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April 3-5 Indianapolis

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ATEA JOURNAL

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Cover photo: Titan Gilkey, CEO, Titans of CNC, featured keynote speaker at upcoming National Conference

The ATEA JOURNAL is the official journal of the American Technical Education Association, Inc., and is published twice annually (fall and spring) by the American Technical Education Association, Inc., Dunwoody College of Technology, 818 Dunwoody Boulevard, Minneapolis Minnesota 55415, 612-381-3315, e-mail skrebsbach@dunwoody.edu. Web site www.ateaonline.org. All members of the Association receive this journal. Corporate/business members $500 per year. Institutional members $500 per year. Individual members $75 per year. Retired persons $30 and student members $15. Life membership $600.

The American Technical Education Association (ATEA) was founded in 1939 and incorporated as a non-profit professional education association in 1960. In 1973 the national headquarters was moved from Delmar, New York to Wahpeton, North Dakota. In 2012 ATEA relocated to the Dunwoody College of Technology, Minneapolis, MN. ATEA is the only autonomous and non-affiliated international association devoted solely to the purposes of postsecondary technical education. ATEA is the leading association for the postsecondary technical educator with emphasis on professional development. Educators and individuals from business and industry come together at conferences to discuss the latest trends and developments in technology. The organization is dedicated to excellence in the quality of postsecondary technical education with emphasis on practical teaching ideas and best practices.

PAGE 2

American Technical Education Association

Values:
To communicate the role and importance of technical education
To share best practice
To build professional relationships
To identify trends that affect technical education

Mission
The organization is dedicated to excellence in quality of postsecondary technical education focusing on practical teaching ideas and best practices. ATEA recognizes outstanding performance and leadership and provides a network for career connectivity.
From the President

Sandra Gehlen Krebsbach, Ph.D., M.S.

Thank you for participating with ATEA.

Teamwork, communication and adaptability are the highest valued soft skills

Educators, students and employers go as team to trade shows.

Universities are acquiring/absorbing two year technical programs

And, closing with trends identified by ATEA members and conferences:

Student, faculty, program and business will be awarded.

Sign and breakouts with the China Educational Association International Exchange. ATEA Outstanding

ATEA will offer our first student competition called ATEA 3Dx. The competition will include student projects focusing on 3D technologies and showcased at our annual conference in Indianapolis. Students will have the opportunity to win cash prizes for the top three projects as determined by a panel of industry judges. Details of the competition will be released in January through the ATEA website. Special thank you to Dassault Systems for their continued support of technical education.

From the Executive Director

Executive Director and Managing Editor

This issue points up the strength and range of leadership in ATEA and new programming. President Bryan Albrecht introduces a new competition, ATEAx-3D. The fall ATEA board meeting called for the formation of an ATEA Business Council and International Education Committee.

The Board acted on ATEA leadership: Sue Smith, VP of the School of Manufacturing, Engineering and Applied Sciences, Ivy Tech, will become the president at the 2019 ATEA Annual Meeting in Indianapolis, April 5. The Board approved 1st Vice President, Mary Kaye Bredeson, Ex. Director, COE for Aerospace and Advanced Manufacturing Everett, Washington, and 2nd VP Dr. Jon Connolly, President of Sussex County Community College, Newton, New Jersey. Biographies are on the Board pages.

The Board appointed three new members: President Ryan Purdy, Mid Plains Community College, North Platte, McCook, Broken Bow and Valentine, Nebraska; Mr. Jim New, Vice President for Administration and Finance, Truckee Meadows Community College, Reno, Nevada; and Dr. Ann Bolman, President of Western Dakota Technical Institute, Rapid City. Congratulations to them and we look forward to their insight and leadership.

ATEA fall conferences were held in Kansas City, Kansas and Waltham, Massachusetts. Region 5 was chaired by Cliff Smith, Associate Chief of Facilities and Services, Kansas City Kansas Community College and Region 1 was chaired by Al Bunshaft, SVP, Dassault Systemes, in Waltham Massachusetts. Cliff and Al delivered extraordinary conferences and tour experiences. Their conferences are featured on Region 1 and Region 5 pages.

A Region 5 President’s Roundtable was held in Kansas City. The Roundtable brought forward areas of common interest, concern and proposed solutions. Thank you to Region 5 Presidents Purdy, Mickelson, Brinhall, Mosier and Cocco; leaders Smith, Stiles, Englert, Jacobsen, Sherrard, and Bunshaft; and participants Adams and Norbury from Washburn Tech for participating.

Ivy Tech Community College Indiana is the host of the ATEA national conference, “Racing to Industry 4.0,” April 3-5, in Indianapolis. The program, speakers, tours and events are all on the national conference pages. There is a reception at the Indianapolis Motor Speedway Museum and dinner at the Lucas Oil Stadium. Thank you Amatrol, Inc. for being a platinum sponsor and Autodesk for being gold conference sponsor. Sponsorships are available and registration is open. We welcome sponsors, trade show vendors and breakout presenters.

At the national conference, there will be tribute to the late Dr. Harry Bowman, ATEA Trustee and a MoU signing and breakouts with the China Educational Association International Exchange. ATEA Outstanding student, faculty, program and business will be awarded.

And, closing with trends identified by ATEA members and conferences:

Universities are acquiring/absorbing two year technical programs

Project learning is the mode of learning for engineering programs and schools

Educators, students and employers go as team to trade shows.

Teamwork, communication and adaptability are the highest valued soft skills

Thank you for participating with ATEA.

Sandra Gehlen Krebsbach, Ph.D., M.S.

Announcement from ATEA President Bryan Albrecht:

2019 brings with it an exciting new opportunity for ATEA member colleges. In partnership with Dassault Systems ATEA will offer our first student competition called ATEA 3Dx. The competition will include student projects focusing on 3D technologies and showcased at our annual conference in Indianapolis. Students will have the opportunity to win cash prizes for the top three projects as determined by a panel of industry judges. Details of the competition will be released in January through the ATEA website. Special thank you to Dassault Systems for their continued support of technical education.

Respectfully,

Bryan

Dr. Bryan Albrecht

President & CEO

Gateway Technical College

Dear Colleagues,

As we bring in a new year I couldn’t be more proud to share with you that our association is setting the pace for technical education. In 2019 we will engage a new industry advisory council to help guide our path. We opened an exciting dialog through a MOU with the Chinese Technical Education community and are building off two highly engaged and successful technical education industry deep dive conferences at the Giga Factory and Dassault Systems.

Foundational to our Association is you our members. You hold the key to our success. Participation in conferences, award nominations, special events is what separates great associations from average membership organizations. We want ATEA to be one of the great Associations of our time.

Holding the key is not enough, this year I ask that you turn the key and race with us into the future. Later this year I will turn “my key” over to President elect Sue Smith and I have all the confidence that she will take us on a exciting journey. Sue has planned a remarkable conference in Indianapolis, the racing capital of the world and you won’t want to miss it.

Serving as your ATEA President is something that I treasure as a highlight in my career. Members of your board of directors have demonstrated passion and commitment to serve ATEA. Our Executive Director, Sandra Krebsbach, is a “Champion” for the values of technical education. I have met many new friends and colleagues through my ATEA membership so this is not good-bye, but rather, let’s go! Let’s go with Sue and let’s go with Sue Smith and I have all the confidence that she will take us on a exciting journey. Sue has planned a remarkable conference in Indianapolis, the racing capital of the world and you won’t want to miss it.

Respectfully,

Bryan

Dr. Bryan Albrecht

President & CEO

Gateway Technical College

ATEA National Conference
Executive Committee leadership 2019-2021
Will be installed at the 2019 Annual Meeting in Indianapolis

Sue G. Smith is the Vice President for the Technology & Applied Sciences Division and Corporate Executive for Advanced Manufacturing at Ivy Tech Community College. Ms. Smith has been with Ivy Tech for over 25 years in various roles including Corporate College, Workforce Development, and now in the academic division. Currently as vice president, Smith has statewide responsibility for and oversight of all Ivy Tech’s technology and applied science degree programs. Smith is aligning the division statewide with industry needs by engaging corporate partners and stakeholders.

Mary Kaye Bredeson is the Executive Director for the Center of Excellence (COE) of Aerospace and Advanced Manufacturing at Everett College, Everett Washington. She was appointed in 2003. Mary Kaye focuses on a targeted industry that drives the state’s economy and is built upon a reputation for fast, flexible, quality education and training programs. The COE provides a central point of contact for industry employers to share their workforce needs with all 34 community and technical colleges within Washington state as well as other education and training providers. The COE for Aerospace has been very successful in implementing numerous state and federal Department of Labor grants focusing on building training capacity and transitioning students into high demand aerospace and advanced manufacturing jobs.

Jon Connolly, Ph.D. is the president of Sussex Community College, Newton, New Jersey. Prior to this appointment to the presidency in 2015, he served in multiple administrative roles in institutions in Maine and Wyoming. He is a graduate of Colby College, Waterville, Maine, with majors in Biology and Geology-Biology; holds a masters of Forest Science from Yale University School of Forestry and Environmental Studies and a Ph.D. in Biological Science from the University of Maine. He has published many peer-reviewed research articles, and has presented at numerous conferences to international audiences and at many higher education leadership seminars.

3 New Board Members

Jim New started work in an administrative support position at a small junior college in rural Utah. Shortly afterward, he began teaching computer technology classes, which led to a faculty position at Truckee Meadows Community College in 1998. He served as an academic department chair, associate dean, dean, and now as vice president of finance and administrative services. His background in managing instructional programs has enabled him to articulate the impact of fiscal decisions to peers professionally trained in accounting and fiscal management but do not have the teaching background. He is passionate about the role community and technical colleges play in the economic vitality of our communities and the nation.

Dr. Ann Bolman, President Western Dakota Tech, Rapid City, South Dakota

President Bolman has twenty eight years of experience in two-year colleges, beginning as a faculty member in 1990. She moved through the instructional portion of higher education to her current position as president at Western Dakota Tech. She has been a dean, vice president, and now president gives her a board perspective on the critical need for professional development in technical education. She works with industry partners on a daily basis and enjoys strengthening partnerships. Dr. Bolman holds three degrees, bachelors and masters from Texas A&M, a member of the Texas A & M system, and a doctor of education from Texas A & M.

Mr. Ryan Purdy was appointed President for the 18-county Mid-Plains Community College service area in May 2012 after serving the same position in the Interim Capacity since January 2012. Prior to this appointment, Ryan had served as the Assistant Vice President of Administrative Services since May 2003 and the Director of Accounting from March 2002 until May 2003. The MPCC service area encompasses three major campuses, four community campuses, more than 30 learning sites and over 20,000 square miles of west-central and southwest Nebraska. Growing up on a farm in rural central Nebraska, Ryan developed a passion for technical education wants to continue to advocate for the value of technical education to society. Ryan holds a Bachelor of Science in Business Administration with an emphasis in Accounting from Nebraska Wesleyan University in Lincoln, NE. He holds a Master of Business Administration degree from Chadron State College in Chadron, NE.

Dr. Ryan Purdy, President for the 18-county Mid-Plains Community College service area, Nebraska

Approval of moving Utah into Region 6 due to aerospace manufacturing and aviation regional support in Idaho with Salt Lake City.

Approval of a committee to form an ATEA International Institutional Membership.

Approval of moving Utah into Region 6 due to aerospace manufacturing and aviation regional support in Idaho with Salt Lake City.

Approval of slate of officers for 2019-2021

Approval of committee to form an ATEA Business Council

Approval of slate of officers for 2019-2021

Approval of slate of officers for 2019-2021

Appointment of new board members for 2019

Dr. Ryan Purdy is the Vice President for Finance & Administrative Services at Truckee Meadows Community College, Reno, Nevada.

Mr. Jim New

Vice President for Finance & Administrative Services at Truckee Meadows Community College, Reno, Nevada.

Dr. Jon Connolly

ATEA President, Vice President of the School of Advanced Manufacturing, Engineering and Applied Science, Ivy Tech Community College, Indians.

Mary Kaye Bredeson

ATEA 1st Vice President, Executive Director of the Center of Excellence for Aerospace Space and Environmental Studies and a Ph.D. in Biological Science from the University of Maine. He has published many peer-reviewed research articles, and has presented to international audiences and at many higher education leadership seminars.

Dr. Ann Bolman

President Western Dakota Tech, Rapid City, South Dakota

Dr. Ryan Purdy

President for the 18-county Mid-Plains Community College service area, Nebraska

Mr. Jim New

Vice President for Finance & Administrative Services at Truckee Meadows Community College, Reno, Nevada.
MOU with China Education Association
International Exchange

Memo of Understanding for institutional member exchanges between the American Technical Education Association ATEA and the China Education Association for International Exchange CEAIE signed on October 18, 2018 at the 2018 CEAIE International Conference and Expo held in Beijing.

The signing was at the 6th China/US Vocational/Community College Presidents Conference. The theme of the conference was “Vocational Education Boosts Global Industrial Transformation.” The MOU between the organizations will facilitate the member institutions of each organization who wish to arrange visits and meetings. The member institutions will determine the programs and topics in the exchange.

L-R: Dr. Lin Zhou, President of Bates Technical College, Tacoma, Washington and ATEA Board of Trustee at the signing, Yu Yougen, Director of TVET Programs and Professional Training Department, and Dr. Sandra Gehlen Krebsbach, ATEA Executive Director.

Dr. Sandra Gehlen Krebsbach, Executive Director of ATEA and Ms. Shen Xuesong, Deputy Secretary-General, CEAIE signed the agreement.

Dr. Gehlen Krebsbach presenting a keynote address on “Scaling Technical Education for Incentivized Industries,” October 18, 2018
“Presidents’ Roundtable” October 3, 2018, Kansas City Kansas Community College, host of ATEA region 5 conference, October 4-5.

ATEA invited presidents from Region 5 to attend a Roundtable to identify key topics and issues in the region. ATEA Board President, Dr. Bryan Albrect, President and CEO of Gateway Technical College, Racine/Kenosha, Wisconsin moderated the discussion.

Attending were:
- Dr. Greg Mosier, President, Kansas City Kansas Community College, Kansas City, Kansas, host of Region 5 2018
- Mr. Cliff Smith, Associate Chief of Facilities and Services, Kansas City Kansas Community College, Kansas City, Kansas, ATEA Board Trustee and Chair of Region 5 2018.
- Dr. Carrie Bistrom, President, Minnesota State Community and Technical College host of Region 5 2017.
- Mr. Ryan Purdy, President of Mid-Plains Community College, host of Region 5 2016.
- Dean Clark Coco, Dean of Washburn Institute of Technology - Washburn Tech, Topeka, Kansas.
- Kerry Notthoff, Associate Director of Admissions, Washburn Tech
- Alan Beam, Director for Instruction of Washburn Tech.
- Dr. Ann Bolman, President of Western Dakota Technical Institute, Rapid City, South Dakota.
- Dr. Scott McKeown, President, Dawson Community College, Gladstone, Montana.
- Mr. Ron Plechakian, Interim Dean of Career and Tech, South Central Technical College, North Mankato, Minnesota.
- Dr. Mark Engler, Vice President, Gillette College, Gillette, Wyoming and ATEA Board Trustee.
- Ms. Diane Stiles, Vice President for Academic Affairs, Lake Area Tech, Watertown, South Dakota.
- Dr. Carrie Brimhall, President, Minnesota State Community and Technical College host of Region 5 2017.
- Mr. Brooks Jacobsen, Supervisor of Electronics and Robotics Programs, Lake Area Tech, Watertown South Dakota, ATEA Board Trustee.
- Dr. James Sherrard, Chair, Nuclear Programs, Three Rivers Community College, Norwich, Connecticut, ATEA Board of Trustee.
- Ms. Diane Stiles, VP Lake Area Tech, created a Workforce Alignment Interdisciplinary Degree, which took all of the statewide electives that are under the technology division and asked the employer to create the certificates they needed. LATI adds courses if needed. The pathways created by employers are on the website for students to see what is needed by those employers. Cummins and Honda are two of the employers. The students in high school know they can take the dual credit course and get on the pathway before they graduate.
- Dr. Jim Sherrard, Three Rivers Community College, Norwich, Connecticut, has sustained a supportive relationship with the nuclear industry for the past thirty years. He is a retired military who moved to education at the same time as the Three Mile Island Nuclear disaster. Federal law required an education component for power plant licensure. He created the program that trains for operating power plants and nuclear medicine. His program receives $400,000 per year from businesses that want to train their own workers.

Key topics
Technical educational institutions renovation and repurpose of vacated buildings spurs growth. Kansas City Kansas Community College revised Wyandotte County.

KCKCC has two campuses, the main campus and the Dr. Thomas R. Burke Technical Programs Center that are a mile and a half apart. Between them is an Automotive Technologies Program, Automotive Collision and Fire Science Training Center. The automotive programs are in what was originally an auto dealer and service area. The Technical Programs Center is in a former Walmart and adjacent strip mall. The renovation of those buildings is a credit to Dr. Burke, former President and to Cliff Smith, former Dean of Technical Programs and now Associate Chief of Facilities and Services. Cliff pointed out the role of government decision makers to have the foresight to fund the renovation. The renovation and use by the college has spurred economic growth and a building boom in Wyandotte County which is now growing twice as fast as the counties in the area. There are plans for 29 projects totally $647M for the adjacent area. In the past five years there has been $18 in investment in the area and thousands of jobs. The office park has 1300 jobs.

Dean Clark Coco, Washburn Tech Topeka, Kansas, commended Cliff Smith on his vision of what the technical education center could be and his tenacity that delivered it. President Mosier, KCKCC, spoke of Cliff Smith’s accomplishments with the Technical Education building. “Cliff was the architect of this building, and the driver of how successful it is.”

Importance of letting the community and technical education stakeholders know how the college is contributing.

Volunteering skills beyond the campus is one way. KCKCC helped the Agriculture Hall of Fame with HVAC repairs.

KCKCC provides community service for low income and elderly in their skill areas as part of their learning experience.

Importance of corporate and business relationships for colleges and for ATEA. Employers are looking for skilled workers with knowledge, technical skills and soft skills.

Al Busnhaft, ATEA Board of Trustee and SVP, Dassault Systems producer of SolidWorks software, talked about businesses using digitization to plan their products and placement. He finds that industry is supporting experiential learning both for skill development and for practicing the soft skills of reliability, trustworthiness, communication, problem solving as well as engineering and scientific skills. Business leaders realize they need to ensure that their businesses have the personnel resources and skills to keep the business viable.

Direct experience with the speed of change in manufacturing instruction and lab experience.

Brooks Jacobsen, Supervisor of Electronics and Robotics, LATI, takes his students every two years to the International Manufacturing Technology Show, ITMS, in Chicago. It expands their thinking from a college or lab experience to a global perspective of automation, robotics, and software integration. It is a 13 hour drive but worth it. Brooks has attended with his students for the past 12 years. He found the show has transitioned from a focus on machines, lathe, and mill, water jets to everything with a robot or cobot attached to it. LATI is getting two cobots with automated guided vehicles. Automated guided vehicles in the classroom and labs were not part of a robotics instructors thinking two years ago. An example of how fast and extensive change is, several years ago 3D printing had a few booths and now it fills an entire building. The speed of change has educators, students and industry partners attending the same trade shows all learning at the same time.

Bryan Albrect commented that Industry 3.0 based on CNC machines and PLC’s is 40 years old. Industry 4.0 is machines communicating with each other. Industry 5.0 is the personalization of the product line and equipment, built by robots that respond to one another.

How to leverage the rapid response requests, from business partners, even though you may not have the internal capacity to make it happen?

Clark Coco recommends industries, “to not only think long term beyond product design and placement but also to how you are going to get a talented workforce.” One way to get the workforce is invest in coaching and mentoring to identify pathways of a career that starts with the positions available when they graduate from a technical program.”

Students, faculty and industry need to take a close look at a pathway, what are the influences on the pathway, what jobs are going to be out, and what skills are going to be for someone successful with competencies in that area.

Ann Bolman, President of Western Dakota Tech finds the same challenge and solutions of customized certificates but is needed by those employers. Cummins and Honda are two of the employers. The students in high school know they can take the dual credit course and get on the pathway before they graduate.

Bryan Albrect, an individualized degree is almost an individualized customized certificate for Industry 5.0.

Mark Engler, Vice President, Gillette College, commented that employers in Wyoming are interested in knowing specific skills so the interest is in less than a degree and more in a portfolio.

Dr. Jim Sherrard, Three Rivers Community College, Norwich, Connecticut, found the show has transitioned from a focus on machines, lathe, and mill, water jets to everything with a robot or cobot attached to it. LATI is getting two cobots with automated guided vehicles. Automated guided vehicles in the classroom and labs were not part of a robotics instructors thinking two years ago. An example of how fast and extensive change is, several years ago 3D printing had a few booths and now it fills an entire building. The speed of change has educators, students and industry partners attending the same trade shows all learning at the same time.

Bryan Albrect commented that Industry 3.0 based on CNC machines and PLC’s is 40 years old. Industry 4.0 is...
Talent to deliver technical programs is a challenge. Corrosion is a billion dollar corrosion problem. In eastern Montana, it took two years to find a technician with all the NACE certifications.

Instructors make the difference in delivering programs needed in a region and the nation. The faculty know they need to “pull their weight” and funds. “We have renovated and updated “every square foot” of the campus. How we decide is by looking at the age of the equipment, what we are training for, what is the industry standard. The faculty know they need to “pull their weight” and funds.

Dr. Sherrard convinces his board for a half million for structural equipment and each of the six years as president $300,000 has gone into the budget for equipment. He takes his students to the diners which are near Boston, from Norwich Connecticut so they can network and meet other business and industry representatives which has opened up opportunities for students. He also has then read the literature from the Society of Manufacturing Engineers.

Dr. Sherrard finds a new challenge with millennials who say they will not consider more than a five year commitment to an employer. They can earn $100,000 a year but that is not a factor in their choices. His approach provides a foundation for this evolving career approach.

How to manage competition among programs for equipment and funds for student trips and building advisory committees

Mid-Plains Community College has relied on employers for surplus equipment. Often it was not the latest and they also expected the employees to do work in the shop. They are moving to iron-plate, taking its training “in-house.” Ryan Purdy in his first year as president $300,000 has gone into the budget for equipment. This is $2M that is mainly for heavy technical programs. Auto body, diesel mechanics, welding, HVAC, building construction, electrical, nursing, lab tech, fire science have gotten the bulk of the funds. “We have renovated and updated “every square foot” of the campus. How we decide is by looking at the age of the equipment, what we are training for, what is the industry standard. The faculty know they need to “pull their weight” by being current, recruiting students to get the $200,000 for the program.” The faculty help to recruit and sustain the program. Mid-Plains has 4 campuses, 1500 students and cover 20,500 square miles of Nebraska.

Instructors make the difference on delivering a program needed in a region and the nation.

Dr. Scott Mickelson, President of Dawson Community College, Glendive MT. Dawson is a small college but has focused on programs needed in the region, one is corrosion. Dawson Community College needed to go out to find and hire talent for eastern Montana. It took them two years but they found an instructor with all of the NACE certifications. Dawson worked with NACE to create a training site on the Dawson campus. The instructor teaches all of the industry standards for pipeline and for corrosion, coatings, and lime. It is one of the few programs in the nation to address the billion dollar corrosion problem. Corrosion is a problem for municipal water systems as well as oil and gas pipelines.

Talent to deliver technical programs is a challenge

Clark Coco emphasized that industry partners are needed to work with education to source talent from their companies. Industry trainers are needed to supplement faculty or to train them. Math and English faculty postors attract sixty applications, but welder zero. Wages are the issue. A welder can get $100,000 a year and a beginning faculty position is not near that.

The same is true of nursing. At LATI they have at team of industry leaders from across the state in different sectors. They bring the problem of access to future employees. That is a way to get adjunct instructors who may become full-time.

At Gateway Technical College faculty are asked to look for potential candidates for adjunct faculty and advisory committee members. When a part-time position comes open the relationship works to bring in new faculty. Another source is secondary educators. Another strategy is to diversify full time with part-time to get the advanced technology.

South Dakota did an industry adjustment from a sales tax that goes directly towards teacher pay at k-12, so LATI can pay competitive salaries with industry on a day to day basis. Faculty get paid different rates. In Wisconsin, the local board makes the decisions so the salaries are public. Faculty know the salaries of their colleagues.

One state has two faculty unions, technical and academic. Masters and Ph.D.’s can make less than a technical faculty or nursing faculty.

Equipment is also a challenge and industry training

Dr. Brimhall, Minnesota State Community and Technical College, has a best practice of leveraged equipment program that matches an industry donation. It is an allocation that an industry can match.

Dr. Brimhall noted a concern that industries decide they will take on training, as happened in North Platte with Union Pacific taking training inside. Amazon has hired a chief academic officer. The Association of American Community College (AACC) has projected that by 2025 there will be a disruption in the education industry. Economic Development Corporations have training centers because they can make money from it. It may be time to start over and figure out how to be ready for seven years from now.

Bryan commented that Chambers of Commerce have directors of academic programming.

Education is facing more than rivals, it is facing disruption from substitutes, suppliers, customers and new entrants.

Sandra Krebsbach, academia focus has been on rivals, other credit awarding institutions. There is more to it, there are new entrants, suppliers, customers and institutes to look at. Education needs to move from a focus on improving the same performance measures such as placement and graduation to include “how are you innovating?” Curriculum can be redesigned in 30 minutes but can take a year to move through the academic process.

Provide access to students on a student visa

Jim Sherrard has found that other countries have engineers but do not have technicians especially in the nuclear power industry. Two year colleges do not have dormitories to house students. There are many quality programs that would fill with students on a student visa if there was housing.

Creative marketing of programs-think both outside the box and send a box.

Clark Coco sends shipping boxes with photos of Washburn Tech students to prospective students. They get opened and cost about $5. Students are invited to activities. It is very effective with donors and employers. They are good for thank you notes. Another creative signing is “day sign” for students who comment to attend a technical program, especially through NC3.

Roundtable Wrap Up

Al Bunshaft noted that we are at or approaching Industry 5.0 which is beyond 4.0. 4.0 was positioned as the automation and digitizing of manufacturing. 5.0 is about is new ways of doing business, completely new business models, what we think about as supply chain management and the manufacturing process is now undergoing an Industry Renaissance. It is the coming together of not only engineering but scientists, engineers, and artists.

Clark Coco, a former basketball coach had this advice for students and higher education, “At some point, just shoot the d…m thing! Don’t get too bogged down with what higher education tells us to do. Tell students to use technical education to scaffold the next layers of what you want to do, do the AST program and you may go on to mechanical engineering.”

Offer graduates discounts when they are back from training sponsored by their employers.

What can ATEA do to help the customization of the learning experience?

Carrie Brimhall, would like to hear from people like Al Bunshaft, thought leaders in business and industry that are pushing the envelope of what’s acceptable, to learn how to change higher education rather than have higher education drive it.

Al Bunshaft, ATEA can play the role of building awareness of technical education. Technical education is not considered by students and counselors. Technical education provides cost effective relevant skills.

Scott Michelson, 40% of Montana’s high school graduates do not go on to any higher education. What he would like to see ATEA convene a think tank at the national conference. He heard great ideas here on how to attract those 40% who could go into technical education but may not know much about it. A think tank could help engage schools and states to attract the 40%.
End to End Digitization Conference
Hosted by Dassault Systemes, Waltham, MA November 7-9
with a tour Olin College of Engineering, Newton, MA

Region 1 conference included a tour of Olin College of Engineering in Newton, Massachusetts. President Dr. Richard Miller spoke with the ATEA participants about the Olin College approach to learning which is project based. Olin does not have tenure or departments. The faculty have long term contracts and the curriculum is revised as needed. Student work is team based so learning about team work and assessing teammates is part of the program. The first project is “Hopper Project” where each student (or team) creates an object that moves. Students also learn to weld and operate machining equipment. A Fab Lab is on site.

“Digitization: the new common fabric of work and education.” Dr. Alex Clifford, Maine College of Health Professions, Dr. Chitra Javdekar, Dean of STEM programs, Massachusetts Bay Community College, Dr. James Sherrard, Chair of Nuclear Programs Three Rivers Community College, Mr. Brad Mingels, Director of Academic Programs, Francis College of Engineering, University of Massachusetts-Lowell, moderator Dr. Bryan Albrecht, President of ATEA Board of Trustees and President and CEO of Gateway Technical College, Racine/Kenosha, Wisconsin

Virtual heart demonstration, Ramesh Holdnari, VP, Platform Consulting, Dassault Systemes—Right Dr. Jon Connolly, President Sussex County Community College, Newton, New Jersey and Janet Numenburg, Dunwoody College of Technology

Virtual City – a study of Singapore lead by Jayne Stafsstrom, EBC Specialist, Dassault Systemes, in the photo, left Cliff Smith, Associate Chief of Facilities, Kansas City Kansas Community College, right—Jonathan Aurand, Dunwoody College of Technology and John Columbia, Dunwoody College of Technology

JP Laguarre, Dassault Systemes Examples of Student Competitions to Drive Learning and Increase Diversity

Region 1 conference included a tour of Olin College of Engineering in Newton, Massachusetts. President Dr. Richard Miller spoke with the ATEA participants about the Olin College approach to learning which is project based. Olin does not have tenure or departments. The faculty have long term contracts and the curriculum is revised as needed. Student work is team based so learning about team work and assessing teammates is part of the program. The first project is “Hopper Project” where each student (or team) creates an object that moves. Students also learn to weld and operate machining equipment. A Fab Lab is on site.
### Wednesday, April 3, 2019

7:30 - 8:00  Registration          Grand Foyer
8:00 - 11:00  Trade Show Set Up   Grand Hall, Alcoves
8:00 - 10:00  ATEA Board of Trustees Meeting  C & E Conference Rm
11:30 - 1:00  Welcome Lunch       Grand Hall

Welcome from:
Dr. Bryan Albrecht, President, ATEA Board of Trustees
Dr. Sue Ellspermann, President, Ivy Tech Community College

1:00 to 2:15  Plenary Session     Grand Hall

"SACA Standards and Certifications: A Roadmap for the Race Through Industry 4.0"
Mr. James Wall, Executive Director of SACA, Smart Automation Certificate Alliance.
(Trade show area will equipment from Amatrol, FESTO and others referred to the presentation)

2:30 – 6:00  Trade Show Open       Grand Hall Alcoves, Foyer
2:30 – 3:20  Concurrent Breakout Session 1  Breakout Rooms
4:30        Buses leave for Indianapolis Motor Speedway Museum
5:15 – 7:30  Reception, Museum Tour  IMS Museum

Donald Davidson, IMS Historian

6:15 and 7:45  Bus departures for the hotel, enjoy Indianapolis dinner on your own

### Thursday, April 4, 2019

7:30 - 3:00  Registration          Grand Foyer
8:00 - 9:30  Breakfast and Opening General Session  Grand Hall

"The Future of Manufacturing"
Titan Gilroy, CEO of TITANS of CNC
Titan is a cable TV and CNC personality, Titan will inspire you with the story of his rise in manufacturing and the development of the TITANS of CNC Academy. The academy provides a revolutionary and innovative CNC curriculum that is FREE to anyone.

9:30 – 5:30  Trade Show Open       Grand Hall Alcoves & Foyer
9:45 – 10:40 Concurrent Breakout Session 2  Breakout Rooms
10:45 – 11:00  Break               Grand Hall Bar
11:00 – 11:50 Concurrent Breakout Session 3  Breakout Rooms

### Thursday, April 4, 2019 cont.

12:00 – 2:00  Awards Luncheon – Dr. Bryan Albrecht Presiding  Grand Hall

Awards Presentations
Outstanding students, faculty program and ATEA Boards of Trustee
Silver Star of Excellence in Business Partnership Award, Co-presented with the National Technical Honor Society
Tribute – To the late Dr. Harry Bowman, ATEA distinguished Board of Trustee
MOU Signing – with the China Education Association for International Exchange

2:15  Buses depart for Industry Tours

2:30 – 5:30  Industry Tours

5:30  Buses return to Lucas Oil Stadium

6:00 – 8:00  Dinner and Keynote  Lucas Oil Stadium

"Smart Factories"
Paul Perkins, President and CEO of Amatrol, Inc., ATEA Board of Trustees

"The Inverse of Truth"
Mr. John McDonald, CEO of ClearObject
ClearObject is recognized by INC magazine as a leading fast growing start up. Collecting theories from fellow technical leaders, John ask why, with high starting salaries in technology, there are so many students enrolled in universities. How is it that we have hundreds of open jobs in software development and other roles related to the digital economy and this could be occurring? John offers some possible solutions to the problem as it relates to the Internet of Things and the Fourth Industrial Revolution.

8:00  Return to hotel – walking distance

### Friday, April 5, 2019

8:00 – 8:45  ATEA Regional Meetings

Region 1  New York Central
Region 2  B & O
Region 3  C & O
Region 4  Milwaukee
Region 5  Nickel Place
Region 6  Illinois Central

9:00 – 10:15  Brunch and Keynote  Grand Hall

"The Future of Industry 4.0"
Dr. Randy Swearer, Vice President, Educational Experiences, AutoDesk

10:15 – 11:00  ATEA Annual Meeting  Grand Hall

Executive Director Report – Dr. Sandra Gehlan Krebsbach
Recognition of Retiring Board Members
Installation of New Board Members
Installation of Executive Committe 1st and 2nd Vice President
Recognition of Dr. Bryan Albrecht, ATEA Board President 2017-2019
Installation of Sue Smith, ATEA Board President 2019-2021
Announcement of 2020 National Conference location
Door Prizes

11:00  Conference concludes
Racing Through Industry 4.0

“This premier conference will empower you to implement the current and future changes needed in technical education to address the workforce skills sets needed in the fourth industrial revolution and beyond. Industry participants and educators will leave the conference with new ideas, strategies and a certification to train and educate in these exciting times where automation, robotics, digitization, and artificial intelligence span and unite sectors and programs. The future is coming. Join us in Indianapolis and let's get to the future first!"

The conference registration includes keynote speakers, a trade show, breakout sessions, industry tours, and an opening night reception at the Indianapolis Motor Speedway Museum. An unforgettable dinner will be provided at Lucas Oil Stadium on April 4th; home of the Indianapolis Colts.

Wednesday, April 3, 2019

Welcome Lunch Speakers

Dr. Sue Ellspermann, President of Ivy Tech Community College

Dr. Bryan Albrecht, President, ATEA Board of Trustees

Plenary Session Keynote Speaker

Mr. James Wall, Executive Director of SACA, Smart Automation Certificate Alliance

“SACA Standards & Certifications; A Roadmap for the Race Through Industry 4.0”

Evening Reception at Indiana Motor Speedway with presentation by Donald Davies

Donald Davies
IMS Historian

Thursday, April 4, 2019

Opening General Session Keynote Speaker

Titan Gilroy
CEO of TITANS of CNC

“The Future of Manufacturing”

Titan is a cable TV and CNC personality. Titan will inspire you with the story of this rise in manufacturing and the development of the TITANS of CNC Academy. The academy provides a revolutionary and innovative CNC curriculum that is FREE to anyone.
**Awards Luncheon, Dr. Bryan Albrecht Presiding**

**Tribute**  
The late Dr. Harry Bowman  
ATEA Distinguished  
Board of Trustee

**MOU Signing**  
With the China Education  
Association for International  
Exchange

**Industry Tours**  
Lilly  
ENERDEL  
IVY TECH COMMUNITY COLLEGE  
Major Tool & Machine  
FedEx  
Allison Transmission  
BECK’S

**Keynote Speaker**  
Mr. John McDonald  
CEO of ClearObject  
“The Inverse of Truth”

ClearObject is recognized by INC magazine as a leading fast growing start up. Collecting theories from fellow technical leaders, John asks why, with high starting salaries in technology, there are so many students enrolled in universities. How is it that we have hundreds of open jobs in software development and other roles related to the digital economy and this could be occurring? John offers some possible solutions to the problem as it relates to the Internet of Things and the Fourth Industrial Revolution.

**Keynote Speaker**  
Dr. Randy Swearer  
Vice President, Educational Experiences, AutoDesk  
“The Future of Industry 4.0”

**Keynote Speaker**  
Mr. John McDonald  
CEO of ClearObject  
“The Inverse of Truth”

**Keynote Speaker**  
Paul Perkins  
President and CEO of Amatrol, Inc.,  
ATEA Board of Trustees  
“Smart Factories”

**Friday, April 5, 2019**
Region 2 Conference in Mississippi

Dr. Mackey hosted the State of Mississippi Career and Technical Education instructors and leaders at a fall event with over 950 participants. Paul Perkins was the keynote speaker on “Smart Factories.” Paul Perkins will be a keynote at the 2019 ATEA national conference.

From Ken Potthoff, ATEA Trustee and Deputy Director of CTECS
On September 11, 2018, the CTECS Community of Practice Conference, Dr. Ron D. McCage presented the inaugural award in his name, Dr. Ronald McCage Award for Service and Excellence for Career and Technical Education, to Dr. Sandra Krebsbach. The award recognizes an individual from among Career and Technical Education Consortium of States (CTECS) membership who embodies the values, strengths, generosity, and diligence of Ronald D. McCage, the longstanding leader of the organization. CTECS work has always been to share the great work in education and the workforce in order to advance state program content and best practices at the state level and the nation collectively.

Region 2 news
Poquoson City Public Schools in Virginia was awarded “An Integrated Approach to College and Career Readiness Skills through PBL, STEM & a Multi-Tiered System of Support.” CTECS was contracted by Poquoson to develop Workplace Ready Skills assessments around the grant project for elementary, middle, and high school levels.

Kansas City Speedway tour

KCKCC tours were outstanding and offered different perspectives on their impact on the Kansas City Economy. The Kansas City Speedway is pictured. Another was Dimensions Innovation, whose workplace is a model for integrated technical education. Thank you to Huhtamaki, a Finnish company, that owns and makes Chinet serving products, ice cream cartons and other products used in food industry.

Keynote Speakers included ATEA Board President, Dr. Bryan Albrecht, Kansas Governor, Jeff Colyer, and Kansas City Kansas Community College President, Dr. Greg Mosier.

From Dimensional Innovations:
We are 225 people, working out of 140,000 sq. ft. of Design+Build space. We are a single interdisciplinary team of industrial designers, brand strategists, graphic designers, architects, interior designers, content creators, engineers, fabricators, general contractors, technologists, and project managers. This gives our clients a unique ability to move from concept to completion with one team. We have a borderless mindset that demands we create experiences out partners and their audiences haven’t imagined yet. Maybe that is why we’ve been named to Inc. Magazine’s list of America’s fastest-growing companies four years in a row.”

From Dr. Blake Flanders, Kansas Board of Regents CEO and President
Dr. Blake Flanders, Kansas Board of Regents CEO and President, spoke at the conference. He has been the President of Workforce Development for the Kansas Board of Regents and provided executive leadership for Kansas Postsecondary Technical Education Authority. His interests include competitive research. Dr. Flanders is a graduate of Colby Community College and Kansas State University where he earned a Bachelor of Science in Animal Science, Masters of Science in Animal Science, and Doctorate of Philosophy in Curriculum and Instruction. Dr. Flanders led the state-level evaluation of research proposals within the Experimental Program to Stimulate Competitive Research.

He spoke on the importance of technical education to the Kansas economy, the dignity of the work technically trained perform and his insights into how education is changing including pressure to reduce the individual student’s debt.
Recognition of ATEA Board member Paul Perkins
as “Volunteer of the Year” by the Indiana Chamber of Commerce. Paul is the President and CEO of Amatrol, Inc., an international company that provides lab learning, software curriculum for training in manufacturing. He was recognized as a “Workforce Warrior.” Congratulations, Paul.

ATEA Award Winning Faculty
presented at the ACTE Visions Conference in San Antonio, Texas, December 1, 2018. “ATEA faculty winners will share their stories on excellence, inspiration, and dedication to CTE learners”

Left: Dr. Kerri Johnson, Dean of Health Professions, Albany State University, winner in 2013 at the ATEA national conference in Chattanooga, Tennessee.
Right: Kim McPherson, Instructor in Machining at the Tennessee College of Applied Technology, Dickson and Clarksville, winner in 2017 at the ATEA national conference in Nashville, Tennessee.

From Sandra Gehlen Krebsbach:
I conducted research on the Gigafactory and Foxconn’s impact on technical education for completion of a master’s degree from the College of Science and Engineering at the University of Minnesota, 2018. I found that the job growth and Tesla’s ability to meet the terms of the legislation that produced the tax incentives and set employment targets was, in part, due to Truckee Meadows Community College’s drive to create flexible schedules, attract faculty, hold job fairs and create a collaborative working relationship with Panasonic and Tesla—who produce the batteries at the Gigafactory. Here is an excerpt from a December 5, 2018 Associated Press article online:
https://www.apnews.com/2f3a3542a4b49c990f19f469f34621d

“Tesla’s battery factory in northern Nevada has created more than 7,000 jobs — 40 percent more than promised — and an additional 8,200 jobs in other local businesses since it opened east of Reno in 2014.” (AP December 7, 2018)

AP sites the report from The Governor’s Office of Economic Development, “that 7,059 employees were working in the Tesla/Panasonic gigafactory as of June 30 with average hourly wages of $25.78.” The report says the companies have invested $6 billion in the factory that produces high-tech batteries for electric vehicles and home-power supplies. Gov. Brian Sandoval says the world-class facility has disrupted the automotive and energy industries in just four years. In addition to jobs, he says it has “had an extraordinary effect on perceptions about Nevada.”

From: ATEA Board member, Jim New, Vice President for Finance and Administrative Services, Truckee Meadows Community College, Reno, Nevada, provides other updates from this fast growing technical region:

“We are in talks with other major players who may set up shop in the TRI Center (Tahoe Reno Industrial Center) next door to the Gigafactory. Blockchains LLC has already announced a major initiative. There is another major tech company who will make an announcement in January. They are both exploring ways for us to bring our training model out to the TRI Center. It’s exciting and heady stuff.

From: ATEA Board member, Jim New, Vice President for Finance and Administrative Services, Truckee Meadows Community College, Reno, Nevada, provides other updates from this fast growing technical region:

L-R backrow: Dr. Rich Wagner, President of Dunwoody College of Technology, Minneapolis MN; Al Bunshaft, Senior Vice President for Global Affairs Dassault Systemes Waltham MA; Dr. Bryan Albrecht, President and CEO Gateway Technical College, Racine/Kenosha WI; Ryan Purdy, President Mid-Plains Community College, North Platte NE; Dr. Mark Englert, Vice President Gillette College, Gillette WY; Brooks Jacobsen, Supervisor of Robotics and Electronics Lake Area Tech Watertown South Dakota
L-R front row: Dr. Sandra Gehlen Krebsbach, Executive Director American Technical Education Association; Cliff Smith, Associate Chief for Facility Services, Kansas City Kansas Community College; Dana Wolff, Instructor of Financial Services Sioux Falls South Dakota; Dr. James Sherrard, Chair of Nuclear Programs, Three Rivers Community College, Norwich CT; Sue Smith, Vice President of Technical and Applied Science, Ivy Tech Community College, Indianapolis, IN. All but left prior to the photo Ken Potthoff, Deputy Director, CTECS, Atlanta Georgia.

Board members on a conference call were: Dr. Shaen Mackey, Dr. Jon Connelly, Dr. Betty Reynolds, Dr. Paul Young, Roger Telekewicz, Chele Travis, Adrian San Miguel, Lin Zhou.
What is the American Technical Education Association?
ATEA is an autonomous, non-affiliated international association devoted solely to the purposes of postsecondary technical education. It is an organization dedicated to excellence in the quality of postsecondary technical education with emphasis on professional development. ATEA is a driving force behind workforce development.

ATEA was founded in Delmar, New York in 1928 and incorporated as a non-profit professional education association in 1960. In 1973 the national headquarters moved from New York to Wahpeton, North Dakota to the campus of North Dakota State College of Science. In 2012 the national office moved to Dunwoody College of Technology, a private non-profit technical college founded in 1914 in Minneapolis.

Members:
- Teach, serve or administer technical education at the postsecondary level.
- Hire technically prepared employees.
- Support or provide technical education pathways: secondary to postsecondary or postsecondary to university levels.

Mission:
The American Technical Education Association (ATEA) is a leading association for the postsecondary technical educator with emphasis on professional development for postsecondary technical educators. The organization is dedicated to excellence in quality of postsecondary technical education by focusing on practical teaching ideas and best practices. ATEA recognizes outstanding performance and leadership and provides a network for career connectivity.

Goals:
- Promote high quality technical education.
- Advocate the value of technical education to society.
- Disseminate information regarding current issues, trends and exemplary practices in technical education.
- Partner with educational institutions, business, industry, labor and government to enhance workforce development strategies.

Top Ten Reasons to Join ATEA:
10. Workforce Development
9. Voice for technical and applied education
8. Share best practice
7. Active involvement with business and industry
6. Opportunity to respond to national media requests
5. Subscription to the ATEA Journal
4. Regional and national conferences
3. Awards for outstanding performance and leadership
2. Professional growth and development
1. Networking with technical education professionals

Annual Membership Rates:

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To join online or print a membership form, please visit: www.ateaonline.org/Membership

Email questions on membership to: info@ateaonline.org
“Racing Through Industry 4.0”
April 3-5 Indianapolis
Crown Plaza Union Station, Lucas Oil Stadium and Motor Speedway Museum
Host: Ivy Tech Community College
Platinum Sponsor: Amatrol Inc.