of Autodesk, Inc.

Autodesk is helping educators think beyond traditional academic borders and encourage new ideas and creative problem solving through the use of advanced technology, helping ensure that today’s students are prepared for the 21st century workplace. This workshop will be broken down into two sessions from 1:30 – 3:00 pm and from 3:15 to 4:45 pm. The first session will cover a broad review of the Autodesk portfolio of products available for education. If you thought Autodesk was only the “AutoCAD Company” then you are in for a real treat as we explore the exciting solutions we offer for Building Design, Manufacturing, Infrastructure, and the Media & Entertainment industries. The second session dives a little deeper into how universities and outreach programs such as Project Lead the Way are using Autodesk products to help enrich students’ education, inspire innovation and fuel their imaginations. Specific examples will be presented on how educators used Autodesk software to address real world challenges and extend collaboration within and across disciplines, bringing consistency to learning outcomes and educating students in the same way that industry operates.

**Workshop Take-aways:**
- Educators can help students learn to use intelligent models created through a Building Information Modeling process to better position them when moving into their career.
- Digital Entertainment Creation technology from Autodesk enables student and commercial artists to use technology to create more innovative entertainment experiences, more easily transform their creative ideas into innovative entertainment, and create more believable digital worlds and characters.
- Educators can help ensure students entering the workplace have an advantage by understanding the principles of the Digital Prototyping approach to product development.
- Nearly all industries—from consumer goods and transportation to architecture, utilities, and urban planning—are asking designers and engineers to deliver more sustainable products and projects. Autodesk offers educational tools and resources to help educators learn and teach sustainable design.

**Faculty teaching courses in these subjects may be interested in this workshop:**
- Architecture
- Engineering
- Construction
- Conceptual Design
- Games and Animation
- Media and Entertainment
- Animation
Learning Through Service
Chris Swan of Tufts University

During the summer of 2012, a series of workshops are scheduled about Learning Through Service (LTS) – a term used for various educational efforts that engage communities; whether the effort is curricular or extracurricular, or the community is local or global. These workshops will to provide an exciting opportunity to learn about LTS from experienced practitioners, to meet others with the same mission, and to take practical, constructive steps in developing or refining your own LTS effort. The goal of these workshops will be to send attendees back to their home institutions equipped to put their vision of LTS into practice. The workshops are part of the Engineering Faculty Engagement in Learning Through Service (EFELTS) project funded by the NSF, with grants 1023022, 1022927, 1022883, 1022738, and 1022831.

This 2.5 hour workshop mirrors this upcoming series by engaging participants interested in designing, managing and assessing LTS initiatives in their own schools of engineering. The workshop will be highly interactive and practical in nature.

Workshop Learning Goals:

- To understand the essential principles of LTS and how it serves as the umbrella for numerous types of service
- To look at numerous examples of how LTS has been implemented, and review best practices in design, management and assessment of LTS
- To discuss common issues and implications for LTS in engineering and technology curricula

Workshop Take-aways:

- Aid in the development of a plan that includes design, management and assessment strategies and that makes sense for the participant, based on their interests and institution
- Knowledge, confidence, and competence to begin or expand efforts at their institution
- Strengthening of connections to other members of the workshop and a connection to the larger community of engineering LTS practitioners
Workshop 1: ABET Assessment ($395)
Thursday, April 26th, 8:00 AM - 3:00 PM in Lower Locks 1 & 2
James Warnock, Mississippi State University

Workshop 2: NSF Performamatics (Free)
Friday, April 27th, 9:00 AM - 3:00 PM in Concord 1
Jesse M. Heines and Gena R. Greher, UMass Lowell

Workshop 3: Problem - Based Learning (Free)
Friday, April 27th, 9:30 AM - 12:20 PM in Concord 2
William (Bill) Lucas, MIT

Workshop 4: Data, Storage & Clouds (Free)
Friday, April 27th, 9:30 AM - 12:20 PM in Concord 3
Mark Conway, NetApp

Workshop 5: Learning Through Service (Free)
Friday, April 27th, 1:30 - 4:45 PM in Concord 2
Christopher Swan, Tufts University

Workshop 6: CAD/CAM/CAE Overview (Free)
Friday, April 27th, 1:30 - 3:00 PM in Concord 3
Matthew Jaworski, Autodesk

Workshop 7: Project Lead the Way (Free)
Friday, April 27th, 3:15 - 4:45 PM in Concord 3
Matthew Jaworski, Autodesk

Panel Session 1: Introduction to Engineering
Friday, April 27th, 1:30 - 3:00 PM in Lower Locks 1
Ed Hajduk¹, Lisa Shatz², Brian Savilonis³, Gonca Altuger - Genc⁴, Nese Orbey⁴
¹University of Massachusetts Lowell, ²Suffolk University, ³Worcester Polytechnic Institute

Panel Session 2: High Performance Computing
Friday, April 27th, 1:30 - 3:00 PM in Lower Locks 2
Jack Wilson¹, Mark Conway², Josh Simons³, Noemi Greyzdorf⁴
¹University of Massachusetts Lowell, ²NetApp, ³VMWare, ⁴Cambridge Computers
Panel Session 3: Service - Learning through Innovation and Entrepreneurship  
Friday, April 27th, 3:15 - 4:45 PM in Lower Locks 1  
Martin Margala\textsuperscript{1}, Steve McCarthy\textsuperscript{1}, Linda Barrington\textsuperscript{1}, Erin Webster\textsuperscript{1}, David Harrington\textsuperscript{1}, Garret Shaw\textsuperscript{1}, Steve Tello\textsuperscript{1}  
\textsuperscript{1}University of Massachusetts Lowell

Panel Session 4: Executive Feedback  
Friday, April 27th, 3:15 - 4:45 PM in Lower Locks 2  
Kanti Prasad\textsuperscript{1}, Bob Meisenhelder\textsuperscript{2}, Rob O'Reilly\textsuperscript{2}, Ian Humphrey\textsuperscript{3}, Chris McCarroll\textsuperscript{4}  
\textsuperscript{1}University of Massachusetts Lowell, \textsuperscript{2}Analog Devices, \textsuperscript{3}Goodrich, \textsuperscript{4}Raytheon

Social Hour & Student Awards  
Friday, April 27th, 5:00 – 6:00 PM in Lower Locks 1, 2, & Courtyard (Ballroom Foyer if rain)

Banquet & Dr. Deshpande Keynote Address on Engineering Education/Entrepreneurship  
Friday, April 27th, 6:00 – 8:00 PM in Main Ballroom

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**Professional Session Listings – Saturday, April 28\textsuperscript{th} 2012**

Banquet & Dr. Duffy Keynote Address on Service - Learning  
Saturday, April 28\textsuperscript{th}, 8:00 – 8:45 AM in Main Ballroom

Session 1: Development of New Engineering Programs  
Saturday, April 28\textsuperscript{th}, 9:00 - 10:30 AM in Concord 1  
- Dartmouth’s Innovation Ph.D. Program  
  Joseph J. Helble\textsuperscript{1}, Carolyn E. Fraser\textsuperscript{1}, Eric R. Fossum\textsuperscript{1}  
  \textsuperscript{1}Thayer School of Engineering
- Model Curriculum Research—Graduate Degree Specializations in Project Management  
  Vijay Kanabar\textsuperscript{1}  
  \textsuperscript{1}Boston University
- Progress with a Synergistic Mechanical Engineering Degree Program  
  Carlos Lück\textsuperscript{1}  
  \textsuperscript{1}University of Southern Maine
- Development of a STEM Program for Teacher Educators  
  Joanna A. Badara\textsuperscript{1}, Buket Barkana\textsuperscript{1}, Nelson Ngoh\textsuperscript{1}, Allen Cook\textsuperscript{1}  
  \textsuperscript{1}University of Bridgeport
Session 2: Performance Measurement
Saturday, April 28th, 9:00 - 10:30 AM in Concord 2

- **Impact of Service on Engineering Students: Preliminary Findings on Knowledge and Skills of Students**
  Christopher Swan¹, Xinyu Wang¹, Kurt Paterson², Krissy Guzak²
  ¹Tufts University, ²Michigan Technological University

- **Assessment and Evaluation of ABET Outcomes C and K in Engineering Courses that Utilize Solid Modeling Packages**
  Steven Kirstukas, Nidal Al - Masoud¹
  ¹Central Connecticut State University

- **A Direct Method for Simultaneously Teaching and Measuring Engineering Professional Skills**
  Edwin Schmeckpeper¹, Ashley Ater Kranov¹, Steve Beyerlein³, Jay McCormack⁹, Pat Pedrow⁴
  ¹Norwich University, ²ABET, ³University of Idaho, ⁴Washington State University

- **Seat Assignment Contribution to Student Performance in an Information Technology Classroom**
  Jacob Cox¹, Jason Cody¹, Jesse Fleming¹, Matthew Miller¹
  ¹United States Military Academy

Session 3: Social/Networking in Engineering Education
Saturday, April 28th, 9:00 - 10:30 AM in Concord 3

- **Teaching Algorithms by Tweaking Algorithms**
  Olga Lepsky¹, Michael Werner²
  ¹Wentworth Institute of Technology

- **Social Network - based Self - Regulated Learning for Engineers: Is it possible?**
  Gonca Altuger - Genc¹
  ¹University of Massachusetts Lowell

- **Virtual Wireless and Mobile Communication Laboratory**
  Ahmad Nassar¹, Motaz Mohammed¹, Ali Elrashidi¹, Khaled Elleithy¹
  ¹University of Bridgeport

- **A Cooperative Learning Approach to Designing, Analyzing, and Building a Structure as a Class**
  Vicki V. May¹
  ¹Dartmouth College

Session 4: Faculty Research
Saturday, April 28th, 9:00 - 10:30 AM in Merrimack 1

- **Video Pre - and Post - Processing Algorithms for Break through Cost - Effective Video Compression**
  Angel DeCegama¹
  ¹Wentworth Institute of Technology

- **Effects and Effectiveness of Energy Drinks**
  Valeria Matinuzzi¹, Danielle Peterson¹, Sean Iacobone¹, Salah Badjou¹
  ¹Wentworth Institute of Technology
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Please join our Storage, Data & Clouds Workshop Friday, April 27th at 9:30, or visit:
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  John Finnie¹
  ¹University of Massachusetts Dartmouth

• In - Pipe Water Generator
  Brian Davis¹, Chris Dorchester¹, Ted Geldmacher¹, Tim William¹, Salah Badjou²
  ¹Wentworth Institute of Technology, ²Professor, Wentworth Institute of Technology

Panel Session 5: Service - Learning Practitioners
Saturday, April 28th, 9:00 - 10:30 AM in Merrimack 2
Linda Barrington¹, Paul Mears², Patricia Peterson³, Carolina Barreto¹, Gonca Altuger - Genc¹, Kenneth Lee⁴
  ¹University of Massachusetts Lowell, ²Greater Lowell Technical High School, ³Bridgewater State University

Session 5: Industry/Academia Interactions
Saturday, April 28th, 10:40 AM - 12:10 PM in Concord 1
• Engineering Salary Modeling and Analysis
  David Kazmer¹, Katie Bardaro²
  ¹University of Massachusetts Lowell, ²Payscale.com

• Reviewing GET IE: An Open Co - op Program
  Jeffrey Saltz¹, Jae Oh², Suk - Chung Yoon³
  ¹JPMorgan Chase, ²Syracuse University, ³Widener University

• Enhancement of Capstone Mechanical Engineering Design courses with Strong Industrial Participation
  Ismail Orabi¹
  ¹University of New Haven

• Best Practices in Engineering Academic Administration
  David O. Kazmer¹
  ¹University of Massachusetts Lowell

Session 6: Engineering Design Experiences
Saturday, April 28th, 10:40 AM - 12:10 PM in Concord 2
• An introductory short course in design thinking for undergraduate and graduate students
  Sujata K. Bhatia¹, Brad Crane², David Goligorsky³, Joseph P. Zinter⁴, Gu - Yeon Wei¹
  ¹Harvard University, School of Engineering and Applied Sciences, ²Harvard University, Graduate School of Design, ³IDEO, ⁴Yale University

• Teaching structural art: a multi - institution collaboration
  Sanjay R. Arwade¹, Vicki V. May², Benjamin W. Schafer³, Stephen G. Buonopane⁴, George Deodatis⁵
  ¹University of Massachusetts Amherst, ²Dartmouth College, ³Johns Hopkins University, ⁴Bucknell University, ⁵Columbia University

• Promoting Intra - Disciplinary Design in Civil Engineering Technology: An Approach to Comprehensive Capstone Design Through Faculty and Practitioner Mentorship
  John W. Duggan¹, Michael Davidson¹, Leonard Anderson¹
  ¹Wentworth Institute of Technology
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EXPERIENTIAL LEARNING: THEORY & PRACTICE

- Real Life High Voltage Accident Cases - Teaching Electrical Safety
  Navarun Gupta¹, Sarosh Patel¹, Manan Joshi¹, Bhushan Dharmadhikari¹, Lawrence V. Hmurcik¹
  ¹University of Bridgeport

Session 7: Student Inclusiveness & Community
Saturday, April 28th, 10:40 AM - 12:10 PM in Concord 3
- Retention of Under - Represented Minority Engineering Students through Practice - Oriented Experiential Education
  Richard Harris², Hameed Metghalchi¹, Claire Duggan¹, Emanuel Mason¹, Rachelle Reisberg¹,
  Deepi Dutt¹
  ¹Northeastern University
- Strategy for Student Inclusion within a University - Based Business Incubator
  Jani Pallis¹, Neal Lewis², Ravi Mishra², Navarun Gupta³, Arthur McAdams⁴, Richard Yelle⁵
  ¹Mechanical Engineering, ²Technology Management, ³Electrical Engineering, ⁴School of Business,
  ⁵School of Design (all University of Bridgeport)
- Observations Regarding the Cultural Diversity of Students in Different Academic Majors
  Francis J. Hopcroft¹
  ¹Wentworth Institute of Technology
- Developing Intercultural Sensitivity through Directed Global Education Programming
  Jessica Dawn Ventura¹
  ¹Gordon College

Session 8: Collaborative Learning
Saturday, April 28th, 10:40 AM - 12:10 PM in Merrimack 1
- Virtual and Collaborative Project - Based Learning
  Keith M. Gardiner¹
  ¹Lehigh University
- The Aggregation Tool: Toward Collaborative Inquiry in Design - Based Science and Engineering Projects
  Ethan Danahy¹, Morgan Hynes¹, Leslie Schneider¹, Danielle Dowling¹
  ¹Tufts University
- Merrimack College’s Haiti Service Learning Initiative
  Marc Veletzos¹
  ¹Merrimack College
- Team Teaching: Blending the Power of the Socratic Method with Traditional Pedagogy
  Tom Goulding¹, Durga Suresh¹
  ¹Wentworth Institute of Technology

Panel Session 6: Implementation of Simulations in Engineering Education at Wentworth Institute of Technology
Saturday, April 28th, 10:40 AM - 12:10 PM in Merrimack 2
Moderator: Anthony W. Duva¹; Panelists: Xiaobin Le¹, Ali Moazed¹, Richard Roberts¹, Anthony Burden¹,
Dana Killam¹, Jeffery Roy¹
  ¹Wentworth Institute of Technology
Professional Session 9: Remodeling the Laboratory  
Saturday, April 28th, 12:20 - 1:50 PM in Concord 1

- **Simulation-based Customizable Virtual Laboratories for Teaching Alternative Energy, Smart Grid and Energy Conservation in Engineering & Technology Programs**  
  Yakov Cherner¹, Gary Mullett²  
  ¹Atel LLC, ²Springfield Technical Community College

- **Designing a Zero-Waste Concrete Mix Testing Lab**  
  James A. Lee¹, Michael J. D’Agostino¹  
  ¹Wentworth Institute of Technology

- **Undergraduate Nanobiotechnology Laboratory Experience at Worcester Polytechnic Institute**  
  Jianyu Liang¹, Terri Camesano¹  
  ¹Worcester Polytechnic Institute

- **Active Learning by Lecture and Laboratory Integration in an Emerging Engineering Program**  
  A. Ieta¹, R. Manseur¹, M. Hromalik¹  
  ¹SUNY Oswego

Session 10: Remodeling the Lecture  
Saturday, April 28th, 12:20 - 1:50 PM in Concord 2

- **Remodeling Class Preparation Activities to Leverage Technology**  
  Christian Dietz¹, Dennis Sugrue¹  
  ¹U.S. Military Academy

- **Enhancing Lectures with Calculations, Simulations, and Experiments**  
  Basile Panoutsopoulos¹  
  ¹Central Connecticut State University

- **Concrete Training Aids in the Classroom**  
  MAJ Cullen A. Jones¹  
  ¹United States Military Academy

- **A New Interdisciplinary Engineering Course – “Nanoscale Transport Phenomena for Manufacturing Nanodevices”**  
  Zhiyong Gu¹, Bridgette Budhlall², Hongwei Sun³, Carol Barry², Alfred Donatelli¹, Jill Lohmeier⁴  
  ¹Chemical Engineering, ²Plastics Engineering, ³Mechanical Engineering, ⁴Graduate School of Education (all University of Massachusetts Lowell)

Session 11: Computers in Engineering Education  
Saturday, April 28th, 12:20 - 1:50 PM in Concord 3

- **Computing and Simulation in the High School Classroom**  
  Molly Clay¹, William Jumper², Kavitha Chandra³  
  ¹University of Massachusetts Lowell, ²Lowell High School

- **Participatory Tweeting as a Vehicle for Course Engagement**  
  Jerald D. Cole¹  
  ¹University of Bridgeport

- **Creating autograded questions in technical courses**  
  Bruce Char¹  
  ¹Drexel University
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- Development of an Online Statics Homework System
  Franco Capaldi
  1Merrimack College

Session 12: Innovations in Introduction to Engineering
Saturday, April 28th, 12:20 - 1:50 PM in Merrimack 1
- Great Problem Seminars: Engaging First Year Students in Project-Based Learning
  Brian Savilonis, Kent Rissmiller
  1Department of Mechanical Engineering, Worcester Polytechnic Institute, 2Social Science and Policy Studies, Worcester Polytechnic Institute
- Implementation Review of a Service-Learning Project into a Freshman Level Plastics Engineering Course
  Gonca Altuger-Genc
  1University of Massachusetts Lowell
- Using a Game Based Learning Tool in a Freshman Chemical Engineering Course
  Nese Orbey, Molly Clay
  1University of Massachusetts Lowell
- Using Blogs and Labview and Lego Robotics in a Freshman Seminar Course to Teach about Sustainability Concepts
  Lisa Shatz
  1Suffolk University

ASEE Northeast Section Board Meeting
Saturday, April 28th, 12:20 - 1:50 PM in Merrimack 2
Navarun Gupta, Chair, University of Bridgeport

Objet Ltd., is a leading provider of high quality, cost effective inkjet-based 3D printing systems and materials. Objet’s 3D printing systems and 3D printing materials are ideal for any company involved in the manufacture or design of physical products using 3D software or other 3D content. Companies using Objet’s solutions can be typically found in sectors such as consumer goods & electronics, aerospace & defense, automotive, education, dental, medical and medical devices, architecture, industrial machinery, footwear, sporting goods, toys and service bureaus.

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Student Sessions – Friday, April 27th 2012

Student Paper Session 1: Mechanical Engineering
Friday, April 27th, 9:30 - 10:50 AM in Hamilton 2

- CFD Study of the Effect of Jet Placement on Flow Patterns Inside a Jet Stirred Tank
  Lyutsia S. Dautova¹, Ivana Milanovic¹, Khaled J. Hammad²
  ¹University of Hartford, ²Central Connecticut State University

- Development of a Rotational Accelerator Test Platform to Enable Wireless Transmission of Data and Automated Speed of Rotation
  David Carlson¹, Mustafa G. Guvench¹
  ¹University of Southern Maine

- Design and Simulation of a Three-way Microfluidic Mixer based on Pressure Disturbance
  Chengxin Zhang¹, Xi Kang¹, Xingguo Xiong¹, Shuyang Zhang¹
  ¹University of Bridgeport

Student Paper Session 2: Electrical Engineering
Friday, April 27th, 9:30 - 10:50 AM in Hamilton 3

- A New Analytical Performance Model for a Microstrip Printed Antenna
  Ali Elrashidi¹, Khaled Elleithy¹, Hassan Bajwa¹
  ¹University of Bridgeport

- Development of a General Purpose XBee Series-² API - Mode Communication Library for LabVIEW
  Michael Schell¹, Mustafa G. Guvench¹
  ¹University of Southern Maine

- Design and Analysis of a Novel MEMS Dual Axis Accelerometer
  Zijun He¹, Xingguo Xiong¹, Wei Quan¹
  ¹University of Bridgeport

Student Paper Session 3: Design Engineering
Friday, April 27th, 11:00 AM - 12:20 PM in Hamilton 2

- Building Customer Loyalty for Company Profitability
  Ece Haznedaroglu¹, Christian Bach¹
  ¹University of Bridgeport

- Developing Kinect-like Video Motion Detection using Canny Edge Detector
  Skander Benayed¹, Ali Eltaher Mohammed¹, Jeongkyu Lee¹
  ¹University of Bridgeport

- Interactive Virtual Laboratories for Studying OLED Technology
  Phillip I. Cherner¹
  ¹Swampscott High School
Student Paper Session 4: Nano/Bio Engineering
Friday, April 27th, 11:00 AM - 12:20 PM in Hamilton 3

- **Drug Delivery in the Body Using Nanotechnology: A Look at Targetting Mechanisms Using Nanotechnology**
  Christina Lakomski¹, Prabir Patra¹, Christian Bach¹
  ¹University of Bridgeport

- **Estimating the Time-course of Digestion for Diabetic Patient Education and Programming of Insulin Pump**
  Robert Deutschmann¹, Douglas E. Dow¹
  ¹Wentworth Institute of Technology

- **Activity Inhibition on Municipal Activated Sludge by Single-Walled Carbon Nanotubes**
  Alex Parise¹, Prof. Jackie Zhang¹
  ¹Univ. Mass. Lowell

Student Paper Session 5: Computer Systems Engineering
Friday, April 27th, 1:30 - 2:50 PM in Hamilton 2

- **Restoring privacy of users to foster Mobile collaborative learning (MCL)**
  Abdul Razaque¹, Khaled Elleithy¹
  ¹University of Bridgeport

- **Improving Wireless Infrastructure Networks Security by Access Point Checking**
  Ammar Odeh¹, Miad Faezipour¹
  ¹University of Bridgeport

- **A High Performance and Efficient TCP Variant**
  Wafa Elmannai¹, Khaled Elleithy¹, Abdul Razaque¹
  ¹University of Bridgeport

Student Paper Session 6: Manufacturing Systems Engineering
Friday, April 27th, 1:30 - 2:50 PM in Hamilton 3

- **Automated Assembling Machinery Design**
  Ye Zhong¹, Jeremy Li¹
  ¹University of Bridgeport

- **Automated High-Speed Assembly System Design of Telecommunication Products**
  Feixiang Ren¹, Zheng Li¹
  ¹University of Bridgeport

- **Speech Recognition using SVM Technique and Threshold Level**
  Hatem Mohamed¹
  ¹University of Bridgeport
Student Poster Session 1: Mixed Undergraduate and Graduate Projects  
Friday, April 27th, 11:00 AM - 12:30 PM in Junior Ballroom (Setup beginning at 10:00 AM)  
1. **Design Collaboration Using Digital Technology Using an Adaptive Lifting Device - Waist Shelf Project**  
   Christopher Mallon\(^1\), Lisa C. Hix\(^1\)  
   \(^1\)Keene State College  
2. **Breathing Movement Classification Using MFCCs**  
   Ahmad Abushakra\(^1\), Miad Faezipour\(^1\), Anas Abumunshar\(^1\), Prabir K. Patra\(^1\)  
   \(^1\)University of Bridgeport  
3. **Batch Quality Control on Monoclonal Antibody (Mab) Product in Mammalian Cell - Culture**  
   Andrew Bawn\(^1\), Seongkyu Yoon\(^1\)  
   \(^1\)University of Massachusetts Lowell  
4. **3-D Scanning and Digital Modeling for an Ergonomic World**  
   Charles Alex Cobban\(^1\), Lisa Hix\(^1\)  
   \(^1\)Keene State College  
5. **Development of Small Scale Nitrogen Liquefier Utilizing Mixed - refrigerant Cycle**  
   Chintankumar Upadhyay\(^1\), Junling Hu\(^1\)  
   \(^1\)University of Bridgeport  
6. **An Integrated Micro - Impedance Signal Acquisition and Analysis Platform for Live - cell Drug Interaction Screening**  
   Joseph Fazio\(^1\), Anthony English\(^1\)  
   \(^1\)Western New England University  
7. **A new model for diagnosing Sleep Apnea through features extraction of the SpO\(^2\) signal**  
   Laiali Almazaydeh\(^1\), Khaled Elleithy\(^1\), Miad Faezipour\(^1\)  
   \(^1\)University of Bridgeport  
8. **Automated Segmentation of Retinal Vasculature**  
   Muder M. Almiani\(^1\), Buket D. Barkana\(^1\)  
   \(^1\)University of Bridgeport  
   N. Kuzmeski\(^1\), J. Krans\(^1\), R. Gettens\(^1\)  
   \(^1\)Western New England University  
10. **Iron Particulate Remediation and Prevention at A Burn Research Facility**  
    Robert Cotta\(^1\), Adam Vorwald\(^1\), Christian Lopez\(^1\), Kyle Styczynski\(^1\)  
    \(^1\)Roger Williams University  
11. **Biosensor detection of early onset septicemia**  
    Srikanth Ammu\(^1\), Anita Vaidya\(^1\), Srikanth Rao Agnihotra\(^1\), Sanjaykumar Patel\(^1\), Syed K. Hasan\(^1\), Sanjeev K. Manohar\(^1\)  
    \(^1\)University of Massachusetts Lowell  
12. **Improving Lung Tissue Retraction in VATS**  
    S. Kudernatsch\(^1\), M. Tobar\(^1\), C. Tokarz\(^1\)  
    \(^1\)University of Hartford
13. Factors promoting increased rate of tissue regeneration: The zebrafish fin as a tool for examining tissue engineering design concepts.  
Vijay P. Boominathan1, T.L Ferreira1  
1University of Massachusetts Dartmouth

14. A Quality of Service Scheme for LTE Networks  
Navid Safavi1, Abhishek Para1, Amir Esmailpour1  
1University of New Haven

15. Supportive framework and innovative mobile application to augment mobile collaborative learning (MCL) activities  
Abdul Razaque1, Khaled Elleithy1, Akram Alhinnawi1  
1University of Bridgeport

16. Facilitating Ongoing Concentration in Undergraduate Students (F.O.C.U.S)  
A.L. Stolarik1, J.L. Cezeaux1  
1Western New England University

17. Speech Recognition using SVM Technique and Threshold Level  
Hatem Mohamed1  
1University of Bridgeport

18. A System Accounting Approach for More Reliable Distance Education Management based on Cloud Systems  
Nailu Chu3, Zhengping Wu1  
1University of Bridgeport

19. Approachable and Authentic STEM Educational Experiences for Primary Education  
M. Stephenson1, Douglas E. Dow2  
1The Technology, Innovation and Entrepreneurship Project, Inc, 2Wentworth Institute of Technology

20. Policy Conflict Analysis in Online Collaborative Research Activities  
Yuanyao Liu1, Zhengping Wu1  
1University of Bridgeport

21. Development of a Particle Image Velocimetry System Which Facilitates Undergraduate Experiential Learning  
Jared DeFoe1  
1University of Massachusetts Lowell

22. Policy Enforcement Cross Multiple Education & Research Domains  
Lifeng Wang1, Zhengping Wu1  
1University of Bridgeport

23. Service Learning Project  
Michael Magaletta2, Maura Pinard1, David vanSchalkwijk1  
1University of Massachusetts Lowell

24. Team - Based Approach to Manufacturing in a Simulated Production Environment  
Daniel Miller1, Michael White1  
1Springfield Technical Community College

25. A Comparative Study between the 4G Wireless Technologies  
Shaurin Patel1, Jaykumar Rajput1, Abhishek Para2, Navid Safavi1, Amir Esmailpour1  
1University of New Haven
26. Wireless Sensor Network with a Remote Monitoring Service Application for Patient Monitoring in Medical Environments
   Amber Higgins\textsuperscript{1}, Christopher J. Martinez\textsuperscript{1}
   \textsuperscript{1}University of New Haven

27. Secure Wireless Infrastructure Network Using Access Point Checking
   Ammar Odeh\textsuperscript{1}, Miad Faezipour\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

28. Implementation of a 8 - bit Low - power Multiplier based on Reversible Gate Technology
   Borui Li\textsuperscript{1}, Xingguo Xiong\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

29. RFID Security In Contactless Smart Card
   Rouzi Aikebaier\textsuperscript{1}, Tanvir Islam\textsuperscript{1}, Abdul Razaque\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

30. Collaborative beam shaping for nonuniformly spaced linear microphone arrays
   Jenny Y. Au\textsuperscript{1}, Charles Thompson\textsuperscript{1}, Kavitha Chandra\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

31. PLC project: A Color Dispensing Machine
   Xin Jin\textsuperscript{1}, Lei Pang\textsuperscript{1}, Jack Toporovsky\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

32. MobilE Liquefying Through Infrared Controlled Emittance
   Ryan Emery\textsuperscript{1}, Ryan Lefaivre\textsuperscript{1}, Matthew Peters\textsuperscript{1}, Sotheavy Chin\textsuperscript{1}
   \textsuperscript{1}Roger Williams University

33. Wireless Communications Research in the High School Classroom
   Nicholas Misiunas\textsuperscript{1}, Anne Chay\textsuperscript{2}, Kavitha Chandra\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell, \textsuperscript{2}Lawrence High School

34. Design and simulation of an 8 - bit Multiplier in Quantum - dot Cellular Automata
   Richa R. Vishwakarma\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

35. Reducing the reflection of light in side view mirrors during night times using electro chromism
   Vignesh Shanmuganathan\textsuperscript{1}, Jani Macari Pallis\textsuperscript{1}, Prabir Patra\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

36. ASHRAE Integrated Sustainable Building Design: University Library Energy Retrofit
   Amy Catanese\textsuperscript{1}, Jon Lemoine\textsuperscript{1}, Chester Potter\textsuperscript{1}, Santiago Ramos Perez\textsuperscript{1}, William Palm\textsuperscript{1}, Robert Potter\textsuperscript{1}, Linda Riley\textsuperscript{1}
   \textsuperscript{1}Roger Williams University

37. Sikorsky Helicopter Blade Modal Analysis
   John Capozzo\textsuperscript{1}, Charles Diguglielmo\textsuperscript{1}, Brian Sobulefsky\textsuperscript{1}
   \textsuperscript{1}University of New Haven

38. Maximizing Vortex Induced Vibrations through Geometry Variation
   Ethan Warner\textsuperscript{1}, Ian Ball\textsuperscript{1}, Shubham Sahuja\textsuperscript{1}, Tom Killen\textsuperscript{1}
   \textsuperscript{1}Worcester Polytechnic Institute
39. A Multivariate In - Mold Sensor Design For Measurement Of Melt Pressure, Temperature, Velocity, And Viscosity
   Guthrie Gordon¹, David Kazmer¹, Stephen Johnston¹, Robert Gao², Zhaoyan Fan², Navid Asadizanjani²
   ¹University of Massachusetts Lowell, ²University of Connecticut

40. Portable Centrifuge for Determination of Hematocrit in Low - Resource Environments
   Joseph T. Papu¹, Michael J. Rust¹, Andrew W. Browne²
   ¹Western New England University, ²Internal Medicine

41. Autonomous UAV Test Bed
   Steven Ericson¹, Melissa Kelly¹, Jeffrey Parkhurst¹, Adam Pranaitis¹, Robert Waldron¹
   ¹Daniel Webster College

42. Design of a Blast Wave Characterization Model
   N. St. John¹, R.C. Turner², C.L. Rosen³, R.T.T. Gettens¹
   ¹Western New England University, ²West Virginia University

43. A Study Of A Grid - tied Microgrid With Renewable energy resources
   Qing Li¹, Linfeng Zhang¹
   ¹University of Bridgeport

44. Protecting tall buildings against compact wind - borne debris: Calibration of a new wind tunnel chamber
   Said Aouinati¹, Farid Moghim², Luca Caracoglia²
   ¹Massachusetts Bay Community College, ²Northeastern University

45. A design of a Smart Mini Greenhouse
   Shizhao Kang¹, Jack Toporovsky¹
   ¹University of Bridgeport

46. Bearing Testing Fixture
   Tomasz Hejmowski¹
   ¹University of New Haven

47. Thermal analysis of a multiple high power LED array
   Yuhan Liu¹
   ¹University of Bridgeport

48. Effect of nanofiber seeding in classical polymerization systems
   Anita Vaidya¹, Sujit Jain¹, Srikanth Ammu¹, Srikanthrao Agnihotra¹, Sanjaykumar Patel¹, Sanjeev K. Manohar¹
   ¹University of Massachusetts Lowell

49. Engineered Nanoparticles for Diagnostics Targeted and Drug Delivery
   Badal Patel¹, Matthew Breland¹, Hassan Bajwa¹
   ¹University of Bridgeport

50. Molecular Dynamics simulation of carbon nanotube and pulmonary surfactant protein binding
   Mohammed Naveed Anjum¹, G. Dhanalakshmi¹, Bhushan Dharmadhikari¹, Lawrence Hmurcik¹, Prabir Patra¹
   ¹University of Bridgeport

51. Tailored Collector Design for Optimization of Nanofibers in Electrospinning
   Kapil Mahakalkar¹, Ashish Aphale¹, Shrinivas Bhosale¹, Isaac Macwan¹, Prabir Patra¹
   ¹University of Bridgeport
52. Role of functionalized carbon nano tubes in stabilization of mRNA from enzymatic
degradation.
Lakshmana Rao Sanka¹, Kinjal Patel¹, Bharadwaj Ravipati¹, Ashish Aphale¹, Kathleen Engelmann¹,
Prabir K Patra¹
¹University of Bridgeport

53. Analyzing Structural DNA Binding With Nanoparticles
Kshama Rane¹, Ashish Aphale¹, Shrinivas Bhosale¹, Kathleen Engelmann¹, Prabir K Patra¹
¹University of Bridgeport

54. Chemical method to obtain highly conducting silver coatings on flexible substrates
Srikanthrao Agnihotra¹, Mohamed Alhabeb¹, Sumedh P. Surwade¹, Akshay Vaidya¹, Laura K.
Fuentes Burgos¹, Christopher Nieszrecki¹, David J. Willis¹, Sanjeev K. Manohar²
¹University of Massachusetts Lowell

55. Styrofoam and the Recycling Revolution
Casey McRae¹, Chris Sadler¹, Ben Clark¹
¹University of Massachusetts Lowell

56. Production and Recycling of a Soda Bottle
Christian Stochaj¹, Kyle Ptak¹
¹University of Massachusetts Lowell

57. Freshmen Engineering Service Learning Project – Milk Jugs
Cleveland Atkinson¹, Justin Galvin¹, Mercedes Mello¹
¹University of Massachusetts Lowell

Student Poster Session 2: Mixed Undergraduate and Graduate Projects
Friday, April 27th, 1:30 - 3:00 PM in Junior Ballroom (Setup beginning at 12:30 PM)
1. Green initiative of UMass Lowell Biorefinery Conversion of waste cardboard to Itaconic acid
Akshat Gupta¹, Sanjaykumar H. Patell, Carl W. Lawton¹, Sanjeev K. Manohar¹
¹University of Massachusetts Lowell

2. Headgear for Soccer Players
Isaac Barbour¹, Nikole Connor¹, Elisabeth Jeyaraj¹
¹Worcester Polytechnic Institute

3. Nerve agent simulant sensors using oligoanilines synthesized directly from aniline dimer
Darhana Chaudhary¹, Akshay Phulgirkar¹, Srikanthrao Agnihotra¹, Srikanth Ammu¹, Sumedh P.
Surwade¹, Marisely De Jesus Vega¹, Sanjeev K Manohar¹
¹University of Massachusetts Lowell

4. Testing and Redesign of a Low - cost Prosthetic Foot
Ben Accardo¹, Jenna Daly¹, Ben Knapton¹, Melissa Liquori¹, Eric Steinberg¹
¹University of Hartford

5. Feasibility of an Electronic Stethoscope System for Monitoring Neonatal Bowel Sounds
Jasmine Dumas¹, Jonathan Hill¹, Ronald Adrezin¹, Eric Campagna¹, Raquel Curry¹, Jorge Alba¹,
Cecilia Fernandes¹, Leonard Eisenfeld¹
¹University of Hartford
6. Two-dimensional analysis of fluid motion in the cochlea resulting from compressive bone conduction
   Katherine Aho¹, David Chan¹, Charles Thompson¹
   ¹University of Massachusetts Lowell

7. A Microfluidic System to Compare the Potency of Topoisomerase II Poisons on Human Colorectal Cancer Cells
   Lindsay Tencza¹, Michael J. Rust¹, Daniel R. Kennedy¹
   ¹Western New England University

8. Walking Assist Device to Aid in the Regeneration of Walking for a T⁴ Paralyzed Client
   Jasmine Dumas¹, Diane Bautista¹, John McCann¹, Matthew Langille¹, Jonathan Leon¹
   ¹University of Hartford

9. Transcriptional Investigation of Lactate Metabolism of CHO Cells
   Omer Karpuz¹, Seongkyu Yoon¹, Hae Woo Lee¹
   ¹University of Massachusetts Lowell

10. Computer Assisted Detection of Liver Neoplasm’s (CADLN)
    Shrinivas Bhosale¹, Ashish Aphale¹, Issac Macwan¹, Kshama Rane¹, Prabir Patra¹, Priya Bhosale²
    ¹University of Bridgeport, ²University Of Texas

    Tariq Abuzagleh¹, Buket Barkana¹
    ¹University of Bridgeport

12. Soft Tissue Containment Device for Ultrasound Based Breast Biopsy
    T.R. Patel¹, S. Schonholz², R.T.T. Gettens¹
    ¹Western New England University, ²Mercy Breast Care Center

13. Facilitating the Paper Shredding Process for a Mobility Impaired Client
    Vivienne Clayton¹, Jeffrey Cote³, Steven Drabik¹, Gil Caspi¹
    ²Roger Williams University

14. Development of Renewable Surfactants From Bio - Based Waste
    Zarif Farhana Mohd Aris¹, Vishal Bahvishi¹, Natalia D. Muniz Rivera², Bridgette Budhlall¹, Ramaswamy Nagarajan¹
    ¹University of Massachusetts Lowell, ²University of Puerto Rico

15. Steganography by Multipoint Arabic Letters
    Ammar Odeh¹, Aladdin Alzubi¹, Qassim Bani Hani¹, Khaled Elleithy¹
    ¹University of Bridgeport

16. Fostering privacy of users in mobile collaborative learning (MCL) environment
    Abdul Razaque¹, Khaled Elleithy¹
    ¹University of Bridgeport

17. Multiple image fusion based watermark
    Chiranjit Das¹
    ¹University of Bridgeport

18. Effective M - Learning Design Strategies for Computer Science and Engineering Courses
    Ibrahim Alkore Alshalabi¹, Khaled Elleithy¹
    ¹University of Bridgeport

19. Overview of Data Cleansing - Duplicate Records detection Research Challenges
    Omar Abuzagleh¹
    ¹University of Bridgeport
20. **Optimized Algorithm for Face Detection Integrating Different Illuminating Conditions**  
    Sumaya Abusaleh¹, Varun Pande¹, Khaled Elleithy¹  
    ¹University of Bridgeport

21. **Design Compass: A tool for scaffolding metacognition in engineering design activities in K - 16 instruction**  
    Ayelet Ronen¹, Ethan Danahy², Morgan Hynes¹  
    ¹Harvard Graduate School of Education, ²Tufts University Center for Engineering Education and Outreach

22. **Engineering Class Assistant Using Moodle Open Source**  
    Kingsley Udeh¹  
    ¹University of Bridgeport

23. **Engineering in a Fictional World: Early Findings from Integrating Engineering and Literacy**  
    Mary McCormick¹  
    ¹Tufts University

24. **Women in Engineering: Perspectives from the Developing Countries**  
    Muhammad Fahim Uddin¹, Navarun Gupta¹  
    ¹University of Bridgeport

25. **Smart Textiles Based Wireless ECG System**  
    Ali Alzaidi¹, Linfeng Zhang¹, Hassan Bajwa¹  
    ¹University of Bridgeport

26. **Effect of Curvature on the Performance of Cylindrical Microstrip Printed Antenna for TM0 mode Using Two Different Substrates**  
    Ali Elrashidi¹, Khaled Elleithy¹, Hassan Bajwa¹  
    ¹University of Bridgeport

27. **Analysis and extension of scattering from rigid infinite wedge**  
    A. Bhatta¹, C. Thompson¹, K. Chandra¹  
    ¹University of Massachusetts Lowell

28. **The SoC Estimation of Lead Acid Battery**  
    Ashraf A. M. Abdelwahed¹, Xu Yang¹, Linfeng Zhang¹  
    ¹University of Bridgeport

29. **B - Scan Ultrasound Simulation Using A Multiscattering Model With Pade Approximants**  
    Ayse Kalkan - Savoy¹, Charles Thompson¹  
    ¹University of Massachusetts Lowell

30. **Design and Simulation of an 8 - bit Low Power Reversible Full Adder**  
    Chien - Wei Lo¹, Xingguo Xiong¹  
    ¹University of Bridgeport

31. **Using Smart Antenna Systems Concept to Manage Unbalanced Cellular Network Load**  
    Haidar Alanbagi¹, Buket Barkana¹  
    ¹University of Bridgeport

32. **Development of an Ultrasound Phantom for use in Low - Resource Environments**  
    Laura M. Daniel¹, Michael J. Rust¹  
    ¹Western New England University

33. **High Efficiency Broadband Solar Cell for Aerospace Applications**  
    Matthew Breland¹, Hassan Bajwa¹  
    ¹University of Bridgeport
34. Tesla’s dream Wireless electricity is not possible. Or is it?
   Muhammad Fahim Uddin¹, Navarun Gupta¹
   ¹University of Bridgeport

35. A Novel MEMS Piezoelectric Micropump with Reversible Pumping Flow
   Peiqiao Wu¹, Xingguo Xiong¹, Prabir Patra¹
   ¹University of Bridgeport

36. Parallel - pipelined Architecture for Low Power VLSI Design
   Shuang Zhao¹
   ¹University of Bridgeport

37. Identification of risk and critical chain to manage project scheduling
   Abdul Razaque¹, Christian Bach¹
   ¹University of Bridgeport

38. AIAA Design/Build/Fly Competition Team Significant Figures
   Sean Considine¹, Maxim Kokurin¹, Eric Strom¹
   ¹Daniel Webster College

   Feixiang Ren¹, Junling Hu¹
   ¹University of Bridgeport

40. An Electrostatically - actuated MEMS Micropump with Symmetrical Double Membrane Structure
   Geetanjali P. Vengurlekar¹, Xingguo Xiong¹
   ¹University of Bridgeport

41. Stokeslet Based Model For Oscillatory Flows
   Megha Sunny¹, Taoufik Nabat¹, Charles Thompson¹
   ¹University of Massachusetts Lowell

42. Design of “Floor - Ba” - A Remote - Controlled Robotic Cleaner
   Caitlin Chaffee¹, Nicholas DeMarco¹
   ¹Daniel Webster College

43. Developing an Experimental Apparatus for a Small Wind Turbine System
   Anthony DeSousa¹
   ¹Roger Williams University

44. MATLAB Computing and Modeling: Analysis of Weather Data
   Pratik Gandhi¹, Steven MacDonald², Kavitha Chandra¹, Charles Thompson¹
   ¹University of Massachusetts Lowell, ²Lawrence High School

45. Team BoFNAR ASME Human Powered Vehicle Competition (Eastern)
   Daniel Susca¹, Ryan Bouchard¹, Bryan Rabbitt¹, Bill Rust¹, Zachary Gamache¹
   ¹Daniel Webster College

46. Water Management of Four Storey Building
   Sharvil A Shah¹, Chintan Patel¹, Elif Kongar¹
   ¹University of Bridgeport

47. Small Unmanned Aerial Vehicle (SUAV)
   Stephanie Riddel¹, Alyssa Rockefeller¹, Salvatore Corrado¹, M.A. Qayyum Mazumder¹
   ¹Daniel Webster College
48. Simulation of a Gas Tungsten Arc Welding Process in COMSOL
   Yang Xiang\textsuperscript{1}, Joyce Hu\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

49. A new collector design technique for alignment of polyvinyl alcohol nanofibers
   Ashish Aphale\textsuperscript{1}, Shrinivas Bhosale\textsuperscript{1}, Isaac Macwan\textsuperscript{1}, Kapil Mahakalkar\textsuperscript{1}, Junjie Zhang\textsuperscript{1}, Prabir Patra\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

50. Low temperature processable, conductive inks for roll - to - roll manufacturing of flexible electronics
   Arun Nayak\textsuperscript{1}, Zhiyu Xia\textsuperscript{1}, Mario Cazeca\textsuperscript{1}, Ramaswamy Nagarajan\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

51. Developing Lead - free Nanosolders for Nanoelectronics Assembly and Packaging
   Fan Gao\textsuperscript{1}, Zhiyong Gu\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

52. Study of Nanoimprinting Process and its Application for Infrared Detection
   Michael McGinley\textsuperscript{1}, Junwei Su\textsuperscript{1}, ByungWook Son\textsuperscript{1}, Plamen Atanassov\textsuperscript{1}, Hongwei Sun\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

53. Passive Multi - Scale Alignment and Assembly
   Mary E. Moriarty\textsuperscript{1}, David Kazmer\textsuperscript{1}, Stephen Johnston\textsuperscript{1}, Carol Barry\textsuperscript{1}, Joey Mead\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

54. Hydrophobicity of Nanostructured Films Characterized by a Quartz Crystal Microbalance
   Pengtao Wang\textsuperscript{1}, Hongwei Sun\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

55. Synthesis and Characterization of Graphene Sheets Covalently Functionalized with Polyaniline
   Srikanthrao Agnihotra\textsuperscript{1}, Akshay Phulgirkar\textsuperscript{1}, Sanjeev K. Manohar\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

56. Low Melting Point Tin/Indium (Sn/In) Nanosolder Particles: Synthesis and Applications
   Yang Shu\textsuperscript{1}, Karunaharan Rajathurai\textsuperscript{1}, Fan Gao\textsuperscript{1}, Qingzhou Cui\textsuperscript{1}, Zhiyong Gu\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

57. The Industrial and Economic Impact of End - Of - Life Telecommunications Products: A Comparative Analysis
   Leonardo E. López Uribe\textsuperscript{1}, Can Ozan Gulcihan\textsuperscript{1}, Elif Kongar\textsuperscript{1}
   \textsuperscript{1}University of Bridgeport

58. Bubble Wrap
   David Cacciola\textsuperscript{1}, Mitchell Plourde\textsuperscript{1}, Michael Benoit\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

59. Service Learning Project
   Michael Perito\textsuperscript{1}, Yianni Dres\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

60. Life, Manufacturing, and Recycling Cycle of Plastic Bags
   Russell Wong\textsuperscript{1}, Suzanne Yoeuth\textsuperscript{1}, Matt Yuen\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell

61. Manufacturing and Recycling of Plastic Cups
   Drew Penney\textsuperscript{1}, Mohtasinul Haque\textsuperscript{1}
   \textsuperscript{1}University of Massachusetts Lowell
So, you know you don’t want to live in your parent’s basement after graduation, but beyond that, how are you preparing for your transition from student to full-fledged professional? Whether you are freshman just starting your undergraduate career or a graduate student completing your thesis, now is the time to think about the types of academic and work experiences, habits and attitudes, and concrete strategies that will define you as a well-prepared, competent new professional. Learn from an expert panel of engineers, entrepreneurs, co-op students, and human resources professionals about how to proactively plan your next career steps to assure a strong and successful start to your career. We’ll tackle questions ranging from how to maximize your academic experiences for future opportunities to managing a successful job search to evaluating professional employment versus graduate education, and the specific strategies you can employ to manage your career in the first year beyond graduation.

It’s not who you know but who knows you. Did you know that 75%+ of jobs are never advertised? How can you tap into the hidden job market? Join me to learn 4 simple strategies to use LinkedIn as an effective, powerful tool in your job search. Learn 10 ways to create and enhance your personal brand on LinkedIn. These easy-to-implement improvements will greatly increase your chances of turning up in the search results of those you want to find you (and increase your confidence!) when representing yourself on the world’s largest professional online network.

Bio: Kim Bilawchuk helps young professionals get “unstuck” and find rewarding careers. Kim brings more than 15 years of corporate and academic counseling experience to help her clients explore their career goals, assess their skills, and develop essential career tools. Prior to starting her own practice, Kim coached and counseled professionals in a variety of corporate technology and financial services settings at companies such as Teradyne and BNY Mellon Financial. She has also counseled students of all ages and backgrounds at many local college and universities, including UMass Lowell, Babson College, Boston University and Boston College. Kim holds an MBA from Boston College, an M.Ed. from Boston University, and a BBA from UMass Amherst.
SOCIAL AND AREA EVENTS

Banquet
The conference banquet will be held on the evening of April 27th at the UMass Lowell Inn & Conference Center. The evening will begin with a social hour at 5pm and recognition of the student best paper and poster awards. The conference banquet will begin at 6pm and complete by 9pm. Attendees can select plated entrees including Herb & Parmesan Crusted Breast of Chicken, Roasted New England Cod & Lobster Ravioli, and Vegetarian Indian Cuisine.

Other Area Attractions
Lowell is an historic city and has many attractions that may be of significant interest to engineering educators and their spouses. The following attractions are distinctive to the area and do not require reservations:

- American Textile History Museum
- Boston & Maine Railroad Historical Society
- Brush with History Art Gallery and Studios
- Lowell Historical Society
- Lowell Spinners
- Merrimack Repertory Theater
- National Streetcar Museum at Lowell
- New England Quilt Museum
- Pollard Memorial Library
- Revolving Museum
- Tsongas Center at UMass Lowell
- Whistler House and Museum

Reserved Tours
The ASEE Conference Committee is also pleased to provide the following tours by reservation:

- Lowell National Historic Park: Views of Lowell Trolley Tour - 2:30pm, Friday & Saturday, Free
- UMass Lowell Engineering Tour – departing from registration desk at 1:50pm, Saturday, Free

Conference registration and tour reservations may be made via the conference site at http://asee2012northeast.eventbrite.com. Questions should be sent to asee@uml.edu.
### List of Participants by Last Name

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