NATIONAL VOLUNTEER WEEK

Annual Conference & Expo Preview

Recruiting, Managing, and Retaining the Millennial Generation in Project Controls
BOOST YOUR VISIBILITY. ASTRONOMICALLY.

From a high vantage point, you gain insights into the big picture. In the same way, EcoSys EPC delivers a strategic set of tools to gain visibility into your project portfolios, to improve capital planning, and to achieve the flexibility to adapt as long-term plans meet the world’s constant state of change. Then in the very same software, drill down to make sure your project performance has...the right stuff.

Learn more about EcoSys EPC, the industry standard for enterprise project controls software. ecosys.net/therightstuff
Uniting the world through volunteerism

Nipuna Ambanpola is the Founder of IVolunteer International, an NPO operating to elevate the quality of human life across the globe. He is studying Economics with a minor in International Studies at Armstrong State University. Nipuna was awarded a scholarship through the Georgia Rotary Student Program to study in the United States. He is involved on campus through Rotaract, Student Government, a Resident Assistant and various other student organizations. He’s an advocate for volunteerism and was awarded the Barbara M. & Donald L. Thomas Peace Award (2015). He is hoping to do his Graduate studies in Global Governance and International Diplomacy. Source: www.youtube.com/TEDxTalks

Outside the Box will be a standing column designed to introduce new ideas and concepts from other resources and professions that may help stimulate a new way of thinking about total cost management. The views and opinions expressed are those of the authors and do not necessarily reflect the official policy or position of AACE International.

We invite Source readers to send suggestions on other sources to editor@aacei.org.
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AACE International Online Store

For additional industry news and updates, you can always visit us at web.aacei.org.
The Top 10 Reasons
To Join AACE International

Ready to advance your career and begin enjoying the advantages that our members enjoy? Whether you are an experienced cost engineer or a student, we have a membership ready for you.

1. **Time**
   Gain access to a wealth of resources that will save you time and money! You’ll stay informed about the complexities of the cost and management profession - plus you’ll have access to discounts on educational programs, publications, and more!

2. **Information**
   Locate thousands of technical papers and publications in the Virtual Library. AACE’s database is keyword searchable for quickly locating appropriate reference articles.

3. **Career**
   Members can post resumes at no additional cost in our Career Center and keep your career on track through information sources such as our annual Salary and Demographic Survey of Project and Cost Professionals.

4. **Learning**
   We offer numerous online learning courses on estimating and project management. The Approved Educational Provider program helps maintain high quality development courses and providers. AACE also holds many seminars throughout the year.

5. **Resources**
   Starting with the TCM Framework and Recommended Practices that are available for free only to members to our bi-monthly publication Cost Engineering featuring articles for cost professionals around the world. Through the AACE International website, the Cost Engineering journal is a great current resource for members and as a member, you gain access to an archive of past issues.

6. **Technical Development**
   Increase your knowledge and expertise by joining one of AACE International’s many technical subcommittees, subcommittees, and Special Interest Groups (SIGs) at no additional cost to members. Discuss industry problems with your peers or help experts develop new and improved techniques and practices for the profession.

7. **Networking**
   By attending a local section or our Annual Conference & Expo for interesting speakers, informational tours, social dinners and much more. The online Membership Directory is an excellent source for a list of contact information on thousands of members. Join one of our many technical subcommittees and participate in the AACE Forums - a great way to tap into the collective wisdom and experience of our world-wide membership.

8. **Excellence**
   Our certification programs are independently accredited by the Council of Engineering & Scientific Specialty Boards. AACE certifications are a recognized credible standard in the cost management field. A recent study shows that individuals with an AACE Certification earn 17.4% more than their counterpart without a certificate.

9. **Discounts**
   On products and services ranging from AACE International Conference & Expo registration fees, archived webinars and presentations, certification examination registrations, and more!

10. **You!**
    We are your professional partner bringing you information and support you can trust. Join and become part of a unique network of individuals who are dedicated to improving the cost and management profession.

JOIN TODAY! web.aacei.org
Our AACE International Conference & Expo is scheduled for June 24-27, and this premier event is rapidly approaching. This year we are in sunny San Diego, CA. I have had the opportunity to attend several outstanding AACE regional symposiums and workshops, with each event reminding me why I look so forward to the annual Conference & Expo. AACE’s annual conference provides four days of opportunities for members and prospective members to enhance personal and professional growth through attending technical sessions and workshops. These are based on best practices, along with innovative techniques and emerging technologies, that are presented by leaders from the many industries in which our members participate. There will be something for everyone attending with nine (9) tracks offering over 120-plus hours of relevant technical content. Participants can sharpen their skill sets as they work toward one or more of AACE’s globally-recognized professional certifications.

For me, as over the years I became more active in AACE, the greatest advantage to attending AACE’s Conference & Expo is the opportunity to interface in person with the leadership of AACE – from the Board of Directors and headquarters staff to the members of the associate boards for technical, education, and certification – and learning about the opportunities to be an active volunteer in these groups that are the backbone of AACE and that take the lead in driving our association forward to greater levels of accomplishment. There will also be excellent opportunities to participate at all skill levels and contribute through volunteering to be active in one of the many sessions sponsored by special Interest Groups (SIGs), task forces, and committees.

There are unlimited opportunities through the scheduled networking and other special events for strengthening your existing professional network of global contacts and relationships, and all the while connecting with hundreds of other professionals creating new collaborations.

The exhibition and showcase, with over 45 firms participating, will provide opportunities to participate in product and software demonstrations as you seek the answers to your most perplexing questions related to all aspects of total cost management, project controls and risk management. Visit our website, talk with your friends and associates who are going to attend, and do not hesitate to register and join us in San Diego for this live event that will inspire you to reach for the highest levels of professional achievement and to volunteer your time to lead and benefit the future of AACE’s members and the numerous industries in which our growing global membership is active.

If you would like to contact our current president with questions or comments about The President’s Message please address your e-mail to president@aacei.org. To engage in other discussions, check out AACE International’s Online Forums at www.aacei.org/forums.

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THE AACE® INTERNATIONAL

2018 Election Results

AACE International wishes to thank all members who took time to vote in the 2018 AACE Board elections, and to congratulate the winners below.

The Constitution and Bylaws Amendment passed. It creates two new associate boards:

The Marketing Associate Board will steward AACE’s brand and image, assuring that the association maintains a proactive, focused marketing effort – both short-term and long-term.

The Membership Associate Board will consist of the existing Regional Directors and the Vice President North American Regions and the Vice President International Regions. Just elected as Regional Directors are:

**PRESIDENT-ELECT**
DOUGLAS W. LEO, CCP CEP FAACE HON. LIFE

**DIRECTOR-REGION 1**
BINDU AMIN, CCP EVP

**DIRECTOR-REGION 2**
OMONIYI O. LADIPO, CCP EVP

**DIRECTOR-REGION 3**
PATRICK M. KELLY, PE PSP

**DIRECTOR-REGION 4**
ADAM T. ALTHOFF, PSP

**DIRECTOR-REGION 5**

**DIRECTOR-REGION 6**

**DIRECTOR-REGION 7**
DEV TAMBOLI, CCP PSP

**DIRECTOR-REGION 8**

**DIRECTOR-REGION 9**
DANILO ARBA

The Constitution and Bylaws Amendment passed. It creates two new associate boards:

**VP-FINANCE**
PATRICK M. KELLY, PE PSP

**VP-NORTH AMERICAN REGIONS**
LES MCMULLAN, FAACE

**PRESIDENT-ELECT**
DOUGLAS W. LEO, CCP CEP FAACE HON. LIFE

**DIRECTOR-REGION 1**
BINDU AMIN, CCP EVP

**DIRECTOR-REGION 2**
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**DIRECTOR-REGION 6**

**DIRECTOR-REGION 7**
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Pop-Up Examination Testing at Annual Conference & Expo

BY PENNY WHOOLEY Manager, Certification and Membership

The Certification Board is pleased to announce Certification examinations will be conducted at the Annual Conference & Expo on Sunday June 24, 2018 at the Manchester Grand Hyatt, San Diego CA. In order to take advantage of this opportunity, you must meet the following deadlines and requirements.

REGISTRATION DEADLINES:
For CCP, CFCC and DRMP Exams:
May 14, 2018

For CCT, CEP, CST, EVP and PSP Exams:
June 10, 2018

Once you are cleared to sit for the exam, you will schedule your exam at the AACE Annual Conference & Expo Testing Center (instructions given in your clearance letter).

REQUIREMENTS:
Bring your own laptop with the following minimum specifications:

- Screen Resolution of 1024 X 768 or greater
- Mouse and Keyboard (no touchscreen is permitted during the exam)
- Operating Systems: Windows 7, 8.1 or 10 or OS X 10.10 Yosemite, 10.11 El Capitan or 10.12 Sierra
- Installed Applications:
  » Internet Explorer 11 or Edge, Chrome, Firefox, or Safari (latest version)
  » Adobe Reader

OPTIONAL:
- Any battery-operated calculator

If you’re ready to take the next step to build your own brand of excellence and elevate your career, register today.

If you have any questions or experience technical difficulty, please contact us at certification@aacei.org or 304.296.8444, ext.1112.
WHY MENTOR?
Greg started mentoring because the mentoring he received has been extremely helpful in his own career development and he wanted to give back. Early in his career, he was very fortunate to have supervisors and managers who took the time to teach him about basic technical aspects of cost engineering and provide good general career advice. Eventually he realized they were world class experts and how fortunate he was to work with them.

On Greg's first project, he was stationed at a construction site where he learned from his supervisor, Larry Ulicki, how to read drawings, measure progress, calculate productivity, apply cost coding and prepare input to project progress reports. Soft skills such as building working relationships, professionalism, being accountable and dealing with difficult people were part of the mentoring he received from more experienced professionals.

Fumio Otsu was instrumental in encouraging Greg to join AACE and also used Greg as a guinea pig for the cost engineering course Fumio was teaching at the University of Calgary. That exposed Greg to more theoretical and technical aspects of cost engineering. Fumio contributed case studies to Forrest Clark and A.B. Lorenzoni’s book, “Applied Cost Engineering,” which was used for the course. Greg still refers to that book more than 30 years later. Greg says his involvement with AACE has been a tremendous positive impact on his career and livelihood.

Greg continues to mentor because it is so gratifying to see that he helped others progress through their own career development and life paths. Interestingly, he says he always learns things from the people he mentors, so it is beneficial for both parties. He always encourages people he is mentoring to become AACE certified because it is a significant commitment and demonstrates dedication to the profession.

Some mentoring occurs through formal methods, such as AACE International’s Mentoring Program and corporate mentoring programs. In other instances, he mentors people informally through conversation or when he is asked for guidance. Greg states that that it is important for organizations to provide formal mentoring programs because it helps to match mentors with mentees and provides a framework and methodology which makes it more effective overall.

“There were a few people who approached me under the guise of mentoring when their actual goal was to get a job in my organization so I developed a few “filters” to test sincerity.”

According to Greg, more formal mentoring programs help to minimize those types of issues and may be worth the cost of time spent on the administrative aspects.

One of his regrets is not being able to make time for everyone that has asked to be mentored or that he has been more formally matched up with. On the other hand, it's very satisfying for him to see people he has mentored be promoted into senior management roles or accomplish what they wanted.
Mentoring is a never-ending process. He continues to seek out and receive mentoring on topics such as self-improvement, lean start-ups, innovative leadership, business networking and AI. Greg believes it’s healthy to have the attitude that even if you are an expert at something, there is always someone else who is more knowledgeable than you, at least in some aspect. By interacting with others, you will discover that your differences, the challenges they present and the questions others ask, can lead to valuable insights and possibilities that were not previously available to you. He really enjoys chatting over a cup of coffee to be mentored, or to mentor, or both at the same time. Greg says, “if you are not involved in mentoring, you are missing out. Take the plunge. You won’t regret it.”

Greg is currently employed with Acumen PMO, a business he established to provide project management, project controls, business improvement and PMO hosting services. Some of his unique service offerings include highly advanced project gate review capability, leading teams to become top performers and effective cost containment methods. Mr. Sillak developed the Cost Trigger Point concept based on behaviors of top performing project teams in times of extremely low commodity prices and capital restraint as well as extensive exposure to benchmarking. His project control teams at two separate organizations were independently benchmarked as top quartile.

He is also exploring conceptual feasibility of a project management related artificial intelligence (AI) application and would appreciate introductions to AI developers.

He has over 30 years of project management and control experience through all life-cycle phases of oil and gas projects upwards of $10 billion. These include multiple small facility projects, pipelines, turnarounds, offshore, refining/upgrading, petrochemical, oil sands, maintenance planning/scheduling and facility decommissioning. Greg also has been involved with two Initial Public Offering (IPO) projects, ERP system implementations and managed project management software selection/implementations.

Mr. Sillak is a recipient of the AACE International Technical Excellence Award and primary author of three AACE Recommended Practices. He served on the AACE Chinook-Calgary Section board for several years. He is a certified Project Management Professional through the Project Management Institute.

Editor’s Note: This month in Source magazine, we begin publication of a series of Spotlight on Mentoring profiles of AACE members who are currently participating in the AACE International Mentoring program. If reading these profiles inspire you to want to become a mentor, contact Dev Tamboli, CCP PSP, Chair of the AACE Committee for Mentoring Excellence, by sending an e-mail to: dktamboli@gmail.com.

APRIL 15 - 21, 2018

National Volunteer Week

BY CHARITY A. QUICK, MBA CIA CCT, EXECUTIVE DIRECTOR/CHIEF EXECUTIVE OFFICER

As we observe National Volunteer Week we would like to take this opportunity to recognize and thank AACE’s volunteers including our Board of Directors, Associate Boards, Committees, SIGs, technical subcommittees, section leaders and virtual volunteers that give us their time, talent and support in advancing AACE’s mission and vision.

It is unfortunate but true that you probably do not hear thank you enough from us. But we don’t want to let this opportunity pass us by. Your contributions improve our member experience, provide valuable technical content and expand our presence locally and across the globe.

If you have a great story to share about volunteering with AACE we would love to hear about it and share. Please feel free to email me at cquick@aacei.org or share on our Communities’ page or AACE’s LinkedIn group.

As we observe National Volunteer Week we applaud all of our volunteers. Stand up and take a bow. You deserve it!
Shohreh Ghorbani is the April Women in Project Controls Profile honoree. Shohreh was born in Ahwaz, Iran, and raised by a loving and supportive family. Her parents emphasized the importance of education from an early age and made her strive for excellence in her studies throughout her school years. Her father, a general surgeon, wanted her to follow in his footsteps and get into the medical field. However, when she was introduced to mathematics in high school, she fell in love with the subject. Her passion for mathematics led her to the Mathematics Olympiad and she was awarded the bronze medal in the National Mathematics Olympiad in 1994. Her interest in math was so strong such that she wanted to pursue the "pure mathematics" field at the university. Because of her great respect for her parents’ opinions, she chose instead to pursue the engineering field and was accepted into industrial engineering.

One of Shohreh’s childhood dreams was to someday learn how to build cars. Her dream became a reality when she was hired as an industrial engineer in the largest vehicle manufacturing company in Iran, the Iran Khodro (IKCO). Although she only worked for two years with that company, she learned so much and enjoyed the company of amazing colleagues who became her best friends up to this day!

Shohreh’s path in project controls started 16 years ago when she moved to Alberta, Canada. While looking for employment in manufacturing related to her field of study and experience, she went to several informational interviews. Through these interviews, she discovered her path to project controls.

Once she started her career in project controls, she became unstoppable! She was very eager to learn everything she needed to learn to grow and succeed in her career. “My coworkers knew me as someone who is "passionate" about project controls! Well, I believe my passion for project controls came from my eagerness to learn and trying new things every day in my career,” said Shohreh.

Project controls is such a diverse field that requires constant learning and upgrading to gain mastery of the field. In addition to possessing incredible technical skills, you must also be an analytical thinker, problem solver, and an excellent communicator. These skills are what attracted Shohreh to project controls, which she remains passionate about.

Today, she is the director of the “Project Control Academy,” a leading provider of comprehensive and practical online training programs in project controls. She has successfully trained tens of thousands of project team members to enhance their project controls knowledge and helped them advance along their career path.

Shohreh comments, “I was fortunate enough to have mentors who helped me tremendously on my project controls journey. They were my inspiration to share knowledge, serve, and provide value to people through my knowledge and experience.” It was this conviction that inspired her to establish the Project Control Academy and to help people soar to excellence in project controls.

What drives Shohreh every day is the desire to share her knowledge. She shoots and produces educational training videos on a regular basis, writes project controls related articles and blog posts, interviews project controls experts and thought leaders every month, and hosts monthly live webcasts to add value to the project controls community.

“There is nothing more rewarding than receiving uplifting and encouraging messages from total strangers from around the world who have watched my training videos,”
“There is nothing more rewarding than receiving uplifting and encouraging messages from total strangers from around the world who have watched my graining videos, thanked me for sharing my knowledge, and encourage me to keep going!”

— SHOHREH GHBANBI

thanked me for sharing my knowledge, and encourage me to keep going!” This is what motivates Shohreh every single day. She expressed her gratitude for the tremendous support from the project controls community.

Reflecting on her career, she believes the following items have contributed most to her successful career.

A STRIVING FOR EXCELLENCE
In every stage of her career, Shohreh strove for excellence and did her best in every given job. She said this stemmed from a big lesson she learned the hard way while at her first job. During a meeting with upper management, she complained about the type of work she was given and claimed that no real work was accomplished in the first six months of her employment. This resulted in her supervisor being fired. In a meeting with her supervisor, before he left the company, she got a big lesson that stuck with her to this day. “If you don’t see the value in the work that you do, how do you expect others to see the value of your work?”

From that day forward, Shohreh did her best at her job and worked in a way that made her feel satisfied, no matter if her employer saw the value that she brought to the table or not. She believes that if you work with the intention to add value to your organization or the people you serve, sooner or later people will recognize the difference you have made.

HAVING GREAT MENTORS AND SUPPORTERS
Shohreh believes she had the best mentors and support team that she could ever ask for. She credits her parents, Dr. Heshmatollah Ghorbani and Jahan Yousefi, for making her believe in her potentials, loving her unconditionally, and encouraging and supporting her throughout her life. She expresses her gratitude to her husband, Kamran Akbarzadeh, the founder of Dream Achievers Academy, who made all her dreams come true. “Kamran has been my driving force and the main source of encouragement for me to start the Project Control Academy and take it to where it is today. He has always believed in me and supports me unconditionally.”

Besides her loving and supportive family, Shohreh credits a team of mentors who helped unveil her untapped potentials and generously shared their knowledge and time with her. She would like to thank Karim Kaba, her first supervisor, for teaching her project controls and mentoring and coaching her in the first years of her career. She said that Karim built a strong foundation for her career and paved a clear career path for her. She also would like to thank Edim Cimic and Hans Raj, her department managers during her employment at WorleyParsons Canada. Their belief in her capabilities, giving her new responsibilities, and helping her grow in her career was invaluable. She also likes to thank Pamela DeGraaf, her department manager at Stantec, who gave her the opportunity to teach a large group of project management team at the Stantec offices in Canada.

Lastly, she wishes to acknowledge Peter Tignini, the former VP of Project Controls at Kentz International, a member of SNC-Lavalin group, for giving her the opportunity to train thousands of his global project controls teams.

LEARNING EVERY DAY
Another key to the success of her career was her continuous learning. She believes that most professionals in project controls did not go through project controls related courses in a university or college to learn how to perform project controls. They learned through trial and error and their involvement in projects. She believes that if they do not back up their experience with fundamental knowledge and continual learning, it would take far too many years to figure out how to perform their jobs correctly.

She advises the young professionals never to stop learning. “With the rapid changes of technology that we are experiencing today, if you don’t advance your knowledge and skills every day, you will be left behind within a matter of years, if not sooner.”

Shohreh emphasizes the importance of obtaining internationally recognized certifications in project controls as a good way that helps professionals keep updating and enhancing their knowledge. She highly recommends the certifications offered by AACE International for anyone involved in project controls. She also believes that the certification and recertification process will keep them on a continuous treadmill of learning and growth within their given area of expertise. She said that if she were to start her career all over again, she would have considered pursuing different professional certifications every year.

GETTING INVOLVED IN PROFESSIONAL ASSOCIATIONS, ESPECIALLY AACE INTERNATIONAL
Shohreh has been a member of the AACE International over the past 10 years of her career in project controls. Before joining AACE, she had a very difficult time finding reliable content and resources in project controls, until she discovered AACE International.

She comments, “AACE is the one and only association that I found that is a 100 percent match for my project controls profession. With its rich content library, recommended practices, as well as the certifications it offers, AACE has become my number one source for finding content and improving my skills and knowledge in project controls.”

As a project controls trainer and educator today, the AACE virtual library is still her favorite companion. She really enjoys pulling information from its large pool of articles and recommended practices that enables her to teach industry’s best practices.

AACE has allowed her to expand her network of like-minded professionals, thanks to local section meetings and the annual conference and Expo. “Nothing feels better than entering a room full of project control professionals; people who understand your language, know who you are, and what you do!” Shohreh comments.
Shohreh believes that “If you are in project controls and would like to expand your knowledge, grow your network, and succeed in your career, joining AACE International is a MUST. Start by attending your local section meetings and see the impact of those meetings on your career growth. If you want to experience one of the best conferences in project controls and to meet the industry experts, mark your calendar for the next AACE International Conference & Expo.”

IMPROVING COMMUNICATIONS AND LEADERSHIP SKILLS

Shohreh believes that communication and leadership skills are crucial for anyone who works in project controls. The leading reason, the job itself demands constant human interaction.

“As a project control professional, you are responsible for getting accurate information from the project team members, analyze the information received, and accurately relay the project status and forecasts to the project manager and ultimately to the client. If you are not a good communicator, you will not be able to get the right information from the team and communicate the right project status and issues,” Shohreh comments.

She used to be a shy person and didn’t know how to communicate properly. However, she learned this skill by joining Toastmasters International. She is now accredited as the Advanced Communicator Silver (ACS) and Advanced Leader Silver (ALS) with Toastmasters International.

Regarding her leadership skills, Shohreh took it upon herself to take on more responsibilities and leadership roles early on in her career. She understood that to move up the corporate ladder, she had to embrace many challenges along the way. She is encouraging the project controls professionals to step up and take on new roles and responsibilities, move across the project controls disciplines, and don’t be afraid whether they can handle a new task or project. This is how they can grow their comfort zone and take their career to the next level.

When asked for the “words of inspiration” for the business professional, she said:

“Ultimate success in your career is only possible when you improve your skills and enhance your knowledge every day. Moving to the top of your career requires your dedication to a lifetime of learning and your commitment to excellence throughout your entire career. Keep yourself current with the demands of your field of expertise and strive for excellence in your work to produce the kind of harvest you desire in your career.”

REGISTRATION IS OPEN FOR THE 2018
AACE Federal Agency Roundtable in Virginia

Registration remains open for the 8 a.m. to noon, Friday, April 20, one-half day AACE International 2018 Federal Agency Roundtable symposium at McLean, Virginia. The focus of the 2018 roundtable symposium is on practical approaches to develop internal cost department excellence. The goal will be discussion on data-driven decision methods that solve problems.

The three planned outcomes are results that are evidence-based, aligned to agency mission, and reflect the maturity level of agency processes. Federal executives will receive free admission and a continental breakfast. Formal presentations are optional. In sponsoring the event, AACE is seeking wisdom and insightful discussion from the attendees. The association expects some 30 attendees for this event; as several federal agencies have agreed to provide attendees.

The roundtable symposium is being sponsored at the MITRE Corporation Conference Center at 7515 Colshire Drive in McLean, VA.

Previous AACE sponsored Federal Agency Roundtables have been well received. Program managers and project controls professionals involved in the federal government are invited to participate in the April 20 roundtable to exchange best practice advice and concerns with professionals from government agencies. Come hear what issues your colleagues at other agencies are dealing with and share your best practices.

Click here to register.

To enhance project delivery and methods to the federal government, former President Barrack Obama on Dec. 14, 2016, signed into law the Program Management Improvement and Accountability Act of 2015 (PMIAA). Bipartisan support of this legislation included Senator Joni Ernst of Iowa, Senator Heidi Heitkamp of North Dakota, Representative Todd Young of Indiana, and Representative Gerry Connolly of Virginia. The key thrust of this law is to demonstrate prudent spending of taxpayer dollars on large, complex projects. The PMIAA also reforms federal project management fundamentals in the following four dimensions:

• Creating a formal job series and career path for program managers in the federal government.
• Developing a standards-based program management policy across the federal government.
• Recognizing the essential role of executive sponsorship and engagement by designating a senior executive in federal agencies to be responsible for program management policy and strategy.
• Sharing knowledge of successful approaches to program management through an interagency council on program management.
SPOTLIGHT ON
Lyazzat Zholimova

BY JULIE K. OWEN, CCC CEP PSP

Lyazzat Zholimova was born in Uralsk, the west region of the Republic of Kazakhstan and grew up there. After winning the Republic Olympiad in Mathematics, she received a scholarship to be part of the FLEX exchange program in the United States. She moved to the United States and completed her high school degree with honors in Kansas City. She then graduated with a degree in financial management from West Kazakhstan Social Science University.

Lyazzat began work with the Italian company, Bonatti, as an assistant in the project control department. Showing remarkable results in analysis, she began to improve the reporting procedures and risk analysis, as well as the accelerated usage and simplification of existing documents. Her background in math helped her understand project controls concepts quickly and she excelled in the field. For the past 12 years, she has been working in project controls performing planning, scheduling, cost control, earned value management, contract administration, estimating and tendering contracts. Lyazzat enjoys her work because she finds the projects to be interesting and believes her project controls contributions are valued.

Within a few years, Lyazzat was leading her own project controls team and managed the project controls and services department for the joint venture company of Areva & Kazatomprom. This company does uranium mining in Kazakhstan. During those years she learned cost engineering based on AACE’s Total Cost Management and developed her managerial skills. Her team successfully implemented an earned value management system on the project within 13 months.

She was then invited to work on a U.S. government project for the construction of a reference laboratory for a biological threat reduction program. During the lifecycle of the project, she and her team successfully passed an integrated baseline review, six DCMA surveillance reviews, and one DCMA audit within eight months. Her mentor, Sean T. Regan, encouraged and assisted her in the development of an earned value management system (EVMS) for this project.

Lyazzat attended earned value classes in 2009 in Moscow. That training assisted Lyazzat in her career development. Since then, Lyazzat has earned 150 PDUs through trainings, seminars, and conferences.

In 2017, Lyazzat attended the AACE Annual Meeting in Orlando and gained a lot of new skills and knowledge on cost engineering, managing big data, risk and critical path analysis. She also spoke at PM days of Kiev, Ukraine, about implementation of EVMS. This event helped launch new sections in Poland and Ukraine. Lyazzat also spoke at a TCM event for the Russia Section in Moscow and with Rosatom on project control best practices.

Lyazzat currently serves as section president for the Central Asia Section. Lyazzat helped organize the Central Asia Conference in Almaty, Kazakhstan. Currently, Lyazzat is reaching out on a Memorandum of Understanding between AACE and the Kazakh British Technical University for development of a partnership that has a goal of better educating students.

Lyazzat says ‘AACE International offers a lot of opportunities for professional certification and is highly revered as they teach you theory but also practical applications of how their tools can be used on your projects.’

Currently Lyazzat is working on her Earned Value Professional (EVP) certification through AACE. She keeps learning and believes in continuous improvement for her professional background. She recommends to never stop learning new and teaching others. Her advice for other rising professionals is ‘do not delay as it is never too late to learn or study something new and you are never too old to follow your dreams.’

“Do not delay as it is never too late to learn or study something new.” — LYAZZAT ZHOLIMOVA
Seeing half is not enough.

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Recruiting, Managing, and Retaining the Millennial Generation in Project Controls

BY DANIEL P. GILMOUR, PSP AND ANDREW D. CORSON

ABSTRACT
The project controls profession is facing a generational reckoning – as the bulk of the baby boomer generation reaches retirement, how do we adapt to the newest generation entering the profession and pivot toward their success? This is a dilemma facing organizations across the industry and truly elevates questions about the future of the profession. To understand the millennial cohort, this article examines research on generational differences, sheds light on the socioeconomic factors that produced the archetypal millennial, debunks well-worn generalizations, and delves into the typical strengths of millennials. Focusing on structured processes centered on frequent feedback, team-driven environments, and the creation of performance scoreboards, this presentation contemplates strategies for getting the most out of, and retaining, millennial employees. Finally, this article analyzes millennials as managers themselves, providing a view of what is to come in the industry. This article was first presented as DEV.2541 at the 2017 AACE International Annual Meeting, now the Annual Conference & Expo.

INTRODUCTION
The millennial generation is now the largest generational cohort in the labor workplace. Beginning in 2015, the millennials comprised over 35 percent of the U.S. workforce, numbering close to 54 million people [10, 17]. In 2018, the last of the 92 million millennials will enter the workforce, heralding in the next unpredictable, misperceived, and unique generation of workers. The time for sounding the warning that “the millennials are coming” is over. The millennials are here to stay and will be for quite a while. By 2025, it is estimated that 3 of every 4 workers will be from the millennial generation [6]. Their heavily generalized and largely misunderstood characteristics will skew and shape the workforce for years to come.
Meanwhile, the long-celebrated baby boomer generation will reach retirement age in entirety over the next decade. The eldest baby boomers passed the retirement threshold starting in 2011. Although the recession of the late 2000's decelerated their exit from the workforce, their departure has begun to pick up as economic conditions have improved. The phenomena of global aging currently occurring in the workforce is a product of the massive size and impact of the boomer generation when compared to successive generations. The commonly quoted statistic for the current exodus of baby boomers from the workforce is 10,000 workers per day [11]. That means that in the next year alone, 4 million baby boomers will cede their leadership positions to both Generation X and the millennials. The long-maligned millennials, outnumbering Generation X by nearly 30 million, will soon be the lifeblood of our workforce. Are they ready? Have we prepared them accordingly?

Although the above cited statistics represent the American workforce, never have generational characteristics been as globally aligned as they are in the millennial generation. Because of globalization and the ability of technology to shrink the earth, millennials around the world share similarities in a way that Generation X, the baby boomers, and previous generations never did.

The project controls industry faces a generational reckoning of a different order when it comes to the millennial generation. Assuming the demographic breakdown of AACE International (AACE) is indicative of the project controls industry, the comparative data is quite striking. Averaging the demographic data within the AACE 2015 Member Values Survey and 2015 Salary and Demographic Survey of Project and Cost Professionals shows that approximately 12-15 percent of AACE membership falls within the millennial generation, compared with 35 percent of the overall workforce [5, 6]. In addition, AACE demographics data shows a membership breakdown of 40 percent Generation X and 45 percent baby boomer or older, compared to 34 and 31 percent respectively across the overall workforce. Figure 1 summarizes the demographic breakdown of AACE compared to that of the U.S. workforce as compiled by the Bureau of Labor Statistics [1, 2, 17]. Arguments can be made that younger project controls professionals are less likely to carry an AACE membership and that the project controls profession is a late-entry profession, meaning that younger workforce members need more seasoning before entering a project controls role. While these arguments are sound, the data on the project controls generation gap is clear and alarming. If the baby boomer generation continues to leave the workforce as predicted, the industry is facing a severe talent drain detrimental across all organizations, particularly AACE. To quote an AACE task force report on membership growth dated June 2, 2015, the issue of membership growth in young professionals is the “single largest, looming threat to AACE in both the near and long terms” [3, 15].

Other industries have seen a data and analytics revolution driven primarily by young, millennial-age thinkers. Industries like advertising, marketing, political polling, and sports management have been transformed by data analytics. In the sports world alone, many teams are drawing on the millennial generation’s technical skills and aptitude for big data to fill their general manager and operations roles. Coupled with the popularity of Moneyball, a book written by Michael Lewis detailing the Oakland Athletics use of advanced statistics to make managerial decisions in 2002, teams are now using advanced statistics and trending to make decisions on whom to trade for, whom to draft, and whom to develop. In 2016, the Phoenix Coyotes of the National Hockey League hired John Chayka, then a 26-year-old with a reputation as an analytics whiz, to run their entire hockey team. So why then, as an industry inherently rooted in data and analytics, has the project controls world failed to harness the passion and energy of the millennial generation toward technical analytics to push the profession and expand it farther than currently conceived?

The answer may lie in the systemic biases leveled toward the millennial generation. If managers and executives believe that their millennial workers are merely tattooed, pierced, and dyed-hair loafers only driven by the infamous participation trophies of their youth, then the generational and global workforce precipice is clear and impending. If those same managers and executives are willing to look past the stereotypes and strive to understand the socioeconomic forces that made their millennial workforce who they are, they will indeed see the vast potential and hidden benefits of this high-maintenance, high-performance generation. Seeing the urgency in the demographic divide, the project controls industry is faced with a defining choice: ignore, accept, or engage the millennials.

**FIGURE 1. Generational Workforce by Percentage**

<table>
<thead>
<tr>
<th>Generation</th>
<th>Bureau of Labor Statistics - US Workforce</th>
<th>AACE®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Millennials</td>
<td>35</td>
<td>15</td>
</tr>
<tr>
<td>Generation X</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Baby Boomers &amp; Older</td>
<td>45</td>
<td>31</td>
</tr>
</tbody>
</table>

**MILLENNIALS DEFINED**

**GENERATIONAL THEORY**

Generational theory and classification is widely recognized to have its founding in the work of Hungarian sociologist Karl Mannheim. Mannheim posits that because of the shared life experiences an age group cohort encounters in their youth, the generation classification to which a person belongs can predict the attitudes and behaviors they exhibit as an adult [12]. Therefore, when defining or attempting to understand the characteristics of any generation, it is vital to explore the cultural environment of its adolescence.
Demographic theorists William Strauss and Neil Howe, in their books The Fourth Turning and Generations, introduced the premise of repetitive generational archetypes. They argue that four repeating generational events called “turnings” cycle throughout time every 20-22 years: high, awakening, unraveling, and crisis. The four turnings thusly create an approximately 80-year saeculum (a period approximately equal to the potential lifetime of a person or population). Corresponding to these four turnings are four repetitive generational archetypes: prophet/idealistic, nomad/reactive, hero/civic, and artist/adaptive.

Morley Winograd and Michael Hais analyze the Strauss-Howe generational theory one step further in their book, Millennial Makeover, by concluding that generations alternate between dominant and recessive archetypes – the prophet and hero generations are dominant, and the nomad and artist generations are recessive. The cyclical rotation of generational traits is important to remember when evaluating communication (and management) between people of different generations – dominants and recessives tend to conflict.

WHAT IS A MILLENNIAL?
So, what exactly is a millennial? The term millennial was first coined by Strauss and Howe. The supposed generational bookends vary, but the millennial generation generally falls between the birth years of 1978-1980 and 2000. This generation has also been called Generation Y, Generation Me, the Baby Boomers, and the Peter Pan generation. The millennials have been shaped by common life experiences such as: September 11th, Columbine, the Afghanistan and Iraq wars, the economic prosperity of the 1990’s and the global recession of the late 2000’s, and the rise of the internet and social media. The U.S. Census Bureau estimates that 92 million millennials were born from 1978-2000. Revisiting Strauss and Howe’s research, the millennial generation falls within an unraveling turning and is classified as a heroic/civic archetype and thereby a dominant generation.

GENERATION X
Generation X, born from approximately 1965 to 1979, numbers approximately 61 million men and women. This generation has also been called the MTV generation or the latchkey generation. The major life events that define Generation X include the Persian Gulf War, the rise of divorce rates, the AIDS epidemic, Watergate, homes with two working parents, Chernobyl, and the introduction of the home computer. Generation X does not expect to be better off than their parents, denoting a significant dividing line in the generational timeline. This generation is most notably marked by their independence and desire for work-life balance. Because of their small size, Generation X only held the title of largest cohort in the workforce for approximately 4 years from 2011 to 2015, when the millennials rose to steal that crown. Generation X falls into an awakening turning and is classified as a nomad/reactive archetype and thereby a recessive generation.

THE BABY BOOMERS
The baby boomers were born from roughly 1946 to 1964 and were aptly named for the post World War II baby boom. This massive cohort of approximately 80 million people lived together through the Vietnam War, the Cuban Missile Crisis, the Civil Rights Movement, NASA’s Apollo Missions, the hippy subculture, and the assassinations of Martin Luther King, Jr., Robert Kennedy, and John F. Kennedy. They were the generation that fought for equality and popularized rock and roll. Through events like Vietnam and Richard Nixon’s resignation, the boomer generation developed a cynicism toward authority and leadership. They were parented on hard values and character building but have matured to parent their own children by leading with self-esteem and assurance. In the workplace, boomers are noted for their diligence, willingness to work long hours, and adherence to the politics of seniority. The baby boomers came of age during a high turning and are classified as a prophet/idealist archetype and thereby a dominant generation.

THE SILENT GENERATION
The silent generation is the oldest generation currently in the workforce. Considering that the youngest members of the silent generation turned 72 in 2016, most of the 56 million members of the silent generation have retired. Also called the Builders, this generation experienced the Great Depression and the New Deal, World War II, and the Korean War in their youth. Thanks to the GI Bill, many in this generation were the first in their families to attend college, beginning an upward educational trend that has now seen the millennial generation become the most educated in history. The silent generation often worked their entire careers for one company. The silent grew up in a crisis turning and are classified as an artist/adaptive archetype and thereby a recessive generation.

THE NEXT GENERATION
Beginning in 2018, the Next generation will enter the workplace. Demographers have also labeled them Generation Z or the Homeland Generation. This cohort is expected to be much smaller than the millennials and has been molded by the mortgage crisis, the war against ISIS, same-sex marriage, and mobile technology. Unlike most in the millennial generation, this cohort has been exposed to social media, the internet, and the modern deluge of information their entire lives. Because of the continued advancement of technology into every aspect of daily life, Generation Z will likely magnify and expand the traits that managers so revile in the millennials. Furthermore, they will have to contend with career-delayed millennials when they enter the job marketplace and their ultimate economic prospects will be burdened by the growing cost of higher education.

THE MILLENNIAL PROFILE
In their book Managing the Millennials, Chip Espinoza and Mick Ukleja suggest that “the holy grail to managing millennials is seeing yourself as the key to their success.” To become part of their success, one must first understand the millennial profile. That begins with setting aside biases and empathizing with the humanistic growth components that formed the millennials into who they are. It is critical to acknowledge that while the profile below deals in typical generalizations about the millennial generation, as the most diverse generation of our time, it is not fair to hold all millennials to the same set of pre-defined standards. In fact, many demographers, historians, and researchers are now classifying the millennial generation into two waves – delineating clear differences between the children of the early 1980’s and the children of the 1990’s. The earliest millennials may not act in accordance with the typical profile at all.

The millennial generation is the most educated and most technologically savvy generation the world has ever seen. Growing up with computers, cellphones, text messaging, and the internet, they are truly
the first digital natives. The technological advancements that have occurred in their upbringing have made millennials less resistant to changing workplace technologies and have embedded within them an innate ability to multitask. Technology and multitasking has led to a work-life blending within the millennial generation that is very much in conflict with Generation X’s search for work-life balance. Millennials have no problem with taking work calls or corresponding by email during non-work hours and perceive that interaction as part of their regular work function. Conversely, they also tend to reel their personal lives into work hours. In many ways, they have blurred the line between their personal and professional lives. Nevertheless, reliance on technology has also routinely stunted their social and interconnectedness skills. Millennials are far less likely than previous generations to participate in traditional networking and put less value on establishing interpersonal relationships with their managers. Their social media tendencies have fostered the label of narcissism onto the entire generation.

The millennials are generally the sons and daughters of the baby boomer generation and the product of changing parenting trends that pushed for a more nurturing and structured environment within which children could grow. Like their boomer parents, millennials tend to challenge authority, but for much different reasons. Owing to their close-knit relationships with their parents and the parents of their friends, they have been encouraged to question why and to interact with their elders in less formal tones. Millennials tend to address their managers by their first name rather than in more formal terms such as Sir or Mrs. Similarly, because of the internet, the millennial generation has grown up with the ability to access information without going through an authority figure.

Many millennials grew and matured under the influence of helicopter parenting, where their days were scheduled and structured down to the hour with practices, tutoring, and extracurricular activities. Their parents have told them they are capable of anything, instilling within them high aspirations for their future. As a result, millennials are ambitious, competitive, self-assured, and thrive under structure. When given rigid structure, millennials prove to be excellent rule followers. They have high perceptions and high expectations for themselves. However, the effect of helicopter parenting has also imprinted upon the millennials several of their most well-worn stereotypes: impatience, lack of self-sufficiency, a high sense of entitlement, and self-absorption. In many ways, the infamous participation trophies that have become the symbolic rallying cry against the millennial generation were more a product of their parent's over-involvement than of their own desires.

Impatience is the millennial trait with which most managers have the hardest time dealing. Partially because of the way they were raised, and to technology’s ability to put everything they want right at their fingertips, millennials want instant gratification and lack the context to understand the ladder they need to climb. One need not look any further than the millennial’s entertainment choices to understand this impatience. Movies, music, books, and information are all available to them right there on their screens. They need not wait for the movie to come out in theaters or the song to play on the radio. The organizational structures of seniority championed by preceding generations existent in today’s workplace are very much at odds with the instant gratification, merit-based climbing mentality of the millennials. Impatience is where millennial retention becomes so challenging as they have rightfully earned their reputations as job-hoppers and boomerangs, moving home to their parents when things have not gone their way. Yet, because of the controlling economic forces at the time they entered the workforce and the growing cost of higher education, millennials have more student debt and smaller mean incomes than previous generations [9, 18]. Might the prevailing economic conditions inform their desire to rise and rise quickly?

There is a lot to admire about the millennial generation. Millennials are diverse and civic-minded, driven by the desire to make an impact (Strauss and Howe would argue that its implicit to their archetype). Technology has made the world smaller for them and they feel more connected with the global community. They seek out companies that allow for volunteering on company time and provide donation matching programs. A people-first atmosphere gives millennials a soft place to land when they need it. Rotational training programs convey structure, multi-disciplinary engagement, frequent feedback, and the opportunity to advance where one feels they can make the most impact – all scenarios under which millennials thrive. As will be discussed later in this article, rotational training programs are as much a millennial recruiting tool as they are an indispensable part of millennial management and retention.

RECRUITMENT STRATEGIES

KNOW WHAT THEY WANT

The fundamental key to recruiting, of any age group in the workforce, is knowing what they are looking for and tailoring the recruitment messaging accordingly. What do millennials want? They want flexible schedules, flexible locations, a career branded with prestige and stature, structured training and mentorship, merit-based advancement and compensation, and the ability to quickly gain responsibilities and express their creative problem-solving skills. Depending on the internal machinations of an individual company, it may not be able to offer many of these millennial wants. Yet, with the coming challenge posed by global aging and the growing share of the workplace held by millennials, organizations may have no choice but to adapt and change their recruiting dynamics. Two straightforward solutions to recruiting for the millennial’s diverse and demanding wants are the promotion of a people-first atmosphere and the implementation of rotational training programs. A people-first atmosphere gives the millennial a soft place to land when they start work, reminiscent of the cultures in which they grew up. It also helps draw out the interpersonal skills that many millennials so often lack. Rotational training programs convey structure, multi-disciplinary engagement, frequent feedback, and the opportunity to advance where one feels they can make the most impact – all scenarios under which millennials thrive. As will be discussed later in this article, rotational training programs are as much a millennial recruiting tool as they are an indispensable part of millennial management and retention.

GO WHERE THEY ARE

Millennial recruiting begins in the digital world. Businesses and organizations that are looking to hire from the millennial generation are practically obsolete without a strong online presence. Company websites and social media content must be dynamic: to a millennial, a static web presence signals an antiquated and dull career opportunity.
With that in mind, organizations need to gear their online presence not only to their customers but also to their prospective employees. Millennials crave prestige and an organization’s web presence is often their first (and sometimes, only) chance to craft a branding message that is attractive to them. In the mind of a millennial, it is not so much that an organization chooses them, but that they choose the organization.

Similarly, millennial friendships and online social networks are the ultimate recruiting avenues for modern businesses. Friends make the best recruiters. Considering their tendency to blur the lines of personal and professional life, millennials are most happy when they feel they have close friends where they work. Organizations need to take advantage of the vast recruiting resource that is the young workforce they already have in the door.

CLOSE THE DEAL

Persuading and onboarding millennials can be condensed in three clear principles: be honest, be selective, and be fast. First, be honest and do not oversell the position you are filling. Millennials already have high expectations for their employers and for themselves. If they feel those expectations have been manipulated and they were sold on something their managers cannot deliver, they are bound to move on. Extend to them a full job preview or the opportunity to shadow a future co-worker. Second, not all millennials will succeed in any given position – being discerning is akin to keeping a wise eye on the future. A suggested note on being selective: millennials have been coached how to interview and they know what you want to hear, regardless of whether its predictive of their own prospects. Ask behavioral questions that knock them out of their comfort zone, compel them to think on their feet, and force them to outline their thought processes. Finally, make quick decisions, stay in communication, and do not leave a millennial hanging. Millennials operate in the transactional and their impatience will sully the opportunity.

ENLISTING THE NEXT TALENT WAVE IN PROJECT CONTROLS

The generation gap in the project controls industry is clear and the millennial generation’s potential is real and apparent. In recruiting millennials, it is time for the project controls industry to begin fishing with hooks and not nets. This means increasing the profession’s exposure to young people and hooking millennials on the power and influence that project controls professionals can wield. When evaluating construction and engineering disciplines, in many respects, there is no better way to make an impact early in one’s career than pursuing a project controls role. Too often, project controls roles are marketed with the most unsexy functions of the career: tedium, repetition, and the pedantic. These roles need to be advertised by extolling the impact project controls professionals can have on their projects and organizations and expressing the considerable opportunity to exercise analytic creativity.

What does fishing with hooks mean in a practical sense? It means not structuring university outreach programs toward students themselves but to the teachers, professors, and curriculum-makers. This cannot be tackled by organizations like AACE alone. Industry-leading companies and individual project controls professionals must make bridging efforts like volunteering to guest lecture classes on the industry and expose students to their own careers and passion. It is only through this type of grass-roots lobbying that the industry can grow its base and combat its stature as a late-entry profession. If they do not know anything about it, how could they possibly want to do it?

Organizations like AACE need to learn to embrace the diversity of the millennial generation and accept them within their ranks. This can be accomplished by expanding and most importantly, widely marketing existing mentoring programs, improving web presence and mobility applications, and acting as industry forerunners by establishing certification ladders and short-interval career plan templates.

MANAGEMENT AND RETENTION STRATEGIES

EMPATHY AND FLEXIBILITY

Successful management of the millennial generation is innately rooted in empathy. Managers must shelve their own personal preconceptions and work to understand the root causes of typical millennial behaviors. This is accomplished by taking an interest in them, listening, and learning their perspectives. Empathy is the ultimate trust builder for a generation low on trust. Managers who can adapt and be flexible, as opposed to following the “way it has always been done” tradition, will be the most effective at engaging the millennial workforce. Engagement is the key to diluting the millennial generation’s self-absorption and the tool by which they may emerge from their notorious vacuums. Millennials do not learn, work, or communicate the same way that previous generations did and as such, today’s workplace calls out for flexibility and adaptation.

STRUCTURE AND STRONG LEADERSHIP

Millennials expect strong leadership - it is what has driven their development. A manager needs to appreciate those expectations and use them to bring out the best in their employee. There exists a dichotomy between the millennial’s desires for the high structure of their youth and the autonomy that brings meaning to their work. As Bruce Tulgan writes in his book Not Everyone Gets a Trophy, “the more structure you provide, the more freely millennials can operate within those certain boundaries” [16, 139]. Therefore, managers must walk the fine line of removing ambiguity and setting clear expectations without condescension and micro-management. To a certain extent though, millennials have been raised on micro-management and are more welcome to that managerial style than previous generations. The parental micro-management they have grown accustomed to, however, was free of condescension and operated on more congenial terms than often seen in workplace practice. Rotational training programs are a great way to provide structure while also broadening exposure, fighting boredom, and embracing the multi-tasking talents of the millennials.

Technical skills aside, leaders at their core are custodians of people and the best leaders generate new leaders. Consequently, the weight of the proverbial millennial problem falls on the workforce leaders of today and their ability to communicate expectations. Communicating clear expectations is a two-way street. Does the employee understand the expectations the manager has set for them? Does the manager understand the employee’s own expectations? A lot of the millennial generation’s failings can be traced back to not meeting the unspoken expectations of their managers and many of the retention issues prevalent with millennials can be pinned to companies not meeting the expectations of the millennial. Managers must coach millennials how to be managed by them.

MENTORSHIP, CONTEXT, AND THE WHY

Espinoza and Ukleja suggest that “Millennials prefer being coached or mentored to being managed. Mentoring
relationships can break down the barrier of generational difference” [7, 170]. One of the many consequences of the parenting trends employed by the mothers and fathers of the millennial generation is that millennials transition slowly into adulthood. Early in their career, they value the guiding role of coaches and mentors who can help them address the quintessential basics they may be lacking. High frequency check-ins such as fixed one-on-one talks can be highly effective at focusing millennials in the proper direction and staying aware of what the millennial needs from their manager.

One of the most common difficulties managers face when dealing with millennials is their failure to grasp context. Though managers can find this questioning nature to be frustrating, they are often missing the native opportunity to help millennials find the meaning they so desperately desire by providing the context they are missing in their overall job roles and daily tasks. When a millennial employee presents a problem, managers should set the expectation that the employee presents a solution proposal as well, thereby forcing the employee to think and plan beyond the bounds of their problem. Their ambition years for a summit. By showing them the big picture, managers can help them understand the mountain that needs to be climbed on the way to that summit. On the other hand, if leaders manage to harness the boundless energy of the millennial generation, their inexperience and blind lack of context can lead to creative solutions.

FEEDBACK AND SCOREBOARDS

Millennials want frequent feedback, but do not necessarily know how to take criticism. They never learned to fail because the dominant parenting and affirmation trends of their youth did not allow them to. Managers should not avoid giving millennials hard feedback, but when giving tough criticism, managers should always pivot to the positive and maintain a focus toward continual progress. The old-school mentality that taking one’s lumps early in their career is a badge of honor is archaic and unwarranted in the mindset of the millennials. The continual path of progress is the decisive millennial motivator. Take their demands for advancement, mobility, and additional responsibilities and use them as motivational opportunities. In this sense, managers can exploit the transactional mindset of the millennial.

The deployment of performance scoreboards is an impactful way to harness a millennial’s ambition and competitiveness and pivot it toward personal progress. When setting benchmarks for their millennial employees, managers should focus on short-term ladders of progression and follow up by celebrating milestones met and reviewing the benchmarks where the millennial employee has fallen short. The most crucial step for a manager to take in establishing a millennial’s progression of development is coaching self-evaluation, a severe deficiency in the millennial generation. To function properly in the workplace, millennials must learn to self-evaluate their behaviors, the quality of their work, and their day-to-day productivity. Coaching self-evaluation unburdens managers from the frequent feedback loop by allowing millennials to carry some of that evaluation load themselves.

KEEP THEM ON THE BOAT

The underlying impatience and genuine ambition of the millennial generation poses a significant retention quandary. A 2016 study conducted by Deloitte concludes that two thirds of millennials plan on leaving their current organization by 2020 [5]. Turnover is extremely expensive, and organizations must focus on strategies that keep their best employees happy where they are. Good management is intrinsically the best retention strategy. Many of the managerial strategies discussed above should also be viewed as important long-term retention tactics.

Retention starts on day 1. Millennials like to feel special. If an organization is not ready for their incoming millennial, the organization is already failing to meet the high expectations of their new employee. A typical example of this would be not having computer equipment procured, not having a desk ready, or not having training or mentorship programs set up. Similarly, a sink or swim mentality toward millennial hires early in their employment will almost always result in a sink – a missed opportunity to potentially use a unique talent.

Another essential principle of millennial retention is combatting periods of restlessness and boredom. The adage stating, “if you have nothing to do, find something to do” just does not play to the strengths of millennials as it might have for previous self-starting generations. Supervisors must adapt. Establishing a long-running learning plan or learning journal with millennial employees allows them to take an active role in the defining and progressing their development. It also establishes learning content and personal development activities for the millennial to pursue in periods of downtime. Along with their many other previously mentioned benefits, rotational training programs have enormous value in fighting boredom. With retention in mind, managers must also avoid what Tulgan calls “the meaningful roles problem” [16, 48]. If managers cannot elevate millennials into progressively more meaningful roles in short intervals, they will have acute difficulties in retaining their highest performing millennials.

Speaking of the highest performing millennials, managers should prioritize the bulk of their retention efforts on them. They are the employees who best know their marketplace worth and by the time they tell you they are moving on, it is already too late to do anything about it. With the millennial generation, managers must make their high performers feel that they are cared for and appreciated. Letting them know that they are valued and a priority in the company’s future will go a long way toward keeping them as long-term contributors to the organization. Maintaining open lines of communication helps managers proactively attack retention issues and strengthens their overall relationship with the millennial employee, which is essential when you consider that a 2005 study completed by the Saratoga Institute concludes that a worker’s relationship with their immediate supervisor accounts for 50 percent of their overall job satisfaction [4].

In the project controls industry, shared best practices and lessons learned generally revolve around technical topics instead of managerial strategies. Successful managers have a responsibility to share not only their technical strengths but their managerial methodologies and victories as well. This will push individual organizations and the entire industry toward more effective management of millennials and the entire workforce.

MILLENIALS AS MANAGERS

Considering that the eldest millennials recently turned 36, the millennial generation is no longer made up of the leaders of the future – they are the leaders of the here and now. In fact, in the AACE 2015 Salary and Demographic Survey of Project and Cost Professionals, 52% of millennials surveyed reported that they had managerial duties in their current position [2]. So, how are millennial managers different than managers of the past?
The millennials are here, they are not going
2018, the next generation will arrive at the
[8]. The influx of millennial managers
while millennial managers may excel on
Generation X than their younger counterparts
undoubtedly bring a management style that
relationships, profit, and products.
retention of the millennial generation seem
that. The youngest wave of the millennial
imperative to acknowledge that the two waves
the horizon. The millennial manager will
undoubtedly bring a management style that
parallels the parenting they experienced:
close-knit relationships built upon constant
communication and assurance. Conversely,
while millennial managers may excel on
the direct people side of management, they
may not be as focused on the traditional
 corporate goals that organizations
have valued for years: customer service
relationships, profit, and products.
As previously discussed, it is also
imperative to acknowledge that the two waves
of the millennial generation will likely produce
managers with distinctly different styles. The
older millennials who are now assuming
leadership roles have more commonalities with
the managers of the boomer generation and
Generation X than their younger counterparts
and their managerial styles will reflect
that. The youngest wave of the millennial
generation may very well typify a whole new
managerial approach.

CONCLUSION
The millennials are here, they are not going
anywhere, and organizations, industries, and
the project controls profession need them
to fill growing labor talent gaps. Starting in
2018, the next generation will arrive at the
office or jobsite, perplexing co-workers and
supervisors with their new behaviors and
odd habits. Time is running out to rectify
millennial management in the workplace.
If the strategies laid out in this article
for recruitment, management, and
retention of the millennial generation seem
to put the onus directly on managers and
supervisors, that is because only managers
can solve the millennial problem. It is up
to managers to decide whether to ignore,
accept, or engage the millennials. They hold
the responsibility to adapt. By focusing on
the unique opportunities that millennials
bring to the table rather than the notorious
headaches, managers can swing millennial
management and pivot for the greater good
of their individual organizations and their
employees’ futures.
The baby boomers who once echoed
The Who’s denouncement of people putting
down their generation must realize that
the millennial generation is making the
same ask. By removing millennial biases
and exhibiting empathy, managers can
separate the signal from the noise – when
you strip away the stereotypes and labels,
is there still a generalized millennial
trend? Millennials need clear expectations,
structured boundaries, strong leaders who
guide and coach, and a notion for how the
score is being kept and how the transaction
will transpire. When managers find a way
to fill these needs, they unlock the keys to
recruiting, managing, and retaining this
high-performance, high-potential generation.

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CENTRAL ASIA SECTION

The Central Asia Section is continuing negotiations to establish a student section at the Kazakh-British Technical University in Almaty Kazakhstan. On Feb. 22, there was a meeting involving Lyazzat Zholimova, President Central Asia Section, board members from the section, Sean T Regan, FAACE CCP CEP EVP, Director Region 9, and Dr. Timur Narbaev of the university. Mr. Regan was the guest lecturer for a master’s degree in construction class. He discussed AACE International, the AACE Academic Special Interest Group (SIG), the AACE scholarship program, and the TCM Framework. Following his lecture, Regan continued talks with Narbaev about opening of a student section at the university, use of the AACE Certified Cost Technician (CCT) and Certified Schedule Technician (CST) certification program as a part of the students’ training, a potential Memorandum of Understanding (MOU) between AACE and the university and possible creation of a master’s degree program in cost engineering.

Above: Lyazzat Zholimova, President of the Central Asia Section is shown with Region 9 Director Sean Regan and Kazakh-British Technical University Professor, Dr. Timur Narbaev during a February Section program at the university.
Above: Region 9 Director Sean Regan spoke to this group of students of Dr. Timur Narbaev at a Kazakh-British Technical University in Almaty, Kazakhstan in February. Regan discussed AACE International and various association programs.

HAWAII SECTION
The Hawaii Section is planning to participate in the Hawai’i Council of Engineering Societies’ Engineering Week with a display at the Windward Mall Shopping Center, and a planned group webinar in April.

On December 8, 2017, over 24 members and associates joined the Hawaii Section for a technical presentation by Bikeshare Hawaii’s Executive Director, Lori McCarney, at the CH2M Hill’s Honolulu office. Her presentation, “The Story of Biki - Chapter One,” was captivating and had the audience all ready to jump on a Biki that afternoon! In her talk, Lori answered questions about the logistical, technical, and financial challenges of starting up this venture. She stayed on to answer many questions from the audience including safety, riding in heels, and ridership statistics both locally and nationally.

Ready... Set... BOWL! On October 19, 2017, the Hawaii Section held its third networking event at Aiea Bowl. The section welcomed 16 members at all skill levels for some fun competition, pizza, and beer!

On Aug. 25, 2017, the Section was elated to hold its largest attended meeting to date, a technical presentation at the Hawaiian Dredging’s new office along Kapiolani Boulevard. Christopher Baze presented, “BIM & Reality Capture in Construction.” Members and friends were given the opportunity to view the latest BIM equipment, software, and scanners. The section also had a hands-on experience with augmented reality headsets! The information was useful for project managers, planners, cost estimators, project controls and schedulers.

These were three section events in the third and fourth quarters of 2017, as well as the planned 2018 activities.

Below: AACE Hawaii Section members enjoyed an Autumn Bowling Outing in 2017. Shown above kneeling are: Brett Katayama, David Ladines, Steven Wong II. Standing l-r are: Cristo Rojas, Cole Yamakawa, Kristy Kastner, Joseph Uno, Tommy Uno, Takaaki Ito, Maelyn Uyehara, Paul Belshoff, Khalil Ibrahim, Lisa Yu, Ray Nair, and Richard Koong.
The France Section sponsored a conference on Jan. 30, in Paris. The conference was a full day orientated toward a theme of the control of costs on industrial projects. The conference was well attended, with 89 attendees and 43 companies/organizations represented. Both speakers and attendees showed a real appetite for growing their processes of cost estimation and control in cooperation with the France Section. The conference was hosted graciously by the CNES (the French NASA – albeit smaller!), and speakers included Total, EDF, Areva, and Thales reports Section President Thierry Linares.

Olivier Brongniart from Cost House speaks at a January conference in Paris that was sponsored by the France Section in coordination with SMaP, a French project management association.

Above: Kanthea Kheng, head of estimating at CNES, along with other speakers, is shown above during a presentation at a control of costs on industrial projects in Paris in January that was co-sponsored by the France Section.

Above: Gilles Turre of SMaP, a French project management association, introduces speaker Ms. Benedicte Bonomi, head of estimating at THALES, at the January conference in Paris, sponsored in conjunction with the France Section.

DOES YOUR SECTION HAVE NEWS TO SHARE? See page 25 for complete instructions for how to submit news and photos from your Section’s happenings to be included in the AACE® International Bulletin.
SUBMITTING SECTION NEWS: We invite all sections to submit news and updates to be included in the International Bulletin section of each Source issue. Please submit any and all text as a part of the e-mail or as a Microsoft Word file attachment. Please submit any photos as individual attachments in JPG formats. Do not embed photos in Microsoft Word files. For photos to be used, we require either large original files or print size photos at 300 dpi (dots per inch). For photos to be published, they must be in focus, of print quality, and of sufficient resolution.

Please include the names and titles of each person shown in any photos. Please list names from left to right or refer to those shown as being above left or right. For group photos please list names from left to right, beginning with the front row and working to the back. All submissions should be e-mailed to editor@aacei.org. Please use the official name of the Section as approved by the AACE Board when the Section’s charter was approved. Within 2 to 3 business days of submitting a “Section News” item, you should receive a return confirmation e-mail that your submission was received at AACE headquarters.

MISSING SUBMISSIONS: Generally, all submissions received in the above scheduled times will be published in the listed issue. Items are not held because of space restrictions. There is no waiting list and no preference is given to one Section over another. Questions about incomplete submissions or failure to follow these submission guidelines could delay publication. Text will be published without submitted photos if the photo does not meet the listed quality requirements. AACE reserves the right to edit all submissions and/or to refuse to publish any submissions determined by the Managing Editor or the Art Director to not meet the standards of the journal. Any appeals of these decisions will have a final decision determined by the Executive Director.

If a submission is not included in the designated issue, please e-mail or call the Managing Editor to ensure that it has not been lost or misplaced. Call or e-mail if you do not receive a confirmation e-mail within 3 business days of submission.

Source has a submission deadline of two months in advance of the issue date.

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Any Section representative with questions is advised to e-mail editor@aacei.org or call the Managing Editor during regular business hours, 9 a.m. to 5 p.m. Eastern Standard Time, Monday-Friday, except holidays and special closings.
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Seminars
June 22-23
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June 27-28
Michael Brenner
CEO, Marketing Insider Group
Author, The Content Formula

Michael Brenner is a globally-recognized keynote speaker on leadership, culture, and marketing. Author of the bestselling book The Content Formula, Michael’s work has been featured by The Economist, The Guardian, and Entrepreneur Magazine. In 2017, Michael was named a Top Business Speaker by The Huffington Post and a top CMO Influencer by Forbes.

Over the last two decades, Michael has championed a customer-centric approach at organizations large and small. He led sales and marketing for software companies like Nielsen and FullTilt. As an executive at ICR, SAP, and Newscred, Michael’s innovative leadership resulted in massive growth. His workshops and keynotes for Fortune 500 brands and tiny startups have inspired profound personal and professional change.

Today, Michael is the CEO of Marketing Insider Group, founded on the belief that strong leaders who champion their teams are the key to unlocking massive growth.

When he’s not working with clients, Michael travels the world helping even the most bureaucratic organizations break down silos, create cultures of innovation, and build engaged workforces.

Keep reading to learn how to save $100 on your registration!
Allan W. Brown
Vice President, Boeing Avionics - Engineering Test & Technology

Allan Brown currently serves as Vice President leading Boeing Avionics and reporting to the CTO of Boeing. In this role he is leading efforts to establish an Avionics capability across the company.

Prior to this current assignment, Allan was Vice President/Program Director for the Missile Defense National Team within Boeing’s Strategic Missiles & Defense Systems division in August of 2009. The National Team organizes and executes a Government, science community and Industry Partnership that applies the best system engineering principles to develop, implement and verify the layered Ballistic Missile Defense System for the United States and its friends and allies.

Prior to his GMD assignment, Allan was Executive Director on a Proprietary Program in Seal Beach as part of the Space and Intelligence Systems business unit. As Executive Director, Allan led a team of Boeing personnel and key suppliers from across the United States for the hardware and software development as well as system level integration.

Allan began his career in 1983 with Warner Robins Air Logistics Command as an electronic warfare and system intelligence engineer where he worked on a number of electronic warfare systems, including the AN/ALR-69 & 74 RADARs, and the AN/ALQ-139 Countermeasure system. From there he joined the McDonnell Douglas Aircraft Company, where he led engineering development, integration and flight test efforts on the F-4G Wild Weasel, F-15 mission computing, and F/A-18 Weapons Control System.

Allan received his Bachelor of Science degree in Electrical Engineering from the University of Kentucky, and a Master of Business degree from Southern Methodist University. Allan is a member of the University of Kentucky College of Engineering Hall of Distinction and serves on the University of Kentucky Electrical Engineering Advisory Board.

Prior to his GMD assignment, Allan was Executive Director for Ground Systems on the Ground-based Midcourse Defense (GMD) program. In this position, he oversaw the development and deployment of the GMD Ground Systems’ missile field, communication and fire control components within the GMD system architecture. His first assignment on GMD was Executive Director for GMD Systems Engineering and Integration Team.
Schedule at a Glance

Visit the AACE International website for the complete conference schedule.

Technical Program

The papers presented in the technical program represent the best and most current tools and techniques used in the industry today covering a wide range of programs and projects. There are over 100 hours of presentations to choose from over a four day period, organized in a variety of tracks such as:

BUILDING INFORMATION MODELING (BIM)
CLAIMS AND DISPUTE RESOLUTION (CDR)
COST AND SCHEDULE CONTROL (CSC)
PROFESSIONAL DEVELOPMENT (DEV)
ESTIMATING (EST)
EARNED VALUE MANAGEMENT (EVM)
GLOBAL PROJECTS (INT)
IT/IM IN PROJECT AND COST MANAGEMENT (IT)
OWNER ISSUES (OWN)
PROJECT MANAGEMENT (PM)
PLANNING AND SCHEDULING (PS)
DECISION AND RISK MANAGEMENT (RISK)
SKILLS AND KNOWLEDGE OF COST ENGINEERING

For a detailed look at the Technical Program schedule or abstracts, visit:

PROGRAM DETAILS
## Continuing Education Seminars

For complete descriptions of the seminars, visit:

### SEMINAR DETAILS

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<td>A.1 CCP Certification Exam Prep</td>
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<td>B.2 You Did What? When? An Interactive Construction Delay Analysis</td>
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<td>C.1 CCT Exam Prep</td>
<td>Quick</td>
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<td><strong>Wednesday - Thursday, June 27 - 28 (1.5 DAYS)</strong></td>
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<td>D.3 Managing a Project from A to Z – A Methodology Based on Key AACE Recommended Practices</td>
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Exhibit Hall

Our exhibitors represent the best in our profession! Visit your favorite vendors at the AACE Exhibit Hall and take advantage of being surrounded by the industry’s newest and hottest products and services.

Exhibit Hall hours are as follows:

- **Sunday** June 24  3:45 PM - 8:00 PM
- **Monday** June 25  7:00 AM - 3:30 PM
- **Tuesday** June 26  7:00 AM - 3:30 PM

For more information on the 2018 Conference & Expo exhibitors, please visit:

EXHIBIT DETAILS

Conference & Expo Exhibitors:

- Administrative Controls
- Management
- Alice Technologies
- ARES PRISM
- Basis
- Bechtel Corporation
- Conquest Consulting Group
- Cost Engineering Consultancy
- Deltek
- DRMcNatty & Associates
- Elecosoft
- EOS Group
- Exponent
- HCSS
- Hexagon PPM
- Intaver Institute
- Load Spring Solutions
- Long International
- Navigant
- Nomitech Limited
- Omega Project Solutions
- OnTrack Engineering
- Plan Academy
- Safran
- Schedule Analyzer Software
- Sword Active Risk
- Taurus Project Controls
- Consultants
- Turner & Townsend
- VMS INC.

Conference & Expo Sponsorship

Showcase your organization’s brand in a highly focused environment.

Sponsorship of the 2018 Conference & Expo is a great opportunity to gain exposure to global leaders in the field of total cost management and to promote your products, services, and image among total cost management professionals.

We have an array of cost-effective options that will enhance your image and visibility among 2018 Conference & Expo attendees. Our sponsorship opportunities are among the most cost and time-effective means of capturing the Conference & Expo attendee’s attention while promoting your organization.

For more information on becoming a sponsor and how it will benefit your organization, please contact Cassie LoPiccolo clopiccolo@aacei.org +1.304.296.8444 ext. 1122.
Hotel

MANCHESTER GRAND HYATT  The host hotel for this year’s meeting is the Manchester Grand Hyatt and AACE has a block of rooms at discounted rates available here:

RESERVE A ROOM

<p>| | | |</p>
<table>
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<tbody>
<tr>
<td>Single/Double Occupancy:</td>
<td>US $209.00/night</td>
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<tr>
<td>Triple Occupancy:</td>
<td>US $234.00/night</td>
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<tr>
<td>Quad Occupancy:</td>
<td>US $259.00/night</td>
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<tr>
<td>Resort fee:</td>
<td>US $5.00/night</td>
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</tbody>
</table>

Rates do not include 8% sales tax; 11.95% hotel tax per night.

Manchester Grand Hyatt
1 Market Place
San Diego, CA 92101
USA

Stay in the host hotel and save US $100

Earn a US $100 discount off your Conference & Expo registration for staying at the host hotel, Manchester Grand Hyatt. Use the link above to access AACE’s hotel reservation website. Your hotel reservation confirmation email will include the discount code (not the online confirmation number) to be used when purchasing your meeting registration. Hotel discounts must be taken at the time of your registration. Hotel discounts will not be applied retroactively.

Airport

SAN - SAN DIEGO INTERNATIONAL AIRPORT
3.0 miles / 4.8 km to hotel
(Also known as Lindbergh Field, San Diego International Airport)

Ground Transportation

TAXI  At the San Diego International Airport, taxis are available at the San Diego International Airport, simply follow the signs leading to the Transportation Plazas. Approximate fare is $17/way.

SHUTTLE  The San Diego International Airport also offers shuttle options to/from the Manchester Grand Hyatt.

PUBLIC TRANSPORTATION (Metropolitan Transit System)
Amtrak Intercity and COASTER commuter trains link communities and travelers from as far away as Los Angeles and Orange Counties to downtown San Diego. From the San Diego International Airport, which is just 3 miles away from the Manchester Grand Hyatt, you can connect with Amtrak’s Pacific Surfliner and the COASTER at Amtrak’s Santa Fe Depot train station downtown by using Metropolitan Transit System Route 992, which operates between 5:00 a.m. and 11:30 p.m., every 15 minutes on weekdays and every 30 minutes on weekends and holidays.

MONEY SAVING TIP #2

Take $100 off your registration fee by staying at the Manchester Grand Hyatt. Enter the discount code found in your hotel reservation confirmation email at registration check-out to receive the discount.

Complimentary high speed internet access throughout the hotel and meeting space
Registration Fees

Visit the AACE Internation website today to register for the Conference & Expo. An early registration discount is available through May 21.

<table>
<thead>
<tr>
<th></th>
<th>FULL TECHNICAL PROGRAM</th>
<th>1-DAY PROGRAM</th>
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<tbody>
<tr>
<td></td>
<td>JUNE 24 - 27</td>
<td>JUNE 24, 25, 26 OR 27</td>
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<td>All prices in US dollars.</td>
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<tr>
<td>**</td>
<td>EARLY</td>
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<tr>
<td>Member *</td>
<td>By 05/21</td>
<td>05/21-06/15</td>
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<tr>
<td>$1,050</td>
<td>$1,150</td>
<td>$1,250</td>
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<tr>
<td>Non-Member</td>
<td>$1,200</td>
<td>$1,300</td>
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<tr>
<td>Student **</td>
<td>$550</td>
<td>$600</td>
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<tr>
<td>Guest(s)/Youth***</td>
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</table>

* Full-time university professors are eligible for a $100 discount off the member rate.
** You must be a student member of AACE International to be eligible for the student rate. Student registrations are not eligible for the hotel discount.
*** Guest registrations are designed for access to selected programs such as receptions, the keynote sessions, breakfasts, and other social events at the Conference & Expo or similar events for a paid registrant’s adult guests (significant others, immediate family). Guest registrations should not be extended to anyone who is currently a member of AACE International, or who is actively engaged in the practice of total cost management, or is employed by any company or organization engaged in cost engineering or cost management, or is employed by an organization or company that offers training and/or professional development in the field of total cost management. Guests may attend a technical session only with the primary registrant if the primary registrant is a speaker or presenter.

**TIP**

MONEY SAVING TIP #3
Register before the Early Registration cut-off date of May 21, 2018 and save an additional $100.

**REGISTRATION**

Add the 2018 conference recordings to your registration - $195

If you are unable to attend all the sessions you would have liked to, or just want to recap what was presented, then this is for you. By purchasing this collection of the recordings from all of the presentations at the conference in conjunction with your conference registration, you will have saved well over $500!

June 24-27, 2018
San Diego, California

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**APRIL**

4  **CMAA EMERGING LEADERS NETWORKING BUSINESS AFTER HOURS**
   Barbara’s at the Brewery, Los Angeles, CA

8-10  **MOBILITY OIL & GAS (UK) TRAINING**
   International Oil & Gas Law Fundamentals
   Dubai, United Arab Emirates

11  **CMAA BREAKFAST OF CHAMPIONS**
   The LA Hotel, Los Angeles, CA

12  **CMAA DINNER LA WORLD AIRPORTS CAPITAL PROGRAM UPDATES**
   The LA Hotel, Los Angeles, CA

26  **THE 15TH ANNUAL SEAOI MIDWEST BRIDGE SYMPOSIUM**
   Maggiano’s Little Italy, 111 W. Grand Ave.
   Chicago, IL

26  **CMAA SOUTHERN CALIFORNIA CHAPTER AWARDS GALA**
   InterContinental LA Downtown,
   Los Angeles, CA

24  **CMAA SEMINAR**
   Effective Leadership and Communication in the Modern Era
   Long Beach Marriott, Long Beach, CA

24-25  **SMART CITIES CONFERENCE**
   Kensington Conference and Events Centre, London

**MAY**

2  **CMAA BREAKFAST OF CHAMPIONS**
   California State University Updates
   Long Beach Airport Marriott, Long Beach, CA

2  **MOBILITY OIL & GAS (UK) TRAINING**
   International Oil & Gas Law Fundamentals
   Houston, Texas, United States

16  **CMAA DINNER, LA COUNTY DPW CAPITAL PROGRAM UPDATE**
   The LA Hotel Downtown, Los Angeles, CA

18  **ETHICS FOR ENGINEERS ASSOCIATION FORUM**
   10 S. Riverside Plaza #800, Chicago, IL

23  **CMAA DINNER, ORANGE COUNTY TRANSPORTATION AUTHORITY CAPITAL PROGRAM UPDATE**
   Long Beach Marriott, Long Beach, CA

**JUNE**

5-7  **AEC NEXT TECHNOLOGY EXPO AND CONFERENCE**
   Anaheim Convention Center
   Anaheim, CA

14  **CMAA SEMINAR**
   Effective Management of Construction Safety Programs Owner and Industry Perspectives
   Long Beach Marriott, Long Beach, CA

24-27  **AACE INTERNATIONAL’S 2018 ANNUAL CONFERENCE AND EXPO**
   Manchester Grand Hyatt
   San Diego, California, USA

**SEPTEMBER**

23-26  **THE 7TH IBPC INTERNATIONAL BUILDING PHYSICS CONFERENCE**
   Syracuse University

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**ARE YOU HOSTING AN EVENT THAT WOULD BE OF INTEREST TO AACE® MEMBERS?**

Please submit items for future calendar listings at least 60 days in advance of desired publication.

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editor@aacei.org
SKILLS AND KNOWLEDGE OF COST ENGINEERING, 6TH EDITION  
Dr. Makarand Hastak, PE CCP, Editor, 2015  
This publication provides information on a wide range of cost engineering subjects and will prove to be a valuable resource to any individual seeking professional growth or pursuing an AACE International certification. This publication offers six sections comprising 34 chapters of content on topics such as cost estimating, project planning, value engineering, and strategic management, to name a few.

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Dr. Makarand Hastak, PE CCP, Editor, 2016  
The AACE International CCP Certification Study Guide, 2nd Edition is designed as a companion workbook to the Skills and Knowledge of Cost Engineering, 6th Edition (S&K 6). In conjunction with S&K 6, this study guide will assist individuals in their preparation for the CCP Certification examination and develop the general knowledge a cost engineering professional is expected to have. This study guide offers insight into the key topics found in each chapter of S&K 6 and provides practice questions and exercises to develop knowledge in individual areas.

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Peter W. Griesmyer, Editor, 2008  
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Sean T. Regan, CCP CEP FAACE - Editor, 2015  
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H. Lance Stephenson, CCP FAACE, Editor, 2015  
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BY THOMAS PETERS, PE CFCC AND ALAN J. WATSON, ESQ.

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FIRST PRESENTED AT THE 2018 ANNUAL MEETING AS PM-2629
BY DR. ALEXIA NALEWAIK, CCP

Proposed Format and Content for Subordinate Recommended Practice 29R-03-3.X
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