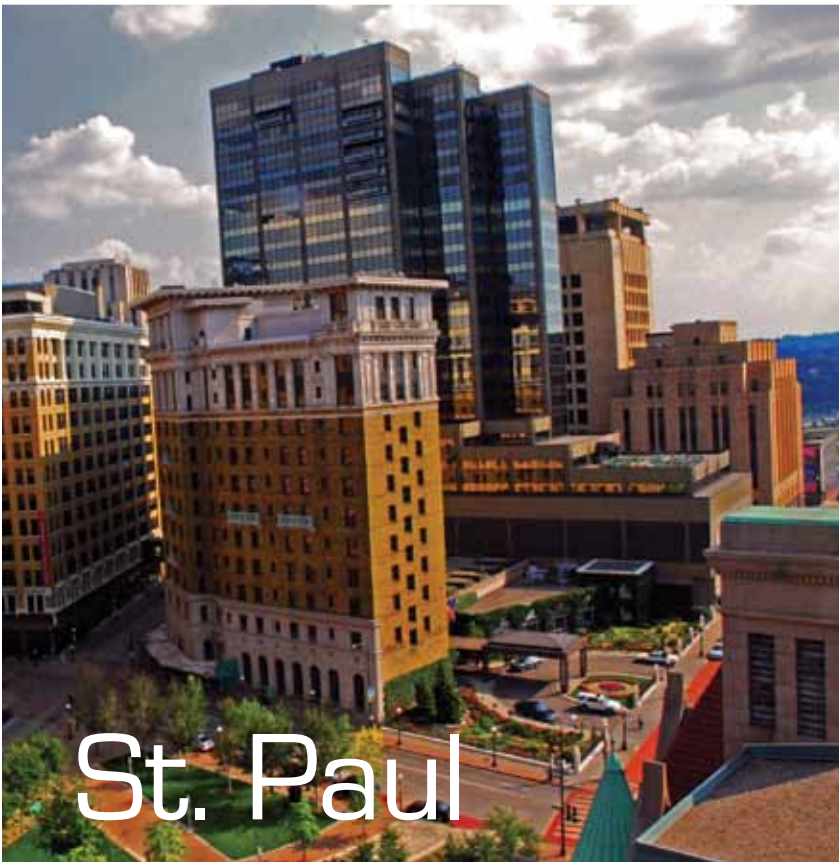


Mississippi River in Saint Paul

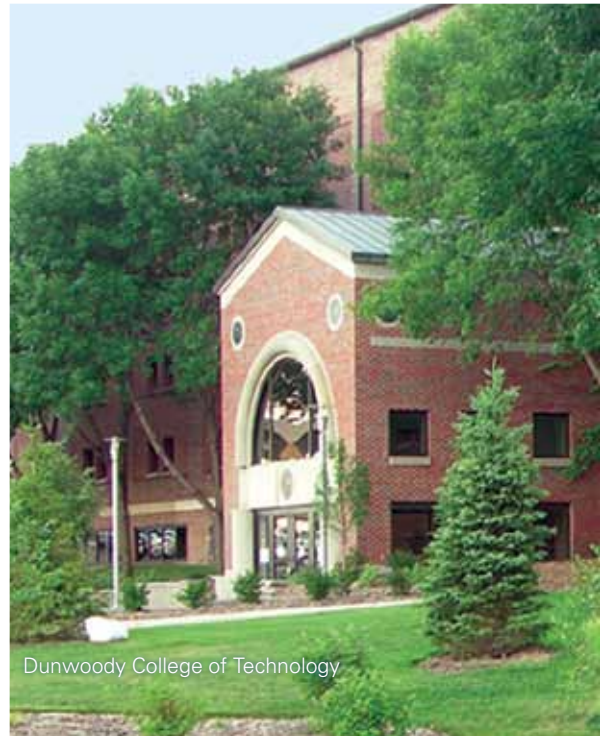


St. Paul



Minneapolis

MINNESOTA  
**ATEA  
2011**



Dunwoody College of Technology



ATEA NATIONAL CONFERENCE 2011  
MINNEAPOLIS/ST. PAUL  
DATES: MARCH 30 - APRIL 1

Conference hosted by

**Dunwoody**  
COLLEGE OF TECHNOLOGY

## WELCOME ATEA CONFERENCE ATTENDEES



### Dear ATEA Conference Attendees:

Dunwoody College of Technology is honored and excited to host the American Technical Education Association's 48th National Conference on Technical Education in Minneapolis-St. Paul. In many ways, Dunwoody and Minnesota are the birthplace of modern technical education, and we are pleased that you are joining us as we work together to teach innovation and innovate teaching.

Dunwoody is truly a unique institution. Founded on the western edge of Downtown Minneapolis in 1914, Dunwoody is a private, not-for-profit, endowed institution of higher education. It is the oldest institution of its kind in the Upper Midwest, with an international reputation for outstanding educational programs. Our success can be seen in our outstanding alumni, the consistently high rate of placement of our graduates, enrollment of more than 300,000 students spanning nearly 100 years of operation and the extensive number of special training programs ranging from robotics to radiologic technicians to automotive technology to interior design.

We hope you enjoy your visit to the Twin Cities. We are proud of our institution and we are proud of our community.

A handwritten signature in black ink that reads "Richard J. Wagner". The signature is fluid and cursive, written in a professional style.

Rich Wagner, Ph.D.

President, Dunwoody College

ATEA Trustee

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## KEYNOTE SPEAKERS



### Dr. William C. Symonds

Dr. Symonds is the director of the Pathways to Prosperity Project, which is based at the Harvard Graduate School of Education. The Pathways Project was created in 2008 to find promising solutions to our national failure to prepare many young adults for success. In February 2011, the Pathways Project released a major report summing up its research and recommendations in Washington at an event that included keynote remarks from Education Secretary Arne Duncan and other key officials. The report is titled *Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century*. The report has generated enormous interest from around the nation, including speaking invitations from organizations in more than 12 states. The Pathways Project now hopes to work with several states that would like to implement the Pathways vision for preparing their young people.

Symonds helped create the Pathways Project while he was a senior fellow at Harvard's John F. Kennedy School of Government in 2007-8. Prior to that, he spent nearly 25 years as a senior correspondent and bureau chief for *Business Week Magazine*. During his career at Business Week, he covered business in the U.S. and abroad, and led bureaus in Pittsburgh, Denver, Boston, Toronto and Rome, Italy. He also served as Business Week's chief education correspondent for many years and wrote extensively about the role of U.S. business in school reform.



### James Brazell

#### ***The Future is Here: Mainstreaming Community College Technical Programs.***

Fueled by Washington's focus on STEM (science, technology, engineering and math) and U.S. competitiveness, community colleges are emerging as a key component of national workforce strategy. Join us at ATEA to hear technology forecaster Jim Brazell's views on the role of community college technical programs in the context of accelerating technology advancement, emerging multi-skill jobs and engaging 21st century students. Discover the 21st century imperative — that creativity and innovation must connect heads and hands, as well as theory and action, to create a future that works.

Jim Brazell is a technology forecaster, public speaker and strategist focusing on innovation. Between 2008 and 2010, Jim delivered over 100 speeches to audiences ranging from the 2009 inaugural NSF High Impact Technology Exchange Conference: Educating America's Technical Workforce to the 2008 and 2009 International Conference on Technology Policy and Innovation on energy policy in Norway and solutions to the financial crisis in Portugal. Jim has keynoted and been a spotlight speaker at conferences for community colleges including: the 25th Annual Career Conference, National Council on Workforce Education and the Community College Futures Assembly. To learn more about Jim Brazell, please visit [www.jimbrazell.com](http://www.jimbrazell.com).

## KEYNOTE SPEAKERS (cont.)

**Stevie Ray**

***Have you ever found yourself in a tough situation and had to think on your feet? Has the cat ever got your tongue? Do you get frustrated while trying to persuade someone to look at things differently? If you answered yes — you won't want to miss this informative and interactive presentation.*** Stevie Ray has been a nationally recognized speaker and trainer for nearly 20 years, helping Fortune 500 companies and start-ups alike to improve communication skills, teamwork, and customer service. He is the Executive Director of Stevie Ray's Improv Company in Minneapolis, a company that has provided training and entertainment since 1989. He is a professional member of the National Speakers Association. He is also a nationally syndicated columnist for the Business Journal Newspapers and author of five books, including: *Keep Your Mind on Your Work*, *What We Laugh at...and Why*, and *Speaking in Public without Sweating in Private*.

**Rachel Lund**

***Navigating a Life Interrupted.*** Interrupted lives — this is an accurate description for all of us. Our interruptions may differ from one another and many times can be difficult to manage, no matter what or whose they are. (Priscilla Shirer). What do we do when our life gets interrupted? Many times, we run! Rachel will share personal life examples and redefine interruptions and show us that interruptions are actually an invitation to do something beyond our wildest dreams.

Rachel Lund is the owner of Motiv84All, a professional speaking and leadership business, and a principal instructor at Dunwoody College of Technology, Minneapolis, Minn. She has had the opportunity to speak in Russia, Mexico, Belarus, Puerto Rico and around the United States. She was named Women of the Year–2010, by the National Association of Professional Women. She was also named one of the eleven Women of Distinction and Master Presenter–2010 at the National Institution for Staff and Organizational Development by the University of Texas at Austin.

## CONFERENCE SCHEDULE

### > Tuesday, March 29

		ROOM
5:00–6:30 p.m.	Registration	Lower Level Foyer
6:00–8:00 p.m.	ATEA Board of Trustees Meeting <i>Presider: James King, ATEA National President, Tennessee Technology Centers, Nashville, Tenn.</i>	State 1

### > Wednesday, March 30

8:00 a.m.–6:00 p.m.	Registration	Lower Level Foyer
8:00–9:00 a.m.	ATEA Editorial Committee Meeting <i>Presider: Dr. Sandra Coyner, University of Akron, Akron, Ohio</i>	State 2
8:00–9:00 a.m.	ATEA Awards & Recognition Committee Meeting <i>Presider: Mike Mires, North Idaho College, Coeur d’Alene, Idaho</i>	State 3
9:00 a.m.–noon	ATEA Board of Trustees Meeting <i>Presider: James King, ATEA National President, Tennessee Technology Centers, Nashville, Tenn.</i>	State 1
1:00–4:00 p.m.	Business and Industry Tours Mall of America Science Museum of Minnesota 3M Center for Innovation	Hotel Lobby
4:30–6:00 p.m.	Get Acquainted with the Exhibitors	Minnesota West
6:00–8:30 p.m.	General Session and Awards Banquet <i>Keynote Speaker: Stevie Ray, Stevie Ray’s Improv Company, Minneapolis, Minn.</i>	Minnesota East

### > Thursday, March 31

7:30 a.m.–4:00 p.m.	Registration	Lower Level Foyer
7:30 a.m.–noon	Exhibits Open	Minnesota West
7:45–8:45 a.m.	Continental Breakfast with Exhibitors	Minnesota West

## CONFERENCE SCHEDULE (cont.)

<b>8:50-9:50 a.m.</b>	<p><b>Opening General Session</b></p> <p><i>Keynote Speaker: Dr. William Symonds – “Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century”</i></p>	Minnesota East
<b>10:00–10:45 a.m.</b>	<p><b>Concurrent Sessions A</b></p> <p>A1) Weld-Ed: The National Center for Welding Education &amp; Training</p> <p>A2) SMED: The Lean Discipline to Increase Productivity and Reduce Downtime (2 hrs)</p> <p>A3) Simple Things to Increase Power and Performance when Engine Machining and Rebuilding</p> <p>A4) Nanotechnology: Multiple Skills, Multiple Markets, Multiple Jobs (2 hrs)</p> <p>A5) Enhancing Design Education with 3D Printing</p> <p>A6) Managing Diversity in the Technical Professions</p> <p>A7) The Power of Service in Technical Education</p> <p>A8) Further Discussion – Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century</p>	<p>Governors I</p> <p>Governors II</p> <p>Governors III</p> <p>Governors IV</p> <p>Governors V</p> <p>State I</p> <p>State II</p> <p>State III</p>
<b>10:45–11:00 a.m.</b>	<p><b>Break in Exhibit Area</b></p>	Minnesota West
<b>11:00–11:45 a.m.</b>	<p><b>Concurrent Sessions B</b></p> <p>B1) Working with WIDS: Embedding External Standards in Technical Education Course Design</p> <p>B2) SMED: The Lean Discipline (Cont’d)</p> <p>B3) A Working Model for Student Success: The Tennessee Technology Centers</p> <p>B4) Nanotechnology: Multiple Skills, Multiple Markets (Cont’d)</p> <p>B5) Fostering Industry Partnerships through Third Party Certification</p> <p>B6) Project Based Learning in Advanced Manufacturing: Engineering and Music Collide</p> <p>B7) Technological Convergence and the Corresponding Need for a Combined Approach toward Electronics and Information Technology Curriculum</p> <p>B8) E-Tech: Technical Education for the Post-digital Age</p>	<p>Governors I</p> <p>Governors II</p> <p>Governors III</p> <p>Governors IV</p> <p>Governors V</p> <p>State I</p> <p>State II</p> <p>State III</p>
<b>12:00-1:30 p.m.</b>	<p><b>Opening General Session</b></p> <p><i>Keynote Speaker: James Brazell – “The Future is Here: Mainstreaming Community College Technical Programs”</i></p>	Minnesota East

## CONFERENCE SCHEDULE (cont.)

**2:00–2:45 p.m.**

### Concurrent Sessions C

C1) The Arkansas Delta Technology and Education Consortium Grant Prospectus	Governors I
C2) Manufacturing Partnerships: Delivering Technical Education to Just-in-time Industries	Governors II
C3) Creating a Sustainable Culture in Education	Governors III
C4) 21st Century Brake Motor Service	Governors IV
C5) Leaders in Postsecondary Technical Education Roundtable (2 hrs)	Governors V
C6) Writing for the <i>ATEA Journal</i>	State I
C7) This Experiment is Sick! Students Loving Hands-on STEM Activities (2 hrs)	State II
C8) Setting Your Course for Great Leadership (2 hrs)	State III

**2:45–3:00 p.m.**

### Break

Minnesota West

**3:00–3:45 p.m.**

### Concurrent Sessions D

D1) Cloud Computing and Virtualization in Higher Education	Governors I
D2) Health Information Technology: Preparing for Electronic Health Records	Governors II
D3) Managing Risk in Higher Education	Governors III
D4) Idaho Basic Education & Skills Training: Integrating Adult Basic Education Skills with Professional-Technical Training	Governors IV
D5) Leaders in Postsecondary Technical Educ. Roundtable (Cont'd)	Governors V
D6) 21st Century Student Services: Providing Traditional Student Services Via Non-traditional Means	State I
D7) This Experiment is Sick! (Cont'd)	State II
D8) Setting Your Course for Great Leadership (Cont'd)	State III

**4:00–4:45 p.m.**

### Regional Meetings - Get acquainted with folks from your area of the country

Region 1 (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, WV)	Governors I
Region 2 (AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA)	Governors II
Region 3 (IL, IN, OH, MI, MO, WI)	Governors III
Region 4 (AZ, CO, KS, NM, OK, TX, UT)	Governors IV
Region 5 (IA, MN, MT, NE, ND, SD, WY)	Governors V
Region 6 (AK, CA, HI, ID, NV, OR, WA)	State I

**Evening on your own – Explore Minneapolis/St. Paul**

## CONFERENCE SCHEDULE (cont.)

### > Friday, April 1

#### 8:00–8:45 a.m.

##### Concurrent Sessions E

E1) Technical Education and Public Works: How an Uncommon Partnership is Saving Money, Solving Problems and Creating Opportunities	Governors I
E2) Significant Changes to NEC2011 (2 hrs)	Governors II
E3) Development of Critical Thinking and Creativity: A Teaching Techniques Workshop (2 hrs)	Governors III
E4) Setting the GOLD Standard for Industry/Education Partnerships	Governors IV
E5) EPA 2010 and Tier IV	Governors V
E6) COE Programmatic Accreditation: An Educational Program Quality Assurance Process	State I
E7) An Innovative Approach to Teaching the Arts to the Technical Thinker	State II
E8) Designing a Web Assisted Sustainable Buildings Course	State III

#### 9:00–9:45 a.m.

##### Concurrent Sessions F

F1) The Advantages of Web-Conferencing in the Classroom	Governors I
F2) Significant Changes to NEC2011 (Cont'd)	Governors II
F3) Development of Critical Thinking and Creativity (Cont'd)	Governors III
F4) Advanced Manufacturing Design Technology	Governors IV
F5) Changing Times in the Collision Repair Industry	Governors V
F6) Considering the Carton: Educating Inside the Box	State I
F7) Making the Grade: Riverland Community College's A+ and Quality Matters Program	State II

#### 10:00 a.m. – noon

##### Brunch General Session

Minnesota East

*Keynote Speaker: Rachel Lund – "Navigating a Life Interrupted"*

Installation of ATEA Officers

ATEA Annual Business Meeting

Door Prizes

## CONCURRENT SESSIONS

### Session A: Thursday, March 31

10-10:45 a.m.

#### **A1) Weld-Ed the National Center for Welding Education and Training**

Room: Governors I

*Joel Johnson and Clint Gilbertson, North Dakota State College of Science – Wahpeton, N.D.*

The presentation will begin with a background of the National Center for Welding Education and Training (Weld-Ed) and share insight on how Weld-Ed can help educators best prepare for the next generation of welding technicians. The presentation will include information on professional development opportunities for instructors, “thinking outside the box” welding assessment techniques and an introduction to the Hypertherm plasma cutting curriculum.

#### **A2) SMED – the Lean Discipline to Increase Productivity and Reduce Downtime (2 hours)**

Room: Governors II

*Enrique Mora, MORA International Group, Inc. – Carlsbad, Calif.*

Based on the competitive strategy of NASCAR races, SMED is a way to improve practically any process. Originally, it was created to reduce changeover times in the stamping presses at Toyota, but it can be applied in multiple environments. Creativity is the only limit.

#### **A3) Simple Things to Increase Power and Performance when Engine Machining and Building**

Room: Governors III

*Paul Nelson, Northwest Technical College – Bemidji, Minn.*

This session will discuss engine modifications that can be done to improve performance on stock engines as well as performance applications. Modifications that can be done without the use of a flow bench or a head machine can be done to stock applications and improve the efficiencies of the engine and help the volumetric efficiencies of the engine. The types of modifications covered range from head porting to cam selection for non-computer controlled and some computer controlled applications and engine block machining.

#### **A4) Nanotechnology: Multiple Skills, Multiple Markets, Multiple Jobs (2 hours)**

Room: Governors IV

*Deb Newberry, Dakota County Technical College – Rosemont, Minn.*

Nanotechnology is the ability to observe, study and manipulate the world at the molecular and atomic scale will impact every market segment. Over the next decade, the need for a nano-savvy workforce will increase exponentially. This presentation will cover an overview of nanotechnology and the fundamental concepts, specific applications to different markets (with hands-on activities) as well as the myriad of career opportunities. This discussion will include how to integrate relevant aspects of nanotechnology into existing technical programs (energy, environment, biotech, chemtech, etc.) within your institution.

#### **A5) Enhancing Design Education with 3D Printing**

Room: Governors V

*Jesse Roitenberg, Stratasys – Eden Prairie, Minn.*

3D printers enable students to take their CAD files and build functional models they can see and feel. Verifying their designs with a physical model is a valuable step in learning CAD, product design and more. This presentation will cover the 3D printing process and describe how schools are currently using 3D printers in their classrooms. Come and learn how 3D printers can enhance your curriculum and provide students with hands-on opportunities while using industry chosen technology.

## CONCURRENT SESSIONS (cont.)

### A6) Managing Diversity in the Technical Professions

Room: State I

*Dr. Leo Parvis, Dunwoody College of Technology – Minneapolis, Minn.*

This presentation discusses building positive relationships and increasing productivity in your technical profession. By embracing and understanding the values of diverse groups, you can become a multicultural advocate in your field and workplace.

### A7) The Power of Service in Technical Education

Room: State II

*Petra Marquart, Hennepin Technical College – Eden Prairie, Minn.*

Providing great service in education is not simply 'nice to do' but is the core product. The intangible yet powerful influence service has on learners is not only key to students' self-confidence but provides a positive basis for the entire educational experience. In this one-hour presentation, Petra Marquart will share her insights on how everyone on staff plays a role in laying the foundation for effective learning and participates in creating an environment dedicated to providing a world-class experience.

### A8) Further Discussion – Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century

Room: State III

*Dr. William Symonds, Pathways to Prosperity Project, Harvard Graduate School of Education – Cambridge, Mass.*

This session will continue the discussion started during the opening general session on the Pathways to Prosperity Project. Join your colleagues to discuss solutions to our failure to prepare many young adults for success in the 21st Century.

## Session B: Thursday, March 31

11-11:45 a.m.

### B1) Working with WIDS: Embedding External Standards in Technical Education Course Design

Room: Governors I

*Susan Grant, Northern Wyoming Community College District – Sheridan, Wyo.*

Curriculum design in technical education just got easier! Worldwide Instructional Design System (WIDS) software offers technical educators the consistency and flexibility needed to create effective learning outcomes and assessments, and seamlessly embed external industry-specific standards into their program matrices. This demonstration shows how to embed external standards into your program using WIDS.

### B2) SMED – the Lean Discipline to Increase Productivity and Reduce Downtime (Cont'd)

Room: Governors II

### B3) A Working Model for Student Success: The Tennessee Technology Centers

Room: Governors III

*James King and Chelle Travis, Tennessee Technology Centers – Nashville, Tenn. and Dr. Carol Puryear, Tennessee Technology Center – Murfreesboro, Tenn.*

Most jobs in this economy require postsecondary training or a credential. More employers now look for some evidence of education beyond high school, even for entry level positions. Too many who enter postsecondary will never complete a degree or certificate and those who do will take, on average, five years to complete. This presentation will review a report commissioned by Complete College America that explores the Tennessee Technology Center system as a model designed to help students complete a credential quickly and enter high-skill careers and employment. For the system as a whole in 2009, the completion rate among the 9,000 students enrolled was 75 percent and the system-wide placement rate for those obtaining employment in their field of training was 83 percent, even in the present economy. Come learn and share ideas as the TTCs discuss key elements of their success.

## CONCURRENT SESSIONS (cont.)

### **B4) Nanotechnology: Multiple Skills, Multiple Markets, Multiple Jobs (Cont'd)**

**Room: Governors IV**

### **B5) Fostering Industry Partnerships through Third Party Certification**

**Room: Governors V**

*Frederick Brookhouse, Snap-on Business and Education Partnership – West Lebanon, N.H.  
and Roger Tadajewski, National Coalition of Certification Centers – Kenosha, Wis.*

The National Coalition of Certification Centers (NC3) is a network of education providers and corporations that supports, advances and validates new and emerging technology skills in the transportation, aviation and energy industry sectors. NC3 is about collaboration and authentic partnerships with transitional skills at their core, which are foundations to success. The NC3 network includes geographically dispersed schools, industry leaders and organizations that identify and establish standards and develop certifications to train students, incumbent workers and other educational institutions' instructors in the transportation, aviation and energy sectors. The vision of the NC3 coalition is to be better as a whole through a synergistic sustainable partnership between industry and education.

### **B6) Project Based Learning in Advanced Manufacturing: Engineering and Music Collide**

**Room: State I**

*Susan Ely and Maxwell Carlson, Ivy Tech Community College – Lafayette, Ind.*

In this presentation, a student from the Advanced Manufacturing program will present his creation of a vinyl record cutting device from a digital source using concepts from his coursework in PLC's, motor controls, basic electricity, pneumatics and basic automation. The instructor will describe the course objectives and present how students are able to combine their personal interests with their studies in new and innovative ways.

### **B7) Technological Convergence and the Corresponding Need for a Combined Approach Toward Electronics and Information Technology Curriculum**

**Room: State II**

*George Bricker, Southern Illinois University – Carbondale, Ill.*

Most college Electronics Technology programs include at least a basic understanding of computers and networking. Few Information Technology programs include sufficient level of electronics background. Current technologies, particularly hardware, require skill sets from both ET and IT fields. This trend toward technological convergence is becoming even more pronounced. The design, installation, configuration and maintenance of current and future technologies require personnel who are not narrowly-educated field technicians, but instead are technologists with a broad background in multiple technologies. This presentation will illustrate this need and provide a viable curriculum model for producing these technologists.

### **B8) E-TECH: Technical Education for the Post-Digital Age**

**Room: State III**

*David Hernandez, American Welding Society – Miami, Fla.*

E-TECH begins by exploring the integration of technology and education in the last decade, the ramifications of the digital revolution upon "Generation Now" and, why, for the most part, technical education was left behind. The heart of this presentation is a best practices approach to adapting technical teaching methodologies to the students of tomorrow by creating open classrooms that promote interconnectedness and collaboration to teach both the art and science of the trades.

**CONCURRENT SESSIONS (cont.)****Session C: Thursday, March 31****2-2:45 p.m.****C1) The Arkansas Delta Technology and Education Consortium (ADTEC) Grant Prospectus****Room: Governors I***Dr. Robert E. Gunter, Mid-South Community College – West Memphis, Ark.*

The Arkansas Delta Technology and Education Consortium (ADTEC) has been successful in acquiring significant funding over the past five years to fundamentally change the education and training culture of the Arkansas Delta. With over \$54 million in federal, state and private grant funding, ADTEC has gained national attention and won numerous awards for its Career Pathway model. This presentation will provide a short overview of the various grants, their application to capacity building and the career pathway model developed by the consortium.

**C2) Manufacturing Partnerships: Delivering Technical Education to Just-in-Time Industries****Room: Governors II***Mark Combs, Parkland College – Champaign, Ill.*

The demand for skilled maintenance technicians is growing as many long-time maintenance workers retire. A skilled maintenance technician partnership between manufacturers and a community college is addressing this need with success. Find out how the partnership was formed and how Parkland College is adapting classroom schedules to fit schedules to meet manufacturing partners' needs. Discover innovative, working methods and the perspectives that reach industry to help build fruitful relationships. The three-phase approach, which has both short and long-term focus, addresses the skills shortage by reaching incumbent workers, traditional college technology students and high school juniors and seniors.

**C3) Creating a Sustainable Culture in Education****Room: Governors III***Jerry Weiss, HVAC Excellence – Mt. Prospect, Ill.*

The U.S. Department of Education has charged the academic community with the task of changing our current culture to a sustainable culture. This session will address this challenge by discussing methods of infusing sustainability into existing curriculum. Additional curriculum content required to accomplish this objective will be addressed in detail.

**C4) 21st Century Brake Rotor Service****Room: Governors IV***Roger Sperling, Pro-Cut International – West Lebanon, N.H.*

This presentation will give the instructors the latest OE information regarding the changes on how brake rotors should be resurfaced to match vehicles. We will provide information on the latest OE requirements, a demonstration of our hub mount lathe and a technical workbook. Presentation time is one hour in length and may be counted toward required classroom time.

**C5) Leaders in Postsecondary Technical Education Roundtable (2 hours)****Room: Governors V**

*James King, Tennessee Technology Centers; Dr. Rich Wagner, Dunwoody College of Technology; Dr. Paul Young, Northern Wyoming Community College District; Ann Stephens, Idaho Division of Professional-Technical Education; and Tom Snyder, Ivy Tech Community College*

There is consensus that America's Technical Colleges and Institutes are critical to helping the nation meet the challenges of a 21st century global economy. Yet, our institutions face unique challenges as we compete for funds, students and a place at the table in the debate about the future of higher education in America. Topics to be discussed are attracting and retaining technical instructors; completion and certification; finding dollars for program support, equipment replacement, etc.; K-12 partnering and assessment and outcomes. Join in the conversation and add your voice and your institution's perspective to the debate.

## CONCURRENT SESSIONS (cont.)

### C6) Writing for the ATEA Journal

Room: State I

*Dr. Sandy Coyner, ATEA Journal Editor, and members of the ATEA Journal Editorial Committee*

Writing for a publication is an outstanding way to share your research, knowledge, expertise and best practices. This presentation will highlight the process of preparing and submitting a manuscript for publication in the *ATEA Journal*. Information on the writing and review process will be discussed along with suggestions provided by the editorial committee. Significant time will be allocated for questions and answers.

### C7) This Experiment is Sick! Students Loving Hands-on STEM Activities (2 hours)

Room: State II

*Carrie Leopold and Rick Hendrickson, North Dakota State College of Science – Wahpeton, N.D.*

Find out why students participating in hands-on activities are calling their experiments “sick” and why that’s not a bad thing. The North Dakota State College of Science Center for Nanoscience Technology Training has launched an Emerging Technologies Outreach Program, increasing awareness and stimulating interest in nanoscience, microelectronics, alternative energy and biotechnology. The team has met with overwhelming positive results, reaching over 6,000 students across the state of North Dakota and Minnesota this past year alone. This two-hour workshop will include a glimpse of the classroom visits (combining hands-on experiments with technical background), female-focused outreach, results to date and methods of future interaction.

### C8) Setting Your Course for Great Leadership (2 hours)

Room: State III

*Rachel E. Lund, Dunwoody College of Technology and Motiv84All – Minneapolis, Minn.*

Do you feel that you have fallen off course? How do you win with people to grow your college? In this session, we will explore how to win with people and be resonant leaders in our college and everyday life.

## Session D: Thursday, March 31

3-3:45 p.m.

### D1) Cloud Computing and Virtualization in Higher Education

Room: Governors I

*Steve Mallard, Tennessee Technology Center – Shelbyville, Tenn.*

Cloud computing and virtualization is a pool of computers that can be used by any computing device. The Cloud Computing paradigm allows for scalability and the provisioning of computers instantly. Because of the mobile world we live in and the global economy, businesses along with higher education must provide ways to be flexible and competitive. Innovation is in its infancy and solutions are growing daily. The new internet allows users access to programs and data anytime and anywhere. With Microsoft’s free Cloud computing, users can obtain 25 gigabytes of storage along with email, synchronization and Microsoft Office Live in the Cloud. Other vendors offer Microsoft Server and Workstation operating systems along with Linux solutions. These personal products allow everyone to use Cloud computing. This session will include a live demonstration of e-learning solutions, CloudShare, Microsoft Live Cloud, Virtualization along with free solutions for educators and students.

### D2) Health Information Technology: Preparing for Electronic Health Records

Room: Governors II

*Darlene Branim, Tennessee Technology Center - Oneida/Huntsville, Tenn.*

A presentation concerning the mandate of adopting electronic health records by all medical providers and how technology educators can prepare and enhance workforce development training for existing and future employees of medical facilities.

## CONCURRENT SESSIONS (cont.)

### **D3) Managing Risk in Higher Education**

**Room: Governors III**

*John Centko, Minnesota State Community and Technical College – Moorhead, Minn.*

The purpose of this presentation is to help people understand that risk management is a growing approach that college and universities are using in evaluating, prioritizing and optimizing strategic options to maximize their resources. As colleges and universities need to accomplish more with less, the need to manage risk differently has increased. This presentation will discuss how colleges and universities are identifying and managing different risk that exists at different levels in their institute including at the academic program level. Different risk management tools and systems of measurement will be presented. Also, the five different classification of enterprise risk management (ERM) – a) strategic, b) operational, c) financial, d) compliance, and e) reputational will be explored. Presentation attendees will be provided examples of tools to help measure risk so they may evaluate their department's level of risk appetite.

### **D4) Idaho Basic Education & Skills Training: Integrating Adult Basic Education Skills with Professional-Technical Training**

**Room: Governors IV**

*Mike Mires and L. Rex Fairfield, North Idaho College – Coeur d'Alene, Idaho*

This program pairs and/or integrates Adult Basic Education instructors with Professional-Technical Education instructors in the classroom to advance students in both basic and professional-technical skills. Classes are held on the North Idaho College campus and are specific to programs building toward degrees and/or certificates leading to high-demand jobs while offering integrated instruction and additional assistance with homework, projects and test preparation. This transition project challenges the traditional notion that students must first complete all levels of basic education before they can begin workforce training.

### **D5) Leaders in Postsecondary Technical Education Roundtable (Cont'd)**

**Room: Governors V**

### **D6) 21st Century Student Services – Providing Traditional Student Services via Non-Traditional Means**

**Room: State I**

*John Hodgson, Tennessee Technology Center – Jackson, Tenn. and Jan Latimer, Tennessee Technology Center – Paris, Tenn.*

Over the past several years, there has been a growing use of advanced technologies to serve students both on and off-campus. In the rush to develop and deliver non-traditional instruction, many postsecondary institutions tend to lag in developing new methods for delivering student services. Institutions often need help in envisioning what services to provide and how to design them. Ways to use these advanced technologies in student recruitment, retention, counseling and follow-up will be explored. This presentation will focus on good, basic practices in delivering these services via a variety of formats.

### **D7) This Experiment is Sick! Students Loving Hands-on STEM Activities (Cont'd)**

**Room: State II**

### **D8) Setting Your Course for Great Leadership (Cont'd)**

**Room: State III**

## CONCURRENT SESSIONS (cont.)

### Session E: Friday, April 1

8-8:45 a.m.

#### **E1) Technical Education and Public Works: How an Uncommon Partnership is Saving Money, Solving Problems and Creating Opportunities** Room: Governors I

*Mike Colestock, Hennepin Technical College – Eden Prairie, Minn.*

Hennepin Technical College's Public Works Maintenance Technician diploma is a great example of a technical school creating a unique program around unmet needs in the marketplace. The new classes create opportunities for both students and employers that are exclusive to the region. Educators will learn how Hennepin Tech used its existing capacity to create value in an uncommon industry partnership.

#### **E2) Significant Changes to NEC2011** (2 hours) Room: Governors II

*Chad Kurdi, Dunwoody College of Technology – Minneapolis, Minn.*

The National Electrical Code (NEC) is the most widely used electrical standard in the United States. Many electrical professionals use it to design, install and maintain electrical systems for different types of occupancies, equipment and conditions. NEC2011 is the latest version and expected to be adopted by the state of Minnesota in July 2011. This presentation will highlight and explain the significant changes in NEC2011 and how it will affect the way we design and install electrical systems. This presentation is approved by MN DOL&I as 2 CEH for licensed electricians.

#### **E3) Development of Critical Thinking and Creativity: A Teaching Techniques Workshop** (2 hours) Room: Governors III

*Dr. Dianna Nicholls, Dr. Linda de Charon, and Dr. Ron Hutkin. University of Phoenix*

Critical and creative thinking are essential to problem solving, decision making and effective practice. Learning to think critically and creatively alters the outcome of technical education from simply gaining knowledge to gaining the abilities to analytically and innovatively explore that knowledge. Based on personality theory, students will typically have intrinsic strength in either critical thinking or creativity, but not both. This workshop will assist technical instructors in recognizing their students' natural tendencies and create lesson plans that empower development of their ability to think both critically and creatively.

#### **E4) Setting the GOLD Standard for Industry/Education Partnerships** Room: Governors IV

*Bethany Clem, Calhoun Community College – Decatur/Huntsville, Ala.*

What do you get when you blend Calhoun Community College, Alabama Industrial Development Training Institute, The Alabama Community College System, 13 robotics industry manufacturers and several four-year universities? You get the Alabama Robotics Technology Park. Come see how the State of Alabama provides world-class training to meet the labor needs of the automation and robotics industry from all over the world.

#### **E5) EPA 2010 and Tier IV** Room: Governors V

*Frank Romano, Cummins NPower, LLC – White Bear Lake, MN*

This presentation will take a look through the EPA / EU standards for today and tomorrow. How do we meet the standards today, and how will we meet them tomorrow.

## CONCURRENT SESSIONS (cont.)

### **E6) COE Programmatic Accreditation: An Educational Program Quality Assurance Process**

**Room: State I**

*Dr. Harry Bowman, Council on Occupational Education – Atlanta, Ga.*

This workshop will describe an alternative to institutional accreditation offered by the Council on Occupational Education (COE) that complements its institutional accreditation activities. COE developed and initiated a programmatic accreditation process as an alternative to institutional accreditation for occupational education program administrators in comprehensive regionally-accredited educational institutions who desire a program quality assurance evaluation that emphasizes job relevance and outcomes. The relevance and outcomes are as indicated by completion rates, placement rates and, when applicable, licensure examination pass rates. The workshop will be of special interest to comprehensive associate degree-granting institutional representatives who have major institutional units, which specialize in workforce development through career and technical education programs.

### **E7) An Innovative Approach to Teaching the Arts to the Technical Thinker**

**Room: State II**

*Arlinda Henderson and Jenny Saplis, Dunwoody College of Technology – Minneapolis, Minn.*

We usually associate technology with logical, analytical concepts and processes, but everything technologically innovative begins in the imagination and has to do with creativity. Can creativity be taught? Is creativity even important in technical instruction? We can use technologies in conventional ways as well as imaginative ways. We can appreciate the arts as a vehicle to understanding history, culture and the human condition and how those experiences and real time conditions are conducive to the essentiality of creativity. In this session, participants will be engaged in left brain/right brain conversations, relate models of creativity to actual or contrived situations and explore and practice spontaneous and analytical creativity through problem solving exercises. As educators, we should examine different innovative approaches for teaching the "Technical Thinker" to think critically.

### **E8) Designing a Web Assisted Sustainable Buildings Course**

**Room: State III**

*John Zeit, Stark State College of Technology – Canton, Ohio*

This session will review the design process and structure of a web-assisted course in sustainable building service systems. It will look into modes of instruction that allow an instructor to reduce face to face seat time while making the online experience robust.

## **Session F: Friday, April 1**

**9-9:45 a.m.**

### **F1) The Advantages of Web-Conferencing in the Classroom**

**Room: Governors I**

*Mary Kay Riendeau, Dan Kugel, Lori Hommerding, Mesabi Range Community and Technical College – Virginia, Minn.*

Technology is changing our educational system and expanding our capacity to provide learning opportunities in innovative and non-traditional ways that better meet the needs of students. This dynamic presentation will demonstrate the use of web conferencing in the classroom to deliver courses or programs simultaneously to multiple locations. In comparison to interactive television (ITV) course delivery, web conferencing is much more cost-effective for institutions and has greater capabilities in providing live-feed connections with students in their numerous remote locations. Attend this session to learn about a user-friendly, inexpensive web conferencing tool that can positively impact how to reach students and deliver courses efficiently and effectively.

### **F2) Significant Changes to NEC2011 (Cont'd)**

**Room: Governors II**

## CONCURRENT SESSIONS (cont.)

**F3) Development of Critical Thinking and Creativity: A Teaching Techniques Workshop (Cont'd)** Room: Governors III

**F4) Advanced Manufacturing Design Technology** Room: Governors IV

*Troy Davis and Rebecca Utter, Central Community College – Hastings, Neb.*

Learn about integration of computers and online learning software in the classroom. This high-tech training environment introduces students to the latest advances earlier in their Advanced Manufacturing curriculum. Our goal is to have our students exceed industry's expectations upon graduation. Part of our core Advanced Manufacturing degree includes Manufacturing Skills Standards Certification (MSSC). This is a great benefit to students as well as all incumbent workers to secure their own future in manufacturing.

**F5) Changing Times in the Collision Repair Industry** Room: Governors V

*Dan Wittek and Jeff Ford, 3M – St. Paul, Minn.*

In this discussion, we will cover some of the new technology changes in the collision repair industry. These would include new paint changes and the corresponding product changes needed to maximize the productivity with these changes. We will also talk about the changes in steels and how they impact the industry. In addition, we will look at consolidation and how it is impacting the shop floor.

**F6) Considering the Carton: Educating Inside the Box** Room: State I

*Pete Rivard, Dunwoody College of Technology – Minneapolis, Minn.*

This presentation will showcase the Graphic and Printing program's innovative, challenging and wildly popular package design suite: Structural Design for Packaging and Graphic Design for Packaging. These courses pair up a client and designer who collaborate over a six-month time frame on the concept, design and prototyping of a folding carton for a specific and singular product. Over the arc of this project, the student learns the dual roles of structural and graphic designer, gains competence in both CAD and graphics software, learns how to operate and maintain a CAD table, presents progressive stages of work and encounters subject matter ranging from structural materials to branding and legal requirements.

**F7) Making the Grade: Riverland Community College's A+ and Quality Matters™ (QM) Programs** Room: State II

*Kari Busch, Lori Jensen, Sheryl Barton and Suzette Overby, Riverland Community College – Albert Lea, Minn*

Riverland's A+ program is an innovative program developed to support faculty in the pursuit and acquisition of industry-recognized program accreditations to align career and technical programs' curricula with national skills standards highly desired by industry leaders and employers. This aggressive plan aims for 100 percent participation of career technical programs by 2015. Further enhancement to the quality of instruction is the adaptation of Quality Matters™ (QM) as a faculty professional development program. QM provides standards to the quality of online and blended courses with the expectation to increase student retention, learning and satisfaction through course design. Participants will learn about Riverland's plan, approach and step by step process to support faculty and their programs, both academically and financially. Presenters will share the college's goals in creating continuous improvement programs to enhance student learning as well as what they have learned along the way as well as their success in achieving excellence in teaching and learning. Samples of related forms and materials will be shared. ATEA 48th NATIONAL CONFERENCE ON TECHNICAL EDUCATION

## Tradeshow Directory

Exhibitor	Website
Amatrol, Inc.	<a href="http://www.amatrol.com">www.amatrol.com</a>
American Technical Education Association	<a href="http://www.ateaonline.org">www.ateaonline.org</a>
American Technical Publishers	<a href="http://www.go2atp.com">www.go2atp.com</a>
ATEA's 2012 National Conference	<a href="http://www.ateaonline.org">www.ateaonline.org</a>
Delmar, Cengage Learning	<a href="http://www.cengage.com/delmar">www.cengage.com/delmar</a>
DEPCO, LLC	<a href="http://www.depcollc.com">www.depcollc.com</a>
Dunwoody College of Technology	<a href="http://www.dunwoody.edu">www.dunwoody.edu</a>
Energy Concepts, Inc.	<a href="http://www.eci-info.com">www.eci-info.com</a>
ESCO Institute	<a href="http://www.escoinst.com">www.escoinst.com</a>
Goodheart-Willcox Publisher	<a href="http://www.g-w.com">www.g-w.com</a>
Green Mechanical Council	<a href="http://www.greenmech.org">www.greenmech.org</a>
Hampden Engineering Corp.	<a href="http://www.hampden.com">www.hampden.com</a>
HVAC Excellence	<a href="http://www.hvacexcellence.org">www.hvacexcellence.org</a>
Industrial Press, Inc.	<a href="http://www.industrialpress.com">www.industrialpress.com</a>
James Brazell	<a href="http://www.jimbrazell.com">www.jimbrazell.com</a>
Minnesota State Colleges & Universities	<a href="http://www.mnscu.edu">www.mnscu.edu</a>
National Technical Honor Society	<a href="http://www.nths.org">www.nths.org</a>
Nida Corporation	<a href="http://www.nida.com">www.nida.com</a>
Pro-Cut International	<a href="http://www.procutusa.com">www.procutusa.com</a>
Project Management Institute	<a href="http://www.pmiteach.org">www.pmiteach.org</a>
RCR Technology Corporation	<a href="http://www.rcrtechnology.com">www.rcrtechnology.com</a>
Stratasys 3D Printers & Production Systems	<a href="http://www.stratasys.com">www.stratasys.com</a>

**Thank you to all our 2011 Exhibitors!**

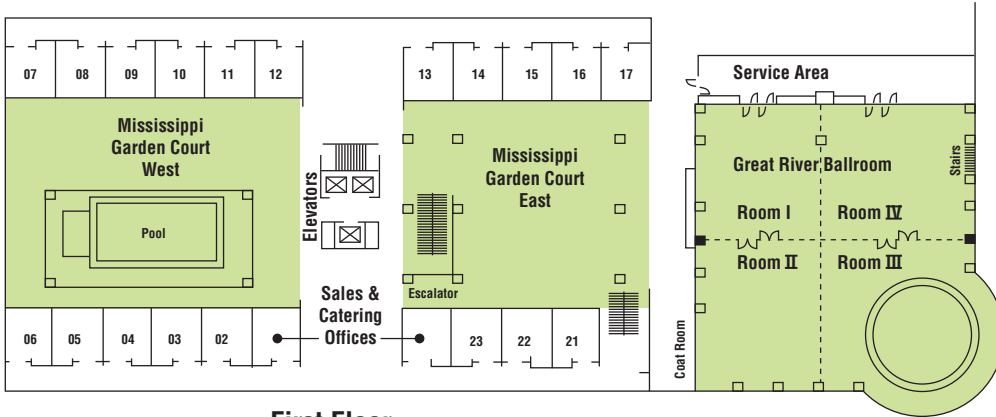
# Crowne Plaza Hotel Map



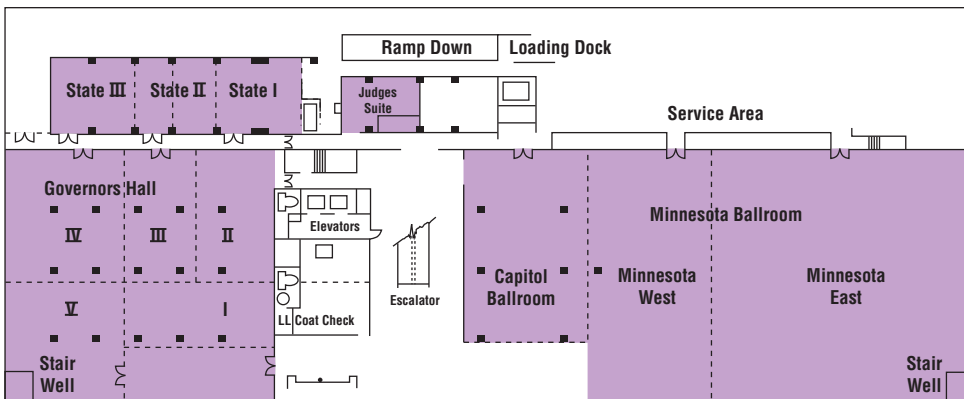
**CROWNE PLAZA**

ST. PAUL - RIVERFRONT

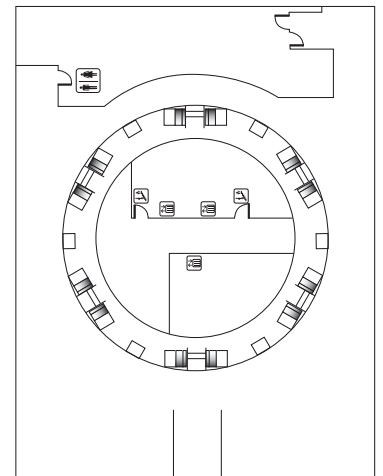
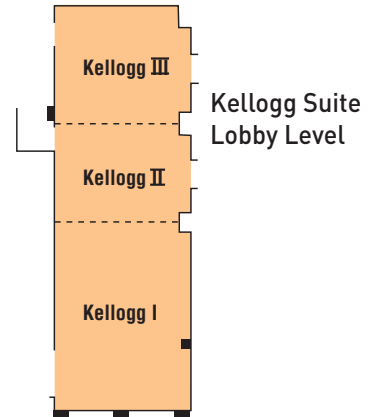
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