CIEC 2015 Conference Management Team

General Conference Chair
Linda Krute, North Carolina State University

CIEC Executive Board Chair
Ron Madler, Embry-Riddle Aeronautical University, Prescott

Assistant General Conference Chairs
Mark Schuer, Purdue University
Mitchell Springer, Purdue University

Registrar
Mike Mathews, Retired, Mississippi State University

College-Industry Partnership Division Program Chair
Lori Glover, Massachusetts Institute of Technology

Engineering Technology Division Program Chair
Helen McNally, Purdue University

Continuing Professional Development Division Program Chair
Candace House Teixeira, University of Southern California

Cooperative & Experiential Education Division Program Chair
Sandra English, Cleveland State University

Golf Networking Coordinator
Paul Plotkowski, Grand Valley State University

Walk-Run Coordinator and Banquet Coordinator
Helene Demont, University of Wisconsin, Madison

EXPO Coordinators
Edna (Eddie) Grover-Bisker, Missouri University of Science & Technology
David Schumeser, Altair Engineering

Poster Chair
Rita Burrell, Mississippi State University

Sponsorship Chair and Proceedings Coordinator
Ken Rennels, Indiana University Purdue University Indianapolis

Publicity Chair
Maureen Barcic, University of Pittsburgh

CIEC Photographer
Craig Gunn, Michigan State University

Site Selection Chair
Pat Hall, University of Tulsa

Banquet Decorations Chair
Nancy Kruse, University of Tulsa

Financial Chair
Linda Krute, North Carolina State University

Companions Program Chair
Robert Krute, Retired, US Army

See page 2 for descriptions of organizations.

www.asee.org/ciec2015

Photos by Craig Gunn

Book design by
Union Street Design, LLC
www.unionstreetdesign.com
REGISTRATION
Registration will be held in the foyer of the Plaza Ballrooms on the first floor. The hours the registration desk will be open are as follows:

- **Tuesday, February 3, 2015**: 8:30 AM to 5:00 PM
- **Wednesday, February 4, 2015**: 7:30 AM to 5:00 PM
- **Thursday, February 5, 2015**: 7:30 AM to 12 noon
- **Friday, February 6, 2015**: 8:00 AM to 10:00 AM

Additional tickets for meal events and for the companions tour may be purchased on site, prior to the event.
Organizations and Acronyms

American Society for Engineering Education (ASEE)
Founded in 1893, the American Society for Engineering Education is a nonprofit organization of individuals and institutions committed to furthering education in engineering and engineering technology. It accomplishes this mission by promoting excellence in instruction, research, public service, and practice; exercising worldwide leadership; fostering the technological education of society; and providing quality products and services to members.
http://www.asee.org

College-Industry Partnership Division (CIPD)
CIP is an organization that fosters a strong alliance between engineering employers, educators and those interested in promoting partnerships that enhance science and technology. http://cip.asee.org

Conference for Industry and Education Collaboration (CIEC)
The Conference for Industry and Education Collaboration is organized and supported by four divisions of the American Society for Engineering Education (ASEE): the Cooperative and Experiential Education Division (CEED), the College Industry Partnership Division (CIP), the Continuing Professional Development Division (CPD) and the Engineering Technology Division (ETD).
www.asee.org/ciec2012

Continuing Professional Development Division (CPDD)
CPD fosters the development, delivery and improvement of continuing education in all areas that pertain to allied branches of science, technology, engineering and math. CPD provides advocacy for and leadership in lifelong learning, and it creates opportunities for the exchange of information and expertise among providers and consumers of educational programs.
http://cpd.asee.org/

Cooperative and Experiential Education (CEED)
This division strives to develop high principles and maintain the integrity of cooperative education throughout academia and industry. The general goals of the division are to foster a better understanding of cooperative education, improve co-op services to employers, and promote cooperative education in engineering and engineering technology to business and industry both national and international. The division also emphasizes professional standards and accreditation of co-op programs.
http://CEED.ASEE.org

Corporate Member Council (CMC)
The Corporate Member Council’s mission is to foster, encourage and cultivate the dialogue between industry and engineering educators.
http://www.asee.org/member-resources/councils-and-chapters/corporate-member-council

Engineering Technology Division (ETD)
ETD has as its principal function the support of individual member interests related to the field of engineering technology. Its membership is composed of public and private two- and four-year engineering technology educators from all over the world as well as representatives from industries that employ engineering technology graduates.
http://www.engtech.org/

International Association for Continuing Engineering Education (IACEE)
The International Association for Continuing Engineering Education (IACEE) is a global, non-profit and non-governmental organization whose aim is to support and enhance lifelong technical education, training, and advanced engineering education worldwide, including the special needs of developing countries.
http://www.iacee.org
## Pre-Conference Meetings

### Monday, February 2

**8:00–12:00 noon**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Room</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>8:00</td>
<td>CIEC Board Meeting</td>
<td>Tapestry Room</td>
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<tr>
<td>12:15</td>
<td>PIC V Meeting and Luncheon</td>
<td>Whitewater Boardroom</td>
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<tr>
<td>7:30</td>
<td>CIEC 2015 General Conference Chair’s Reception</td>
<td>Tapestry Room</td>
<td>(By Invitation Only)</td>
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**1:15–4:15 pm**

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<th>Time</th>
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<th>Room</th>
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<tbody>
<tr>
<td>1:15</td>
<td>CEED Board Meeting</td>
<td>Palm Canyon Suites A&amp;B</td>
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</tr>
<tr>
<td>4:30</td>
<td>CIEC 2015 Conference Management Team</td>
<td>Executive Boardroom</td>
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The CIEC Board will meet to discuss the 2015 conference and make plans for the 2016 conference to be held in Austin, Texas.

**Chair:** Ron Madler, Embry-Riddle Aeronautical University, Prescott

Members of the CEED board will meet to discuss the business of the division.

**Chair:** Reginald McGregor, Rolls-Royce Corporation

Representatives from the College-Industry Partnerships, Continuing Professional Development and Cooperative and Experiential Divisions will meet to discuss events pertaining to the ASEE annual conference and other PIC V business.

**Chair:** Lea-Ann Morton, Missouri University of Science & Technology

Members of the 2015 CIEC Management Team will meet to finalize the logistics for this year’s conference.
Tuesday, February 3

The Luther Epting Golf Classic is a wonderful way to enjoy a California morning and participate in face-to-face networking opportunities with conference participants, companions and guests. A light breakfast will be served at 6:30 AM. At 7:00 AM the Best-Ball Scramble Format will be held, a wonderful activity for both newcomers and experienced golfers. After a morning of great exercise and perhaps sharing of “golfing tales,” participants will have lunch at the golf club’s restaurant and celebrate their accomplishments. This event is co-sponsored by RoMan Manufacturing, Inc., Quanser, and Grand Valley State University. However, individuals must have preregistered and tickets are required to cover additional costs of the event.

Cost: $60 per person

Coordinator: Paul Plotkowski, Grand Valley State University

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8:00 AM—12 NOON

**CPD Division Board Meeting**

**Palm Canyon Suites A & B**

**Chair:** Paul Jewell, Iowa State University

12:15–12:45 PM

**EXPO and Poster Coordinators Meeting**

**Suite 342**

1:00–4:00 PM

**CPD 203: Managing Your Brand—How to Thrive in a Competitive Global Market**

**Plaza Ballroom D**

Apple, Google, Coca-Cola, IBM, and Microsoft are not the world’s largest corporations, but they were the most recognizable global brands of 2013. Your “Brand” is not just your logo. So, what is it? According to Jeff Bezos, “Your brand is what people say about you when you’re not in the room,” while Arside Marketing, Inc. defines brand development as “the sum total of all your moving parts.” Would you like to learn more about brand management to improve your brand? Do you have a recognizable brand? Does your brand deliver a clear and consistent message, connect to your target audience, and motivate your customers to purchase your products and services? Does it serve your strategic goals?

Attend this fun and highly interactive workshop where experts who are extremely successful in managing their Brand will provide in-depth information to help you understand how to maximize all of the “moving parts” of your organization to thrive in an increasingly competitive global marketplace.

By completing an extra assignment, you may also earn a badge for IACEE’s CEE Manager’s Certificate Program. Tickets Required: $75

**Moderator:** Wayne Pferdehirt, University of Wisconsin, Madison

**Workshop Facilitators:**

- Terri Gaffney, University of Idaho
- Pat Hall, University of Tulsa

**Panel:**

- Michele Jacobs, Senior Manager, Integrated Marketing at Western Union Digital Ventures
- Paul Marca, Executive Director, Stanford Center for Professional Development

5:30–6:30 PM

**CIEC 101: Meet and Greet**

**Tapestry Room**

All individuals who are attending CIEC for their first time or have not been able to attend in several years are invited to attend a Wine and Cheese reception sponsored by the CIEC Divisions. Board members and representatives from the CIEC 2015 Conference Management Team will provide an overview about CIEC, its divisions and acronyms and a general overview about the conference. Learn how you can get involved in future CIEC conferences.

**Hosts:** CIEC Board and 2015 Conference Management Team

7:00 PM

**Plenary Speakers Dinner**

**Horizon Ballroom I**

(By Invitation Only)
Wednesday is designated as **Industry Day** to recognize our partners in industry, business and government who have developed collaborations and alliances with educational institutions to support and promote engineering and engineering technology.

## Wednesday, February 4, 2015

### CIEC 2015 Conference Begins

**7:00–8:45 am**

**All Conference Continental Breakfast**

**Pool Area**

Enjoy a beautiful California morning with a continental breakfast by the pool area. Renew your acquaintance with CIEC colleagues and meet first time attendees. If the weather is cool, the breakfast will move to the lower level of the Horizon Ballroom.

### 9:00–10:30 am

**CIEC Plenary Session**

**Horizon Ballroom**

**Engineering Education: Past, Present and Future—A Socratic Dialogue**

A distinguished panel of representatives from industry and academia will discuss issues related to the conference theme and how past and present experiences might lead to new paths in engineering and engineering technology curricular, professional development programs, coop and internship experiences, and academic-industry partnerships. There will be time for the audience to reflect upon the thoughts presented during the panel discussion and question or comment upon the issues discussed. Representatives have been selected to represent the four divisions of CIEC. Come and join us and see if you agree with the panel on how engineering education has changed and what direction we might need to go in the future.

**Moderator:** Ed Borbely, University of Michigan, Ann Arbor

**Panelists:**
- Howard Appelman, The Boeing Company
- Nelson Baker, Georgia Institute of Technology
- Andy DiPaolo, Stanford University
- Julie Furst-Bowe, Southern Illinois University, Edwardsville
- Walter Buchanan, Texas A & M University
- Patricia Fox, Indiana University Purdue University Indianapolis
- John Gilligan, North Carolina State University
- Anette M. Karlsson, Cleveland State University
- Ron Madler, Embry-Riddle Aeronautical University
- John Mastrototaro, Medtronic
- Reginald McGregor, Rolls Royce
- Yannis C. Yortsos, University of Southern California

### 7:45–8:45 am

**Companions Breakfast and Informational Meeting**

**Tapestry Room**

All registered companions are invited to a breakfast, organization meeting in the Tapestry Room. Mary Jo Ginther, Director of Tourism, will talk about the history of Palm Springs and places to visit in the area. Information about the special tours and events for companions will be discussed. The cost of the breakfast is included in the companion’s registration.

### 10:30–10:50 am

**Refreshment Break**

**Horizon Ballroom Foyer**

**Wednesday, February 4**

Industry Day
Wednesday, February 4
Industry Day

11:00–12:30 PM

CIEC Division Sessions

**CEED 312 Looking Forward and Learning from the Past**

**Plaza Ballroom D**

The Cooperative and Experiential Education Division (CEED) has been a very active division of the Conference for Industry and Education Collaboration. This panel discussion will highlight the history of CED and will provide an overview of the development of the organization and its original constituents including employer engagement. The panel will discuss how far CEED has changed including advancements made along with current challenges. This session will conclude with prospecting the future, how we plan to last another 40 years and what CEED needs to do to remain a strong division while continuing to provide resources to train students and assist employers with recruiting prepared quality students.

**Moderator:** Gayle Elliott, University of Cincinnati

**Presenters:** Ilka Balk, University of Kentucky
Sandra English, Cleveland State University
Susan Matney, North Carolina State University
Craig Gunn, Michigan State University

**CPD 314 Continuing Professional Development —Past, Present and Future**

**Tapestry Room**

A look at the history, present CPD programs and future reflections about continuing professional development will be discussed in this session.

**Moderator:** Meghan Balding, University of Southern California

**The Past: A timeline and past milestones of Continuing Professional Development**
Soma Chakrabarti, University of Delaware

**The Present: Iowa State Engineering-LAS Online Learning and Open SUNY**
Thomas Brumm, Iowa State University
Kim Scalzo, State University of New York

**The Future: A Panel with three visionaries who will state how they see the future of Continuing Professional Development.**
Nelson Baker, Georgia Institute of Technology
Edward Borbely, University of Michigan
Paul Marca, Stanford University

**CIP 313 Where have we been and where are we headed: Past, Present and Future Reflections as a Division**

**Plaza Ballroom C**

The College-Industry Partnerships Division, first known as the Relations with Industry (RWI), was formed after World War II to help develop a closer relationship between the industrial members and the educational institutions of ASEE. The RWI title was changed to College-Industry Partnership in February 1990. This session will provide you with a better understanding of the development and achievements of the division since its beginning and will provide a format of discussion on where it should be going in the future to serve its mission and the needs of the membership.

**Moderator:** Linda Krute, North Carolina State University

**Presenters:** Lucy Morse, University of Central Florida
Jack Selter, University of Central Florida

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**Image Description:**

- A man and a woman are sitting at a table with microphones, with a man standing behind them.
- The man in the foreground is holding a cup and appears to be speaking.
### ETD 315 The History of Engineering Technology and Engineering Education as It Has Developed in the United States

**Palm Canyon Suites A & B**

This session addresses different aspects of the development of the field of engineering technology and engineering education in the United States. First, the session examines the development of engineering technology under the auspices of the “Committee of Twenty One,” a group that took these programs through to the predecessor of what is now ABET accreditation just after World War II. Next, it examines the influence of the Grinter Report on engineering technology, using manufacturing engineering technology as an example. The third presenter explores the evolution of a proprietary school into an integrated collegiate unit, housing both engineering and engineering technology, as well as the history of this college in the context of the engineering/engineering divide at the national level. The next presenters look at whether engineering and engineering technology can exist at the same institution; engineering, education, and computers, past, present and future; and, finally, an overview of engineering education in America from its inception to the present, starting with the time period prior to the Morrill Act of 1862 and ending with the most recent STEM movement in K–12. The final topic is an explanation of the development of the ET listserv over the past 20 years and how it helped unify professionals in the field.

**Moderator:** Walt Buchanan, Texas A&M University  
**Presentations and Presenters:**  
- **Engineering Technology — A Discipline or a Stepping Stone: What or Where Now?**  
  Lawrence J. Wolf, Oregon Institute of Technology  
- **The Influence of the Grinter Report on Engineering Technology and the Emergence of Manufacturing Engineering Technology**  
  Rod L. Flanigan and Dale S. Porter, University of Nebraska at Kearney  
- **Evolution of American Engineering Education**  
  Marjaneh Issapour, Farmingdale State College  
  and Keith Sheppard, Stony Brook University  
- **Using Computer Speech Recognition to Enhance Second Language Learning: A Case Study**  
  Don Ploger, Florida Atlantic University  
- **The Development of the Engineering Technology Listserv over Its First Twenty Years**  
  Walt Buchanan, Texas A&M University

### 12:45–1:45 PM  
**Industry Day Luncheon**  
**Horizon Ballroom**

Join your colleagues for a special luncheon designed to honor the award winners from the Corporate Member Council and the CIEC sponsors. Cost of the luncheon is included in your conference registration.  
**Moderators:** Dan Sayer, Wiley, Corporate Member Council  
Linda Krute, NC State University, CIEC 2015 Chair
Cooperative Education enables students to integrate classroom theory into practice in an employment position related to their major field of study. Co-op is an extension of the classroom in theoretical practice. Typically, students get academic credit and earn as they learn. Sounds great – so what is the problem? As there are many co-op programs that are not mandatory and would like to employ the traditional concepts of a mandatory co-op program, there are challenges. This panel will cover aspects of how a non-mandatory co-op program has had success with developing a robust self-sustaining program. In addition, discussion of exploration of studying students’ attitudes toward optional co-op programs will be addressed. Also, this panel will cover how experiential learning thrives through internship opportunities while sharing information on providing employers to external funding for internships and developing inter-departmental work groups to enhance employer engagement.

**Moderator:** Erin Minta, Florida Institute of Technology  
**Presenters:**  
John Bau, University of Connecticut  
Ana Wieman, University of Washington  
Matthew Jensen, Florida Institute of Technology

The Great Recession left its indelible mark across the world of business and its effects did not ignore university-industry engagement activity. It’s common to hear that during tough economic times training budgets are the first to go, but how exactly does this change the way engineering schools design and deliver training to industry organizations.

Highlighting pre and post-recession corporate demands, identifying how best to approach and manage design/delivery of programs, finding balance between what engineering schools do best and what companies actually need; this session presents both anecdotal understanding and industry survey results to catalyst intelligent dialog around today’s business of selling corporate and professional programs.

**Moderator:** Zachary Gredlics, University of Kansas  
**Presenter:** Karl Theisen, Arizona State University

Designed specifically for ETD newcomers (but useful for all), this session will concentrate on the resources available to ETD members including members of the ETD leadership, funding and publishing opportunities, the ETD List serve, and information on the ETD Strategic Plan. Opportunities for getting involved will be explained. A special introduction of the ETD Mini Grant Winners will also be presented.

**Moderator:** Keith Johnson, East Tennessee State University  
**Presenters:**  
Walt Buchanan, Texas A&M University  
Marilyn Dyrd, Oregon Institute of Technology  
Keith Johnson, East Tennessee State University  
Ken Rennels, Indiana University Purdue University Indianapolis

CIEC Companions and guests are invited to go on a walk to the Art Museum located a few blocks from the hotel. Museum entrance fee is $12.50 per person and $10.50 for seniors over 62. Meet Robert Krute in the hotel lobby if you are interesting in joining the museum group.
Wednesday, February 4
Industry Day

3:30–4:00 PM
EXPO and Coffee Break Plaza
Ballroom A & B

Visit the CIEC exhibitors during the coffee break session to learn more about their products and services.

EXPO Chairs: Edna Grover-Bisker, Missouri University of Science and Technology  
David Schmueser, Altair Corporation

4:00–5:30 PM
Division Sessions

**CEED 332 Future Trends – Systems Thinking for Co-ops and Internships**

Plaza Ballroom D

This interactive session will provide ideas of the 21st century continuous improvement (CI) and systems thinking combined with some recent research on workforce development and the millennial generation. This session will discuss strategies for successful co-ops and internships from the perspective of students, industry and universities. In particular, review of the Baldrige framework and Lean Six Sigma practice for improving co-op and internship experiences will be examined. After the session, you will be able to take back to your organizations CI tools and quality systems thinking to improve your co-op and internship programs.

**Moderator:** Woodrow Whitlow, Cleveland State University  
**Presenters:** Cindy Veenstra, Veenstra and Associates  
Julie Furst-Bowe, Southern Illinois University Edwardsville  
Reginald McGregor, Rolls Royce

**CPD 334 Partnerships that Perform — It Takes More than Good Intentions**

TaPestry Room

The future of engineering education is being transformed through the emergence of new opportunities for partnerships made possible in an inter-connected world. One of the great promises of distributed learning is the opportunity for partnerships between diverse organizations that can produce superior outcomes. However, partnerships often fall short of their promise and end in disappointment. The presenters published a model for effective partnering over 10 years ago and have used it successfully with corporate and university groups. In this session we present our model and share our experiences in applying it. An interactive component calls upon participants to apply aspects of the model to their own programs and partnerships.

**Moderator:** Jeffrey Goss, Arizona State University  
**Presenters:** Sue Bray, New Vistas  
Kim Scalzo, State University of New York

In every partnership there are at least two or more parties involved who bring with them certain goals or perceived needs. Communication is one of the extremely important components in developing a working relationship for the partnership to succeed. Does academia really understand the motivation and needs of their industry partners? This session will focus on issues related to industry and how universities can better understand what industry needs or is looking for in the establishment of partnerships with academia.

**Moderator:** Letha Hammon, DuPont  
**Panelists:** Charles Baukal, John Zink Institute  
Maria (Lolo) Penedo, Northrop Grumman  
David Schmueser, Altair Engineering, Inc.
Wednesday, February 4
Industry Day

4:00–5:30 PM
Division Sessions, Continued

ETD 335 Collaborations that Strengthen Engineering and Engineering Technology Programs
Palm Canyon Suites A & B

This session explores the ways in which an academic program can collaborate with industry partners, government entities or agencies, and other academic programs (both at the home institution and at other institutions of higher learning). These collaborations can be established at the local, state, national, or international levels and are designed to add value to all parties involved in the collaborations. The primary goals of the collaborations are to: 1) enhance student learning, 2) increase engagement between involved parties, and 3) increase research in engineering and engineering technology. Papers in this session describe various collaborations, as well as the strengths, weaknesses, and opportunities that are associated with each partnership.

Moderators: Patricia Fox and Charles McIntyre, Indiana University Purdue University Indianapolis

Presentations and Presenters:

Groundbreaking Collaboration between Consumer Retailer Walmart, University Research, and Existing Manufacturing and Revolutionary Additive Manufacturing Firms
Doug Acheson, Indiana University Purdue University Indianapolis

Building Information Modeling/Vertical Digital Construction: Teaching Strategies and Preparing Students for the Workforce
Sofia Vidalis and Joseph Cecere, Penn State University, Harrisburg

The Design and Implementation of an Advanced Analytics Laboratory Supporting Industry Partnerships
Emory Zimmers and Charalambos Marangos, Lehigh University, Zephyros, Inc.

Industry Collaboration for Training Workforce
Masoud Fathizadeh, Purdue University Calumet

Establishing and Managing Business-University Research Partnerships
Regena L. Scott and Edie K. Schmidt, Purdue University

Developing a “High Impact” Industry Advisory Board
Charles McIntyre and Patricia Fox
Indiana University Purdue University Indianapolis
Thursday, February 5, 2015

7:00–8:15 am

Division Breakfasts and Business Sessions

Meet your colleagues for breakfast and a brief business meeting at one of the following division breakfasts. First time attendees are welcome to attend the breakfast of the division they are interested in gathering more information or joining.

CEED 412 Business Meeting Breakfast
Horizon Ballroom I

All CEED members and new attendees are encouraged to attend this breakfast session as the division elects new officers and board members. The chair will present an overview of the 2013–14 activities.
Chair: Reginald McGregor, Rolls-Royce

CIP 413 Business Meeting Breakfast
Oasis III

All CIP and CMC members are encouraged to attend this breakfast meeting as the division elects new officers and board members. The Board Chair will provide an overview of the division’s 2013–14 activities.
Chair: Ron Madler, Embry-Riddle Aeronautical University

CPD 414 Business Meeting and Breakfast
Tapestry A

All CPD members and new attendees are invited to attend. New officers will be elected and introduced.
Chair: Paul Jewell, Iowa State University

ETD 415 ETD Division Breakfast
Horizon Ballroom II

All ETD members are encouraged to attend this breakfast meeting of the division. Come get involved!
Chair: Keith Johnson, East Tennessee State University

7:30–8:30 am

CIEC 411 Companions Breakfast Meeting
Terrace Restaurant

Companions can enjoy breakfast together in the Terrace Restaurant. Tickets will be provided as part of the registration fee.

9:00–11:00 am

CIEC 421 Companions Tours of the Palm Springs Windmills
Hotel Lobby

All who are registered for the tour will meet in the hotel lobby. Tour bus will pick up companions at the hotel and will return approximately at 11:00 am. Tickets must be purchased in advance.
Division Sessions

**CEED 422 Preparing Students for Co-op: Successful Co-ops, First Co-ops and Success in Full-Time Job Searching and Beyond**

**Plaza Ballroom D**

This session will provide interactive marketing, promotional and engagement strategies—ingredients that have increased the appetite of 1st year students to the smorgasbord of career exploration. The session will also look at resources and activities used in the classroom to understand Mindset, Mindfulness and Motivation in order to better prepare students for their co-op. Incorporation of the Biggs “Structure of the Observed Learning Outcome (SOLO) Taxonomy” will also be discussed.

**Moderator:** Robin Hammond, Arizona State University

**Presenters:**
- Jan Vanselow, Northeastern University
- Erin Yokay-Basso, Northeastern University
- Kyle Liechty, Michigan State University
- Bernadette Friedrich, Michigan State University

**CIP 423 Innovative Partnerships to Provide Students with Skills Industry Needs**

**Plaza Ballroom C**

**Moderator:** Lori Glover, MIT

**Session A: The Engineering Ambassador Network**

The Engineering Ambassador Network is a nationwide collaboration of Engineering Ambassador Programs that provide opportunities for undergraduate students to become exceptional leaders and advance their communications skills. This session will highlight how universities within the Engineering Ambassadors Network are partnering with industry through program sponsorship, internships, and networking events to grow the engineering pipeline and offer a unique professional skill set to engineering students.

**Presenters:**
- Christine Haas, Engineering Ambassadors Network
- Kimberly Harrison, The Boeing Company

**Session B: A Unique Industry-Education Collaboration**

Embry-Riddle Aeronautical University and Gulfstream Aircraft Company created a unique partnership to design and deliver an exclusive master’s degree program, the Multidisciplinary Master of Science in Engineering (MMSE), for the company’s engineering and technical staff. The program which was launched in 2009 was designed to address the company’s competency gaps, provide professional growth opportunity, loyalty, and talent retention. This session will present an overview of this partnership and share data on student success, enrollment trends, program delivery modes, and the impact on enhancing and strengthening the university-company collaborations.

**Presenter:** Maj D. Mirmirani, Embry-Riddle Aeronautical University

**CPD 424 You want to teach what from where?!**

**Tapestry Room B**

An adjunct professor is contracted to teach an undergraduate class to students at a remote location close to his place of employment. At the last minute, it is decided to simultaneously offer the class to students on campus 65 miles away via distance technology (on a budget). We will chronicle the trials and tribulations of supporting a technology challenged instructor from a distance and the various delivery platforms attempted. We will be focusing on the decisions to use certain platforms including their strengths, weaknesses, student experience, and dependability. We will conclude with a discussion of the eventual winning solution and how the number of requests like this is increasing.

**Moderator:** Tamra Swann, Mississippi State University

**Presenter:** Marty Ronning, University of Maryland

**ETD 435 Engineering Technology National Forum (ETNF)**

**Palm Canyon Suites A & B**

The ETNF is an action arm of the ASEE Engineering Technology Council, providing “a continuity of effort in taking internal and anecdotal discussions to a higher level to investigate them factually, turning high-level issues into action items for national impact,” Journal of Engineering Technology, Fall 2012. The ET National Forum also works closely with the ETLI National Leaders Conference in developing the conference program currently held in Washington, DC each fall.

This CIEC session will report on activities and seek interaction from the attendees on current activities as well as potential future activities that could impact Engineering Technology nationally. Ongoing activities include:

- Federal Office of Personnel Management (OPM) GS-800 description rewrite to be more inclusive of the Engineering Technology
- NAE NSF sponsored study: The Status, Role, and Needs of Engineering Technology Education in the United States
- ET Marketing Strategies

**Moderator:** Bob Herrick, Purdue University

**Presenters:**
- Ken Burbank, Purdue University
- Jeff Ray, Western Carolina University
- Ron Land, Penn State University
- Pat Fox, Indiana University Purdue University Indianapolis
**Thursday, February 5**

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<tr>
<td>10:15–10:45 AM</td>
<td><strong>EXPO</strong>&lt;br&gt;PLAZA A &amp; B BALLROOMS&lt;br&gt;The EXPO will be open to all conference participants and will remain open all day so that you can visit the vendors and learn more about their products or programs.</td>
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<tr>
<td>11:00–12:30 PM</td>
<td><strong>Division Sessions</strong>&lt;br&gt;<strong>CEED 432</strong> <em>Experiential Learning Pathways for Junior and Senior STEM Students: A Model for Incorporating Undergraduate Research, Internships, and Entrepreneurship Experiences</em>&lt;br&gt;PLAZA BALLROOM D&lt;br&gt;STEM (Science Technology, Engineering, Mathematics) students with no or limited exposure to professionals in the field may make career decisions based on distorted perceptions that lack socialization to the profession. This session will discuss the evolution of a unique experimental learning program in a large engineering and computer science college. This model differs from traditional experiential learning programs in four ways: (1) partnerships with other on-campus colleges and units to incorporate undergraduate research, internship and entrepreneurship pathways under one program; (2) a co-hort-based approach to create learning communities; (3) recruitment of internships for rising juniors and community college transfers who lack the discipline-specific knowledge of seniors; and (4) sponsored funding to support the program and provide financial support to the students.&lt;br&gt;<strong>Moderator:</strong> Thomas Demmon, Grand Valley State University&lt;br&gt;<strong>Presenters:</strong> Lisa Massi, University of Central Florida&lt;br&gt;Jackie Herold, University of Central Florida</td>
</tr>
</tbody>
</table>
Thursday, February 5

11:00–12:30 PM
Division Sessions, Continued

ETD 445  More Women and Girls in STEM: How To
Palm Canyon Suites A & B

Learn proven recruitment and retention practices and strategies so you can see more female students succeed in your STEM classes within the next year. Donna Milgram—Executive Director of the National Institute for Women in Trades, Technology and Science—will share proven practices and strategies that resulted in real increases in female enrollment and in female and male completion rates in STEM programs around the country. Participants will walk away with recruitment and retention strategies they can implement in their schools right away. This will be an interactive session with a worksheet you can bring back to your home institution.

Moderator: Helen McNally, Purdue University
Presenter: Donna Milgram, Executive Director, Institute for Women in Trades, Technology & Science (IWITTS)

12:45–2:00 PM
CIEC Awards Luncheon
Horizon Ballroom

CIEC 2014 award winners and CEED’s student of the year and employer of the year will be honored. Luncheon tickets are included in the registration fee. Continue your dialogue with conference participants as we honor these winners.

Hosts: Ron Madler, CIEC Board Chair
Linda Krute, NC State University
CIEC 2015 General Conference Chair
Mark Schuver and Mitch Springer, Purdue University
CIEC 2016 Conference Chairs
Ken Rennels, IUPUI, CIEC 2014 General Conference Chair

1:30–4:00 PM
CIEC 431  Companions Indian Canyon Tour
Hotel Lobby

Meet in the hotel lobby at 1:15 PM to load the bus for the Indian Canyon Tour. Tickets must be purchased in advance.
### Division Sessions

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Location</th>
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<tbody>
<tr>
<td>CEED 442</td>
<td>Preparing Students for Success in Full-time Job Searching and Beyond</td>
<td>Plaza Ballroom D</td>
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<tr>
<td>CPD 444</td>
<td>Best Practices in Faculty Compensation to Incentivize Distance Learning Participation</td>
<td>Tapestry Room</td>
</tr>
<tr>
<td>CIP 443</td>
<td>Future of Engineering Education: An IEEE Report</td>
<td>Plaza Ballroom C</td>
</tr>
<tr>
<td>ETD 455</td>
<td>The Dean's Panel</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
</tbody>
</table>

#### CEED 442 Preparing Students for Success in Full-time Job Searching and Beyond

As a part of a graduation requirement, Northeastern University’s College of Engineering students must take a course entitled “Professional Issues in Engineering.” The Mechanical & Industrial Engineering co-op department developed this course curriculum which covers topics such as reflection and career planning, portfolios, ethics, and lifelong learning. This session will share curriculum overview and dive more deeply into the topics of engineering leadership development and human resources perspectives on student success in the job search derived through collaboration with our industry partners.

**Moderator:** Vickie Kuntz, University of Toledo  
**Presenters:** Kerri Beiswenger, Northeastern University  
Alison Noguerira, Northeastern University

#### CPD 444 Best Practices in Faculty Compensation to Incentivize Distance Learning Participation

In higher education, courses and curriculum are purportedly the intellectual property of the academic departments who provide faculty to teach or the faculty themselves. This directly implies there needs to exist some level of financial incentive for the home department of those faculty, as well as direct incentive to the faculty who are involved in teaching. After all expenses are accounted for, then, what model for faculty incentive is most applicable and will provide maximum incentive to participate in professional studies? This paper focuses on the impact of numerous employed faculty compensation models across multiple institutions of higher education. A survey of these many institutions of higher learning, regarding their compensation strategy for adjunct faculty, was collected and compiled. This presentation will share the results of this cross-institution study and encourage input from attendees on their experience with these and other methods/practices.

**Moderator:** Rita Burrell, Mississippi State University  
**Presenters:** Tom Brumm, Iowa State University  
Mitchell Springer, Purdue University  
Mark Schuver, Purdue University

#### CIP 443 Future of Engineering Education: An IEEE Report

Technological, economic, and social changes will reshape undergraduate engineering education, but there is little consensus on its future. To gather more information about how members of the engineering education community think about the current state and future directions of engineering education, the IEEE Curriculum and Pedagogy Committee (CPC) conducted a global survey. People in four categories were surveyed: individuals who (a) teach undergraduate students, (b) administer a degree program (i.e., Department Chairs and Heads), (c) serve as a top-level administrator over all engineering degree programs (i.e., Deans), and (d) individuals who work professionally in engineering, were invited to respond to the survey. With 2176 responses on a wide range of issues, the CPC believes that survey results can inform conversations about the future of engineering education. For this presentation, the CPC will focus on responses from industry practitioners on the importance of a wide range of skills for engineering graduates as well as strengths of current engineering graduates with respect to these skills. In addition, the CPC will present an analysis of data from all respondents on initiatives to:

- Ensure that entry-level engineers are prepared,
- Facilitate exchanges between industry/government practitioners and students, and
- Facilitate collaborative activities between academia and industry.

Results will illuminate strengths and opportunities to improve engineering graduates as well as potential directions to enact these improvements.

**Moderator:** Linda Thurman, University of North Carolina, Charlotte  
**Presenters:** Susan Lord, University of San Diego

#### ETD 455 The Dean’s Panel

Engineering Technology Deans from three different types of university settings will discuss the budget processes and challenges faced today. In addition, future predictions and how we may solve some of the challenges we all face will be discussed. The panel will start with a few brief opening comments for background and then this session will be mostly Q&A. Come and take advantage of a great opportunity to better understand the realities of the budgeting process and variety each institution faces from a Dean’s perspective.

**Moderator:** Ken Burbank, Purdue University  
**Presenters:** Vern Fitzsimmons, Kansas State University  
Steve Cobb, Murray State University  
James Frendeway, Michigan Technological University
Thursday, February 5

3:45–5:30 PM

**Poster Presentations and EXPO**

**PLAZA FOYER**

Visit the exhibits for the last time, enjoy refreshments with your CIEC colleagues, and meet the CIEC Poster Presenters and ETD Mini Grant Winners.

**Poster Presenters:**

*Growing Globally through a Diverse Supply Chain Student Body Population*
Shirl Donaldson and Edie K. Schmidt, Purdue University

*Methodology for Educating Future Aviation Technologists on ASTM Turbine Fuel Standard Specifications*
Gozdem Kilaz, Ronald F. Bender, and Ronald Sterkenburg, Purdue University

*Small and Medium Enterprise (SME) Can Benefit from Students Final Project and Enhancing Student Learning Experience in Lean Manufacturing: A Case Study.*
Shweta Chopra, Kim Deranek, and Chad Laux. Purdue University

*Creating the Comfort Zone for Diversity and Inclusion*
Rebecca G. Book, Pittsburg State University

*Industry-Education Partners Prepare the Next Generation Manufacturing Workforce*
Diane Dostie, Regional Advanced Machining Partnership
Karen Wosczyna-Birch, Regional Center for Next Generation Manufacturing

*Waters Course through Time*
Edward T. Davis, Queensborough Community College

*Capstone Marketplace: A DOD Project*
Michael DeLorme, Stevens Institute of Technology

**ETD Mini Grant Winners:**

*Design of Simulation-Based Laboratories for Teaching Wireless Network Technologies*
Te-Shu Chou, Phil Lunsford, and Keith Thomson, East Carolina State University

*Enhancing Programming Skills of Engineering and Technology Students Using an Object-Oriented Multidimensional Desktop Virtual Reality (dVR) Framework*
Magesh Chandramouli and Justin Heffron, Purdue University Calumet.

*Cost Effective Training in Cyber Security*
Jane LeClair, National Cybersecurity Institute at Excelsior College

5:30–7:00 PM

**CIP and ETD Hospitality Event**

**PRESIDENTIAL SUITE 342**

Before going out to dinner, take time to visit colleagues and new acquaintances in the hospitality suite. All CIEC participants and companions are invited to attend the joint event sponsored by the College-Industry Partnership and Engineering Technology Divisions. Exhibitors and sponsors are welcomed.

5:00–6:30 PM

**CPD and IACEE Hospitality Event**

**PRESIDENTIAL SUITE 322**

Please join the Continuing Professional Development Division and International Association for Continuing Engineering Education for a joint wine and cheese hospitality event. Attendees can network and mingle with members from both CPD and IACEE.

5:00–6:30 PM

**CEED Awards Reception**

**SUITE 164**

This special gathering will honor the winners of this year’s CEED awards: Co-op Student of the Year, Intern Student of the Year and the Borman award. The awards are presented at the luncheon earlier this day. Join your CEED colleagues in congratulating the winners and enjoy light refreshments to start off the evening.

7:00 PM—Bedtime

**Downtown Palm Springs Village Fest**

Downtown Palm Springs opens up on Thursday evenings for its weekly street Village Fest or street fair. Palm Springs Canyon road will be closed to vehicles between Baristo and Amado where more than 100 arts, crafts, and food vendors set up their booths up and down the street. A lot of the shops and restaurants will be open so you can get souvenirs for your family. The Palm Springs Art Museum will also be open and there is no admission fee for the evening. Get some exercise, see how many Hollywood stars you remember identified on the sidewalks, and enjoy the evening event.
Friday, February 6

Division Breakfasts and Planning Meetings

**CEED 512 CEED Breakfast**

**Plaza Ballroom B**

Join CEED colleagues for a morning cup of coffee and breakfast.

**CIP 513 CIP/CMC Planning Breakfast**

**Plaza Ballroom A**

Join the CIP Board Members, CMC representatives and CIP members as they look towards the future in the planning of CIEC 2016 sessions and activities.

**Moderator:** Ranji Vaidyanathan, Oklahoma State University, 2016 CIP CIEC Program Chair

**CPD 514 Special Interest Group (SIG) Breakfast**

**Tapestry Room**

Join the CPD breakfast discussion that sets the framework for workshops and sessions for the 2016 CIEC Program for the Continuing Professional Development Division. Meet in your designated Special Interest Group, which include: Administration, Faculty, International, Industry and Delivery — and share ideas for workshops and sessions that you would like to either present or attend at the 2016 CIEC!

**Moderator:** Mark Schuver, Purdue University

**Presenter:** Terri Gaffney, University of Idaho

2016 CIEC CPDD Program Chair

**ETD 515 ETD Business Meeting and Breakfast**

**Horizon II**

Join the ETD leadership as they discuss pertinent division information as well as upcoming events and activities. All ETD members are encouraged to attend.
The recession of 2008/2009 caused many companies to lay off engineers and engineering co-ops as “survival” was a typical short-term business goal. The initial phases of the recovery resulted in very cautious hiring of both students and graduates, but now that we are in a sustained growth economy the demand for technical talent has soared. How have employers re-connected with their “talent-suppliers” to obtain the engineering capacity for the present and the future? This session will address how both the University of Cincinnati and Grand Valley State University are working with companies to reconnect and collaborate with them to obtain the talent they need.

**Moderator:** Edna Grover-Bisker, Missouri University of Science and Technology  
**Presenters:** Thomas Demmon, Grand Valley State University 
Jill Flood, University of Cincinnati

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“Serendipity” may evoke the image of “dumb luck,” but serendipity in entrepreneurship is a combination of one’s prior knowledge, a purposeful search, and a chance event. The speakers will share how their programs have grown through serendipitous discovery: outlining categories of serendipitous incidents and giving examples of the application of the knowledge and the search activity that lead to success when a seemingly “chance event” occurred. They will also share how individuals and organizations can improve their opportunities for serendipitous growth. Throughout the presentation, feedback and examples will be elicited from the audience.

**Moderator:** Kim Scalzo, State University of New York  
**Presenters:** Kevin Curry, University of Kansas Continuing Education 
Jeffrey Blessing, Milwaukee School of Engineering 
Joe Levens, Pittsburg State University
Beginning in the 1950s and 1960s, post-secondary institutions in the United States and Canada began offering degrees in Engineering Technology. These programs focus on applied application of engineering science principles. Depending on the institution, 2-year Associate of Science and/or 4-year Bachelor of Science degrees were offered. In general, an Engineering Technologist student receives a broad range of applied science and applied mathematics education as well as the fundamentals and application of engineering principles in the student’s area of focus. Today, many institutions offer graduate degrees at the master’s and/or doctorate level. While many programs remain applied in nature, other programs include applied research components. This session will explore the future direction of graduate education programs in Engineering Technology in terms of philosophy along with curriculum design, assessment and accreditation.

**Moderator:** Ken Rennels, Indiana University Purdue University Indianapolis

**Presentations and Presenters:**

**The Ghost of Technology Future**
Andy Jackson, East Carolina University

**Engineering Management: The Future of Engineering Technology**
Saeed D. Foroudastan and Dianna J. Prince, Middle Tennessee State University

**Using Graduate Teaching Assistant to Build a Self-Sustaining Graduate Program**
George Yang, Missouri Western State University

**Enhancing Graduate Research through Collaborative Research: Case of Global Innovations for Smart Grids**
N. Athula Kulatunga, Purdue University

**Online Graduate Education in Engineering Technology: Lessons Learned**
Ken Rennels, Indiana University Purdue University Indianapolis.

**11:00–12:30 pm**

**Final Conference Division Sessions**

**CEED 532 CEED Planning Session for 2016**
Plaza Ballroom D

Join CEED members as they plan for the next CIEC conference to be held in Austin, Texas. Bring your ideas and help plan your division’s sessions and activities.

**Moderators:** Sandra English, CEED Program Chair for CIEC 2016
Gayle Elliott, CEED Chair

**CIP 533 CIP Board Meeting**
Oasis III

Letha Hammon, 2015 CIP Chair, will lead a discussion among continuing and newly elected board members about CIP projects and initiatives for 2015. All CIP members are also invited to attend.
Session A: “The [Students] They Are a Changin…”
With greatest respect for Bob Dylan’s 1964 song “…the [students] they are a changin…” ProSTAR has experienced first-hand, the transitioning of professional working adult learners from one generational cohort to another, and now, to yet the youngest of generational cohorts… the Millennials.

Drawing from sixteen years of student data, this report will focus on who these cohort learners are and how they compare to previous cohort groups of comparable age. The information presented will focus on generational cohort differences that impact, or have the potential to impact the offering of Master of Science degrees and other fee-based continuing educational opportunities.

Session B: Quality vs Quantity:
Running the Academy as a Business
Everyone should agree quality programs are the cornerstone of a quality education and the attendant ranking of an institution. Our differences reside in perspective couched in the perception of necessity to run an academic unit as a business.

ProSTAR has produced scholarship on the insufficiency of GPA and GRE as determinants of entry into graduate programs for professional working adult learners. This paper will dig deeper into the cultural perspective of the burning platform, and the implications for historical thresholds for adult learner entry. The paper will examine the underlying premise of what has been termed “a call to action”.

Moderator: Erin Tanaka, University of Southern California
Presenters: Mitch Springer, Purdue University
Mark Schuver, Purdue University

ETD 535 Potpourri of Creative Ideas
Palm Canyon Suite A & B

Creative ideas and inspiring papers which did not quite fit the programs sessions are included in this session. Contributions span from ethics in corporate America to engineering education in K-12. Experiences and sustainability ideas for Senior Capstone and Internship programs will be presented as well as an innovative teaching tool for power management.

Moderator: Mike Strange, California Maritime Academy
Presentations and Presenters:

Engineering Ethics and Corporate America: The Case of Ford Motor Company
Marilyn A. Dyrud, Oregon Institute of Technology

An Integrated Experience for Elementary Engineering Education
Richard Gilbert, University of South Florida
Marilyn Barger, Florida Advanced Technological Education Center of Excellence

Creativity Assessment of Senior Design Projects Using an Engineering Expert Panel
Abi Aghayere, Drexel University

Viability of an Engineering Technology Internship Program at a Rural Institution
Austin C. Cheney, Eastern Illinois University

Design and Development of a Teaching Tool for Lithium-Ion Battery Management System
Y. Gene Liao and David T. Fu, Wayne State University

Cradle to Cradle Sustainability Concept for Technology Education Senior Capstone Projects
George E. Comber and Kerry N. Tobin, Weber State University

CIEC 2015 Conference Concludes
Please join us for the 2016 Conference in Austin, Texas. For more information about how you can participate, contact Mark Schuver, General Conference Chair, at mschuver@purdue.edu or 765.496.2094
## Post-Conference Activities

### Friday, February 6

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>1:00–5:00 PM</td>
<td>CPD 544 IACEE Executive Committee Meeting</td>
<td>Executive Boardroom</td>
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<tr>
<td>1:30–3:00 PM</td>
<td>ETD 545 ECETDHA Board Meeting</td>
<td>OASIS III</td>
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### Saturday, February 7

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00 AM–3:00 PM</td>
<td>IACEE Executive Committee Meeting</td>
<td>Executive Boardroom</td>
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<tr>
<td>9:00 AM–5:00 PM</td>
<td>ETD Workshop: Fundamentals of Program Assessment (ABET)</td>
<td>Palm Canyon Suites</td>
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</table>

Participants will broaden their understanding of the continuous improvement of student learning through the design of assessment processes, development of measurable student outcomes, and application of data collection and data reporting methods. Workshops are facilitated by highly experienced faculty with wide-ranging experience in assessment and evaluation. This workshop focuses primarily on ABET Criterion 2: Program Educational Objectives, Criterion 3: Student Outcomes and Criterion 4: Continuous Improvement. This workshop is interactive and those attending will work in small groups applying the concepts learned throughout the day. Participants will receive a workshop booklet containing all slides and reference materials. **Registration Required.**

**Ticket Required:** $175 for CIEC Registered Participants

**Presenter:** Elaine Cooney, Indiana University Purdue University Indianapolis
### COLLEGE INDUSTRY PARTNERSHIPS DIVISION
#### WEDNESDAY, FEBRUARY 4

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00–8:45 AM</td>
<td>CIEC All Conference Breakfast</td>
<td>Pool Area</td>
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<tr>
<td>9:00–10:30 AM</td>
<td>Plenary Session</td>
<td>Horizon Ballroom</td>
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<tr>
<td>11:00 AM–12:30 PM</td>
<td>CIP 313 Where have we been and where are we headed: Past, Present and Future Reflections as a Division</td>
<td>Plaza Ballroom C</td>
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<tr>
<td>12:45–1:45 PM</td>
<td>Industry Day Luncheon</td>
<td>Horizon Ballroom</td>
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<tr>
<td>2:00–3:30 PM</td>
<td>CIP 323 CMC/CIP Roundtable: Building a Bigger Tent for the Future</td>
<td>Plaza Ballroom C</td>
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<tr>
<td>3:30–5:30 PM</td>
<td>EXPO</td>
<td>Plaza Ballroom A &amp; B</td>
</tr>
<tr>
<td>4:00–5:30 PM</td>
<td>CIP 333 What Industry Wants and Needs</td>
<td>Plaza Ballroom C</td>
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<tr>
<td>5:45–6:30 PM</td>
<td>CIEC Walk/Run</td>
<td>Hotel Lobby</td>
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<tr>
<td>7:00–9:00 PM</td>
<td>CIEC Banquet</td>
<td>Horizon Ballroom</td>
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#### THURSDAY, FEBRUARY 5

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<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00–8:15 AM</td>
<td>CIP Breakfast Meeting &amp; Elections</td>
<td>Oasis III</td>
</tr>
<tr>
<td>8:30–10:00 AM</td>
<td>CIP 423 Innovative Partnerships to Provide Students with Skills Industry Needs</td>
<td>Plaza Ballroom C</td>
</tr>
<tr>
<td>11:00 AM–12:30 PM</td>
<td>CIP 433 Successful Partnerships between Academia and Industry</td>
<td>Plaza Ballroom C</td>
</tr>
<tr>
<td>12:45–2:00 PM</td>
<td>CIEC Awards Luncheon</td>
<td>Horizon Ballroom</td>
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<tr>
<td>2:00–3:30 PM</td>
<td>CIP 443 Future of Engineering Education: An IEEE Report</td>
<td>Plaza Ballroom C</td>
</tr>
<tr>
<td>3:45–5:15 PM</td>
<td>Poster Presentations and EXPO</td>
<td>Plaza Ballrooms A &amp; B</td>
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<tr>
<td>5:30–7:00 PM</td>
<td>CIP Hospitality</td>
<td>Presidential Suite 342</td>
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#### FRIDAY, FEBRUARY 5

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:30–8:45 AM</td>
<td>CIP Breakfast</td>
<td>Plaza Ballroom A</td>
</tr>
<tr>
<td>9:00–10:30 AM</td>
<td>CIP 523 Potpourri of New Initiatives in Engineering Education Programs</td>
<td>Plaza Ballroom C</td>
</tr>
<tr>
<td>11:30–12:30 PM</td>
<td>CIP 532 Board Meeting</td>
<td>Oasis III</td>
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**Thank You for Attending CIEC 2015 — See You Next Year!**
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<thead>
<tr>
<th><strong>TUESDAY, FEBRUARY 3</strong></th>
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<tbody>
<tr>
<td>8:00–12 NOON</td>
<td>CPD Division Board Meeting</td>
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<tr>
<td>1:00–4:00 PM</td>
<td>CPD Workshop: Managing Your Brand</td>
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<tr>
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<td>7:00–8:45 AM</td>
<td>CIEC All Conference Breakfast</td>
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<td>9:00–10:30 AM</td>
<td>Plenary Session</td>
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<tr>
<td>11:00 AM–12:30 PM</td>
<td>CPD 314 Continuing Professional Development – Past, Present and Future</td>
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<tr>
<td>12:45–1:45 PM</td>
<td>Industry Day Luncheon</td>
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<tr>
<td>2:00–3:30 PM</td>
<td>CPD 324: Engaging Industry in the Post-Recession World</td>
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<td>3:30–5:30 PM</td>
<td>EXPO</td>
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<tr>
<td>4:00–5:30 PM</td>
<td>CPD 334 Partnerships that Perform—It Takes More than Good Intentions</td>
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<tr>
<td>5:45–6:30 PM</td>
<td>CIEC Walk/Run</td>
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<tr>
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<tbody>
<tr>
<td>7:00–8:15 AM</td>
<td>CPD Breakfast and Meeting</td>
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<tr>
<td>8:30–10:00 AM</td>
<td>CPD 424 You want to teach what from where?</td>
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<tr>
<td>12:45–2:00 PM</td>
<td>CIEC Awards Luncheon</td>
</tr>
<tr>
<td>11:00 AM–12:30 PM</td>
<td>CPD 434 International Partnerships in Continuing Engineering Education: Best Practices and Considerations for Future Global Expansion</td>
</tr>
<tr>
<td>2:00–3:30 PM</td>
<td>CPD 444 Best Practices in Faculty Compensation to Incentivize Distance Learning Participation</td>
</tr>
<tr>
<td>3:45–5:15 PM</td>
<td>Poster Presentations and EXPO</td>
</tr>
<tr>
<td>5:00–6:30 PM</td>
<td>CPD and IACEE Hospitality Presidential Suite 322</td>
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<tr>
<th><strong>FRIDAY, FEBRUARY 6</strong></th>
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<tbody>
<tr>
<td>7:30–8:45 AM</td>
<td>CPD SIG Breakfast</td>
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<tr>
<td>9:00–10:30 AM</td>
<td>CPD 524 Serendipity in Entrepreneurship: Engineering Your Own Breaks</td>
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<tr>
<td>11:30–12:30 PM</td>
<td>CPD 534 Engineering Education: Past, Present and Future – the times they are a changing...</td>
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</table>

*Thank You for Attending CIEC 2015 — See You Next Year!*
CEED Programs at a Glance

COOPERATIVE & EXPERIENTIAL EDUCATION DIVISION
TUESDAY, FEBRUARY 3
1:15–4:15 PM  CEED Board Meeting  Palm Canyon Suites A & B

WEDNESDAY, FEBRUARY 4
7:00–8:45 AM  CIEC All Conference Breakfast  Pool Area
9:00–10:30 AM  Plenary Session  Horizon Ballroom
11:00 AM–12:30 PM  CEED 312 Looking Forward and Learning from the Past  Plaza Ballroom D
12:45–1:45 PM  Industry Day Luncheon  Horizon Ballroom
2:00–3:30 PM  CEED Overcoming the Barriers to Co-op  Plaza Ballroom D
3:30–5:30 PM  EXPO Opens  Plaza Ballroom A & B
4:00–5:30 PM  CEED 332 Future Trends—System Thinking for Co-ops and Internships  Plaza Ballroom D
5:45–6:30 PM  CIEC Walk/Run  Hotel Lobby
7:00–9:00 PM  CIEC Banquet  Horizon Ballroom

THURSDAY, FEBRUARY 5
7:00–8:15 AM  CEED Breakfast Meeting  Horizon I
8:30–10:00 AM  Preparing Students for Co-op: Successful Co-ops, First Co-ops and Success in Full-time Job Searching and Beyond  Plaza Ballroom D
11:00 AM–12:30 PM  CEED 432 Experiential Learning Pathways for Junior and Senior STEM Students: A Model for Incorporating Undergraduate Research, Internships, and Entrepreneurship Experiences  Plaza Ballroom D
12:45–2:00 PM  CIEC Awards Luncheon  Horizon Ballroom
2:00–3:30 PM  CEED 442 Preparing Students for Success in Full-time Job Searching and Beyond  Plaza Ballroom D
3:45–5:15 PM  Poster Presentations and EXPO  Plaza Ballrooms A & B
5:30–7:00 PM  CEED Awards Reception and Hospitality  Suite 164

FRIDAY, FEBRUARY 6
7:30–8:45 AM  CEED Breakfast  Plaza Ballroom B
9:00–10:30 AM  CEED 522 Re-establishing a Talent Pipeline in a Post-Recession Economy  Plaza Ballroom D
11:30–12:30 PM  CEED 532 Planning Session for 2016  Plaza Ballroom D

Thank You for Attending CIEC 2015 — See You Next Year!
# ETD Programs at a Glance

**ENGINEERING TECHNOLOGY DIVISION**  
**Wednesday, February 4**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00–8:45 AM</td>
<td>CIEC All Conference Breakfast</td>
<td>Pool Area</td>
</tr>
<tr>
<td>9:00–10:30 AM</td>
<td>Plenary Session</td>
<td>Horizon Ballroom</td>
</tr>
<tr>
<td>11:00 AM–12:30 PM</td>
<td>ETD 315 The History of Engineering Technology and Engineering Education as It Has Developed in the United States</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>12:45–1:45 PM</td>
<td>Industry Day Luncheon</td>
<td>Horizon Ballroom</td>
</tr>
<tr>
<td>2:00–3:30 PM</td>
<td>ETD 325 Nuts and Bolts of Engineering Technology Division</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>3:30–5:30 PM</td>
<td>EXPO</td>
<td>Plaza Ballroom A &amp; B</td>
</tr>
<tr>
<td>4:00–5:30 PM</td>
<td>ETD 335 Collaborations that Strengthen Engineering and Engineering Technology Programs</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>4:00–6:00 PM</td>
<td>ETD Board Meeting</td>
<td>Whitewater Boardroom</td>
</tr>
<tr>
<td>5:45–6:30 PM</td>
<td>CIEC Walk/Run</td>
<td>Hotel Lobby</td>
</tr>
<tr>
<td>7:00–9:00 PM</td>
<td>CIEC Banquet</td>
<td>Horizon Ballroom</td>
</tr>
</tbody>
</table>

**Thursday, February 5**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00–8:15 AM</td>
<td>ETD Division Breakfast</td>
<td>Horizon Ballroom II</td>
</tr>
<tr>
<td>7:00–8:15 AM</td>
<td>ETD 425 Engineering Technology Leadership Institute</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>7:00–8:15 AM</td>
<td>ETD 435 Engineering Technology National Forum (ETNF)</td>
<td>Oasis II</td>
</tr>
<tr>
<td>11:00 AM–12:30 PM</td>
<td>ETD 445 More Women and Girls in STEM: How To</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>12:45–2:00 PM</td>
<td>CIEC Awards Luncheon</td>
<td>Horizon Ballroom</td>
</tr>
<tr>
<td>2:00–3:30 PM</td>
<td>ETD 455 The Dean's Panel</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>3:45–5:15 PM</td>
<td>Poster Presentations and EXPO</td>
<td>Plaza Ballrooms A &amp; B</td>
</tr>
<tr>
<td>5:30–7:00 PM</td>
<td>ETD Hospitality</td>
<td>Presidential Suite 342</td>
</tr>
</tbody>
</table>

**Friday, February 6**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30–8:45 AM</td>
<td>ETD Business Meeting and Breakfast</td>
<td>Horizon II</td>
</tr>
<tr>
<td>9:00–10:30 AM</td>
<td>ETD 525 Future of Engineering Technology Education—Graduate Programs</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>11:30–12:30 PM</td>
<td>ETD 535 Potpourri of Creative Ideas</td>
<td>Palm Canyon Suites A &amp; B</td>
</tr>
<tr>
<td>1:30–3:00 PM</td>
<td>ECETDHA Board Meeting</td>
<td>Oasis III</td>
</tr>
<tr>
<td>3:00–4:30 PM</td>
<td>ETC Board Meeting</td>
<td>Oasis III</td>
</tr>
<tr>
<td>4:30–6:00 PM</td>
<td>JET Meeting</td>
<td>Oasis III</td>
</tr>
</tbody>
</table>

**Saturday, February 7**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00–5 PM</td>
<td>ABET Workshop</td>
<td>Palm Canyon Suites</td>
</tr>
</tbody>
</table>

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Thank You for Attending CIEC 2015 — See You Next Year!
## Companion Programs at a Glance

### Wednesday, February 4

<table>
<thead>
<tr>
<th><strong>Meeting</strong></th>
<th>7:45–8:45 AM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tapestry Room</td>
<td></td>
</tr>
</tbody>
</table>

All registered companions are invited to a breakfast, organization meeting in the Tapestry Room. Mary Jo Ginther, Director of Tourism, will talk about the history of Palm Springs and places to visit in the area. Information about the special tours and events for companions will be discussed. The cost of the breakfast is included in the companion’s registration.

### Spring Art Museum

<table>
<thead>
<tr>
<th><strong>Hotel Lobby</strong></th>
<th>2:00 PM</th>
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</thead>
</table>

CIEC Companions and guests are invited to go on a walk to the Art Museum located a few blocks from the hotel. Meet Robert Krute in the hotel lobby if you are interested in joining the museum group.

*Museum entrance fee is $12.50 per person and $10.50 for seniors over 62.*

### CIEC Gala Banquet

<table>
<thead>
<tr>
<th><strong>Horizon Ballroom</strong></th>
<th>7:00–9:00 PM</th>
</tr>
</thead>
</table>

All registered companions are invited to the CIEC Gala Banquet celebrating 40 years as an organization.

### Thursday, February 5

<table>
<thead>
<tr>
<th><strong>Hotel Lobby</strong></th>
<th>8:45–11:00 AM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Palm Spring Windmill Tour</strong></td>
<td></td>
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</tbody>
</table>

When driving into the beautiful Coachella valley, one of the most striking sites you will see is the vast array of wind turbines that sprout from the desert floor. The words “wind turbine” have evolved into what the locals call windmills. The tour guide will provide interesting background on the subject of windmills, or wind turbines. Participants will get an introduction to the weather and geology of the area, learn why windmills were built in California, and why the wind blows the way it does in the mountain pass. Information about the windmills themselves, how big they are, how they work and unique features of the different designs and models will be discussed. The last stop of the tour will be a power plant where you will learn about the economics and politics of wind energy in California, the US, and around the world. This tour is approximately two hours long, and the bus will return to the hotel around 11 AM.

*Tickets required: $40 Meet in Hotel Lobby at 8:45 AM*

<table>
<thead>
<tr>
<th><strong>Hotel Lobby</strong></th>
<th>1:15–4:00 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indian Canyon Tour</strong></td>
<td></td>
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</tbody>
</table>

The Cahuilla Indians are natives to the Palm Spring area. This tour will take you to the Andreas Canyon, the second largest palm oasis in North America, where you will participate in a 30 minute nature walk. Information will be presented on the plants, animals, native lore, history and earthquake information of the area. The next stop will be the Palm Canyon, home to over 3,000 native palms. Souvenirs and snacks can be purchased at the trading post.

Learn how the native people thrived on the desert floor for hundreds of years. Your guide will identify some of the plants the Cahuilla people used for food and medicine. Learn where the water comes from in the hottest and driest desert in North America and watch for the amazing desert animals risking discovery to steal a drink from a stream. The tour lasts approximately 2.5 hours and the bus will return to the hotel by 4:00 PM.

*Tickets required: $50 Meet in Hotel Lobby at 1:15 PM*

### Friday, February 6

| **Terrace Restaurant** | |
|------------------------||
| **Breakfast** | |

Breakfast tickets will be provided for individuals who would like to have breakfast in the hotel’s Terrace Restaurant. Tickets will only be good for Thursday and will not include the tip.

<table>
<thead>
<tr>
<th><strong>Hotel Lobby</strong></th>
<th>7:00–9:00 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pool Side Day</strong></td>
<td></td>
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</tbody>
</table>

Enjoy the pool while you gaze at the beautiful mountains. No events are planned for this day.
Congratulations to the Conference for Industry and Education Collaboration on its history of providing professional development and networking opportunities for engineering administrators, professional staff, faculty and industry representatives through out the past 40 years.

We are proud to have supported this organization and will look forward to the future for continued development of outstanding conferences.

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North Carolina State University
Education is our most powerful defense.

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Our STEM program (science, technology, engineering, and mathematics) helps make science and math fascinating to students. STEM partnerships and strategies are creating a future workforce of scientists, engineers, and technicians who will join our mission to protect the world.

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See you next year... for the 41st Anniversary of the Conference for Industry & Education Collaboration

CIEC 2016

Austin, TX
February 3–5, 2016

2016 General Conference Chair
Mark T. Schuver
Purdue University