AACE ANNUAL MEETING
THE 2017 ANNUAL MEETING BROCHURE
FOLLOWS THIS ISSUE

PRESIDENT’S MESSAGE
DRIVING INNOVATION

AACE INTERNATIONAL ELECTIONS
2017-2018 ELECTION RESULTS

BONUS CONTENT - TECHNICAL ARTICLE
PLANNING ENGINEER QUALIFICATION PARAMETERS
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.

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OUTSIDE THE BOX

HOW TO GET BETTER AT THE THINGS YOU CARE ABOUT

CLICK to watch Eduardo Briceño talk about “How to Get Better at the Things You Care About” presented by TED.

Working hard but not improving? You're not alone. Eduardo Briceño reveals a simple way to think about getting better at the things you do, whether that’s work, parenting or creative hobbies. And he shares some useful techniques so you can keep learning and always feel like you’re moving forward.

Eduardo Briceño leads Mindset Works, which helps people develop as motivated and effective learners through training and resources to foster growth mindset beliefs and behaviors. He co-founded Mindset Works in 2007 with the foremost growth mindset researcher, Carol Dweck Ph.D., and education expert Lisa Blackwell Ph.D. Prior to his current role, Briceño was a Principal at the Sprout Group, a venture capital firm in Silicon Valley, where he was part of the technology investment team.

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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Seeing half is not enough.

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We as AACE members are well situated to drive innovation. We have desperately needed skills in identifying issues and risks, developing strategies to mitigate those risks, solving problems as they arise, and managing projects for greater efficiency. We all use and rely on the latest hardware and software to improve our work, do our jobs more efficiently, and at the same time do it more humanely.

Appropriately, innovation was the theme of Southern California’s 56th Western Winter Workshop (WWW) in Palm Springs, California. It was a great event, very well attended primarily by folks who could drive there, but also with a sizable contingent from North America and overseas: including Europe, South America and the Far East. The attendees were energized by the focus on innovation. I got to attend and provide lunch-time entertainment, along with Charity Quick, our Executive Director, where we discussed the future of AACE. The short conclusion is that AACE has great capabilities and offerings, but we need to present those to the world more effectively. We need to innovate in order to do this.

Most of the speakers on innovation discussed the latest (and very impressive) improvements in hardware and software. However, I also found a number of speakers who discussed social and institutional innovation. These innovations were largely, though not exclusively, related to how our institutions are delivering their services. For example, one speaker, discussing the continuing homelessness problem in his city, related how the city developed a database of available shelter beds that are made accessible through a cell-phone app, which permits police and social workers to instantly identify where the homeless could find a meal or a bed.

Obviously, as users of hardware and software at the cutting edge of capabilities, our members can and do offer ideas and observations concerning what technology products can actually do. Our estimators, risk experts, and schedule experts have already contributed greatly toward the development of these products. The cavalcade of new products and ideas shown at the WWW conference prove this. Other conferences and symposiums, held worldwide by AACE Sections or with significant AACE participation, provide equally important venues for discussing and disseminating information about project and method innovations. Further, our website is a virtual fount of information.

And the great thing is that these new technologies create new non-technical and analytical innovations. For example, more than a decade ago, I thought up a way to look at how CPM activities progressed over time. At the time Excel spreadsheets, a then-new software technology that took hours, was much faster than the former manual process. Now this same work can be done in seconds in some of the new schedule analytic tools—making it easier to evaluate schedule progress rapidly and accurately.

AACE is innovating as an institution—hopefully fast enough. In addition to the new website and Association Management System, we will soon be rolling out a long overdue replacement for the “Forums.” The Forums were a great advance in their day, but like the flip-phone, its relevance has been overtaken by LinkedIn and Facebook as the better way to reach our membership. Our pending engagement platform will enable us to reach more people, interact more...
directly, and post data useful for all our members more quickly.

Given that our Annual Meeting is now in its 61st year, we are also looking at ways to innovate. We all recognize that our Annual Meeting is the very best place to learn about recent thinking and trends in our various sub-specialties. It is also a great place to network, and frankly to have a good time. To be held in Orlando, June 11-14, we will have TWO keynote speakers. The first is Frank Abagnale, famous for the movie “Catch Me If You Can” and the other is Justin Newton, a leader from one of the all-time institutional innovators, Disney.

Of course over the years, we have changed the format, content, and experience of the Annual Meeting in numerous ways. But, we will still continue to innovate and change. Even this year there will be some changes (two keynote speakers among others). As we continue to improve the Annual Meeting you may see changes. For example we may include more panel discussions than we currently have, and/or business case study sessions, and/or “surprise” sessions where audience participation is essential and helps drive the subject matter topic. Other changes might include presentations with different lengths under the theory that some information can be explained in 30 minutes, while others require our usual 60. We are considering an array of different options with the goal of improving not only the technical content but the event experience.

Perhaps the greatest need we have for innovation is in how to present ourselves to the professional world. There are a huge number of “cost engineers,” control experts, and construction related managers in North America and throughout the world who would benefit from membership in AACE. Certainly reaching them was and is part of the work for the Board of Directors. As we move forward, expect more innovation in how we publicize ourselves, how we market our capabilities, and generally, how we interact with the professional world. Our new web presence is a step in the right direction, but our future focus will be on HOW to let people know WHO we are and what we offer.

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 web.aacei.org.
Nominating Committee Chair Julie K. Owen, CCP PSP, announced the results of balloting for the 2017-2018 AACE International Board of Directors, in balloting that ended on March 15.

**PRESIDENT-ELECT -**
Alexia Nalewaik, CCP FAACE
Dr. Alexia Nalewaik, CCP FAACE, is a project controls director with 25 years of experience in the industry. She joined AACE International as a member in 1994.

**VP-ADMINISTRATION -**
Chris Caddell, PE CCP DRMP
Chris Caddell, PE CCP DRMP, has enjoyed being a member of AACE International for over 15 years, participating and contributing in a number of different ways through the years.

**VP-INTERNATIONAL REGIONS**
Mohammed Rafiuddin, CCP PSP
Mohammed has been an active member of AACE International since 2006 with 29 years of experience in project management, contracts management, and project controls.

**DIRECTOR-REGION 3 -**
John C. Philbrick, PE CCP
John C. Philbrick, PE CCP, is a Director with PMA Consultants LLC.

**DIRECTOR-REGION 5 -**
Josh Rowan, CCP
Josh Rowan, CCP MRICS, is an executive in the energy industry and has been an active member of AACE since 2008.

**DIRECTOR-REGION 6 -**
Mark von Leffern, EVP PSP
Mark von Leffern has been an active member of AACE International since 2012.

**DIRECTOR-REGION 8 -**
Laurie Bowman, CCP DRMP EVP PSP
Laurie Bowman has 20+ years of experience in project control, planning and scheduling, and risk management.

**DIRECTOR-REGION 10 -**
Jeancarlo Durán Maica, CCP EVP
Jeancarlo Durán Maica, CCP EVP, has over eight years of experience in project control and has an engineering and construction background, leading planning and control teams in large EPC projects.
Valerie G. Venters, CCP FAACE, Vice President Certification Board, believes in AACE International and acknowledges that her passion is focused on the association’s certification program.

Venters has been an AACE member for 20 years. She has seen personal benefits from joining AACE, she promotes the association to others, and she sees the challenges of younger professionals replacing retiring employees and not having all the resources her experience tells her they will need to successfully continue to manage projects. Val’s message to those just entering the total cost management fields is that they need to strongly consider joining AACE International.

“I realize people are different and not everyone is a “joiner” of associations or professional groups, but building a network of professional people is an essential part of developing your career,” stresses Venters. Continuing, she says, “Yes, a person can build a professional network using social media, like LinkedIn – but in a lot of cases the people you “friend” or “connect” on social media do not truly know you. “Joining” and getting involved with a professional association opens avenues to leadership roles and job opportunities, and recommendations from professional people who have seen you work through challenges, problem solve, and come to a resolution beneficial to all involved.” She concludes, “There is a benefit to “joining,” maybe everyone does not see it at first and maybe I did not either—but, as I have continued through my career, it has become obvious to me the benefits of my network and the opportunities thrown my way.”

Val first learned of AACE through a co-worker. The two of them attended Val’s first Houston Gulf Coast Section meeting in 1997. She recalls, interestingly there were only about 10-15 people attending the meetings at that time, with only three of those in attendance being women. She notes that a lot has changed in the Houston Section since that time. Today, the section has 60 to 70 people attending the meetings and about half the crowd are women.

Returning to her personal story, Val explains that she was looking to join a professional organization that could give her exposure to different industries and a broad group of professional people. She adds, “It just made sense—I was working in cost management and wanted to learn more; I also wanted to meet other professionals working in the same environment. I did join PMI, but wanted to build a closer relationship to the cost engineers (practitioners) working in project controls. AACE had the type of people I wanted to associate with and learn from—it has been a good fit for me.”

Certification was a personal goal for Val. She says, “Unfortunately, my employer (at that time) was not supportive of my desire for certification and even asked me, ‘What are you doing that for?’ Val’s answer was—”It is important for me to establish confirmation of my skills and competency.” She further explains, saying: “Although I did not tell him, I definitely wanted more for my career and professional life than the job position I had at that time. Becoming certified was an accomplishment that enhanced the personal confidence in myself and the kind of job I sought.”

“AACE is important to me—both professionally and personally,” notes the VP Certification. She commented, “Being associated with AACE has benefited my career opportunities; many employment doors have been opened to me.
through the people in my AACE professional network. Because of the benefits I have experienced over the years as an AACE member, I talk about AACE to others, especially those starting to build their professional network and those needing additional exposure to a wider range of project controls.”

Venter adds, “I promote certification as a way to confirm skills, knowledge, and competency; and ultimately enhance personal marketability in the industry.” She believes AACE International’s technical products are industry standards. She says she is often asked, “What does AACE say about this subject.” To respond, Val says the virtual library, the Recommended Practices (RPs), the Professional Practice Guides (PPGs), the TCM Framework, and the Skills and Knowledge of Cost Engineering (S&K) are available resources. Using these resources, she says, “I have shown how AACE members can research topics and influence decisions on processes and procedures. Between the professional network, technical products, and the certifications – promoting AACE is easy.”

“Of course, my passion is focused on the Certification program,” notes Val. She says, “As Certification Chair for the past six years and now as VP Certification, I am very proud of the AACE Certification Program and the program’s achievements through the years.” She adds, “While becoming certified was a personal driver for me, others have certification as a career driver and seek certification for better job opportunities.” Val says she has experienced both perspectives. She says her AACE certification has personally been very satisfying. From a career and professional perspective, having AACE’s Certified Cost Professional (CCP) certification has also been very beneficial and
has contributed to Val’s “bottom line” income. She believes, “certification has made me more marketable at times when the local industry was tough, and has given me additional creditability in situations where my concerns were being voiced.” She concludes, “Certification has been a good asset to my career.”

In her professional career, Val is currently employed by Shell International Exploration & Production in Houston Texas. Overall, she has been with Shell for nine years—four years as a contractor and five years as a direct employee. Her current work duties are as a senior cost management lead for a deep water Gulf of Mexico project. In this role, Val says, “I lead the cost team responsible for the budget control, value of work done, and forecast management; as well as the coordination of trends and technical, cost and schedule change management.” Val further explains that the majority of her experience has been associated with upstream projects in the Gulf of Mexico, both on the shallow water shelf and in the ultra-deep water. “When I joined Shell, the prospect of doing another deep water project was exciting for me because of the new technology and state-of-the-art components being designed for these huge platforms, she explains.

Val holds a Bachelor of Science in Business Management (BSBM) and a Master in Business Administration (MBA) degree with a focus in finance from LeTourneau University. She is a Certified Cost Professional (CCP) and also has the PMP (Project Management Professional) certification from PMI. Val says one of her favorite things about working (besides making money) is her association with other professional people. She notes, “Some have like ambitions and passions as I, while others have totally different ways of looking at the same problem and seeing it from a totally different angle. The combination of all the different personalities, ambitions, views of the world, different ways of assessing problems, coming up with different ways of solving problems, and yet all working for a common goal (the project) is what makes my job worthwhile to me.”

One of the biggest challenges Val sees in the total cost management industry is the lack of experienced resources coming up behind those who are retiring and moving out of the workplace. She says this challenge is not unique to project controls or cost, but is being experienced by all companies and organizations. Val believes, “AACE can assist in the training of the new project controls resources and hopefully with good training and certifications, these new workers can gain meaningful experience and move into the roles being vacated by retirees.”

“I am a native Houstonian and have lived and worked in the Houston Texas area for the majority of my life,” says Val, adding, “I took a short 10-year detour through Colorado and Florida, but then returned home to Houston.” Her favorite weekend activity is getting together with friends. She says this can, “either be for an evening out or hanging around on the patio with my favorite glass of wine in hand.”

Recalling those who influenced her career, Val says, “My defining moment came as the result of a very perceptive manager with whom I worked three years as his executive administrator. Over that time, he saw my aptitude for numbers and encouraged me to broaden my skills and knowledge in this area. He repeatedly gave me the budgets for the departments under his leadership, asking me to track and maintain, as well as develop a methodology to forecast next year’s budget request. He taught me to understand the annual budget processes, how to present my findings and recommendations, and receive the budget we needed. After three years with him, an opportunity for a “junior” project cost analyst came open—he was the first to put my name in the selection. He lobbied for me and convinced those making the decision to give me a chance—and they did. . .the rest is history!”

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AACE INTERNATIONAL’S
SAVE THE DATE - JUNE 11-14

2017 ANNUAL MEETING
ORLANDO
THE TOP 10 REASONS TO JOIN AACE INTERNATIONAL

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!

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

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.

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.

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.

TECHNICAL DEVELOPMENT
Increase your knowledge and expertise by joining one of AACE International’s many technical subcommittees, subcommittees, and Special Interest Groups (SIG’s) 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.

NETWORKING
By attending a local section or our Annual Meeting 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.

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.

DISCOUNTS
On products and services ranging from Annual Meeting registration fees, archived webinars and presentations, certification examination registrations, and more!

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.

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.

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AACE introduces its new eLearning series. The first module, Pricing and Costing, was released in February 2017.

This module explains the difference between pricing and costing. It is important to distinguish between the terms "price" and "cost". There is a very fine line separating them which is why people often use the terms interchangeably. This module highlights the concepts of pricing and costing of a project, illustrates the variances, and helps the learner identify the inputs, transforming mechanisms (tools and techniques), and outputs related to the cost and pricing process.

The module can be utilized as a study aid for the CCP Certification Exam. It is interactive with questions posed intermittently to assess knowledge gained by the viewer. There is also a test at the end requiring a 70% score to earn 0.1 CEUs.
How can you contribute to the organization and earn recertification credits? Well, as long as you are actively certified, you can earn recertification credits by writing and submitting new exam questions for your specialty certification exam (CCT, CCP, CEP, CFCC, CST, DRMP, EVP or PSP). The CEUs assigned to writing/submitting approved questions range from 0.25 CEUs for simple multiple choice questions to 1 CEU for each compound scenario-based multiple choice questions. This article covers the basic guidance and process for submitting new exam questions, why it is important to continually add new questions to the exam databases, the question submittal form and reference material.

Basic Guidance and Process
The process steps include: becoming familiar with how to write exam questions by reviewing the “Question Writing Presentation” on our website; becoming familiar with the online form; reviewing AACE publications or AACE recommended resources listed for each certification on our webpage; writing a question using the question submission form, including populating the form with all requisite information; and submitting the question(s) for review.

After submission, the AACE Certification Board is notified and the question is reviewed and validated by a member of the Certification Board. You will be notified via email if the question is accepted or rejected within 120 days of submission. Recertification credits will only be applied to accepted questions. The acceptance notification email is required to be uploaded during the recertification process.

A question can be in simple multiple choice, scenario based or memo/essay format. True or false questions are not accepted and will be immediately rejected. To begin, go to the AACE International website, select the certification tab, select “Volunteer Opportunities” from the menu on the left of the screen, and then click on “Writing and submitting new exam questions.”

Why is it important to continually add new questions to the exam databases?
Having more questions in each certification examination database ensures that the exam is continually “fresh” with respect to the areas of competency being tested. It maintains the integrity of the certification that you worked so hard to accomplish.

What are the key elements required on the question submittal form?
Once you have reviewed the “Question Writing Presentation” and re-acquainted yourself with the AACE approved references, select the “take me to the form” button. You will be asked to acknowledge your understanding of the process, expectations and timing information presented on the screen. At this point, you will enter basic personal data relevant to this activity, and prompted to identify if the question is simple multiple choice, scenario based multiple choice or a memo/essay. Based upon your selection, the form generates the applicable data.
elements required for that type of question. If necessary, formulas and math to successfully calculate results must also be provided as attachments to the form (Excel format is preferred).

**What are the generally acceptable AACE references to base exam question upon?**

Each specialty certification is associated with specific AACE approved references. The references are located on the individual certification webpages for Technician, Professional or Expertise level certifications. For example, the EVP certification recommended references include: AACE’s *Earned Value Professional Certification Study Guide, 3rd Edition*; AACE’s *Skills & Knowledge of Cost Engineering, 6th Edition*; AACE’s *Total Cost Management Framework; Earned Value Project Management, 3rd Edition; Practice Standard for Earned Value Management; Project Management Using Earned Value, 2nd Edition*; and EIA-748 (most current version). Submitted questions must reference at least one of these documents as the source for the question.

In a nutshell, this volunteer activity helps you stay current in your specialty by researching and writing subject matter questions, provides an opportunity to earn recertification credit (ranging from 0.25 to 1 CEU per question) and helps the organization maintain the integrity of the organization’s specialty exam question databases.

In summary, this article served to provide insight into earning recertification credit(s) by writing and submitting exam questions to increase a specialty exam question database. By reviewing the process and guidance for question writing, recommended reading to help develop your exam question writing skills, insights into why the organization needs to continually add new questions to each specialty exam question database, and the form used to submit questions for consideration was presented in this article, you have a path to earn recertification credits by writing certification examination questions.

For additional information please feel free to contact Penny Whoolery, Manager, Certification and Membership at pwhoolery@aacei.org or 304-296-8444, extension 1104.

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**Transportation Report Estimates 7 Million Drivers Will Shift to Autonomous Vehicles in Three US Cities**

A study by transportation, economics and urban planning experts has found that ridesharing and ridesourcing services using autonomous vehicles (AV) could shift millions of drivers away from personal cars in major U.S. cities.

*Driverless Future: A Policy Roadmap for City Leaders,* the study prepared by Arcadis, HR&A Advisors and Sam Schwartz Consulting, shows that the move to ridesharing and ridesourcing services that don’t have a driver could cause a shift of up to 60 percent (3.6 million cars) from traditional to autonomous vehicles in the New York metro area alone over the next 15-20 years.

The Los Angeles metro area could see a shift of up to 44 percent (2.2 million cars) and the Dallas-Ft. Worth metro area could see a shift of up to 31 percent (nearly 1 million cars). These shifts of nearly 7 million drivers to autonomous vehicles across three diverse metro areas illustrate how cities across the U.S. could be greatly impacted and reveals the significant effect of driverless services contemplated by companies such as Uber and Lyft.

Public policy must evolve along with driverless cars. Cities, suburbs and smaller communities alike need to embrace new land use and real estate policies whether it is development in new neighborhoods or providing more flexible parking regulations, explains Eric Rothman, HR&A President and transportation practice leader.
Mayli Salinas was born in a small village called Huaraz in Peru. She studied civil engineering and then she completed a Master in Business Administration (MBA) degree. She studied project management in an international school in Spain named ESADE. Her training in project management enabled her to get the PMP certification, as well as in 2016, a Planning and Scheduling Professional (PSP) certification from AACE International. Since she was young, her dreams motivated her to launch her own business. She founded her own consulting and construction company in 2008, which at present, has international partnerships.

After her university studies, Mayli started her project controls career in the mining industry. She started as a junior project controls specialist at one of the most important gold mines in Peru, South America. She has developed her career in the mining and energy industries working as a planner, cost estimator, cost control and project controls in major greenfield and brownfield projects with EPCM companies. She has also worked as a senior project controls specialist and as a project controls manager for mining owner companies and important consulting firms in the mining and energy sector.

Mayli’s professional work experience entails 15 years in project controls for both owner and consulting companies. Mayli has been a part of large-scale national and international projects, working for EPCM consulting firms. Frequently, she works with a variety of international and multicultural people from different backgrounds.

Mayli worked in an open pit mining project for seven years. The project ranked as the fifth largest gold mine in Peru in 2009, with over

Mayli has balanced her professional career with a healthy life. She is a sportswoman and enjoys swimming, trekking, running, and playing tennis. She considers herself a woman with a strong personality and a great attitude that helps her to achieve her goals in rough contexts.

Mayli concludes, “All women can achieve their dreams and goals; the key is just decision and constancy.”
4,200 meters over the sea level and temperatures between 40 – 50 Fahrenheit degrees. During this time, Mayli dedicated years of work to understanding the mining business and getting hands-on experience in all phases of the life cycle going through evaluation (pre-feasibility, feasibility), development, construction, operation, closing and post-closing of the mine. Similarly, in 2008, she worked as a mining heavy equipment supervisor, managing dumpers and loaders of heavy ore tonnages. This part of her experience was the key for figuring out the process, value engineering, value production, operation, annual production, restriction, times, and the value of the life mining activities where safety has always been the number one priority. After this period, she was part of a team that supervised ore extraction, enabling her to have a complete understanding of projects and the mining life.

Within the mining industry, Mayli has also been part of pre-feasibility, feasibility and construction phase of an important phosphate project in Peru. The first non-metallic mining project with an annual average production of 3.9 Mt (million tons) of phosphate concentrates. During early phases on this project with a well-known Brazilian company, Mayli had to reside within this country for years.

Mayli has also been part of EPCM energy projects; she worked for the electricity generation Fenix Power project and a thermoelectric plant of natural gas combined cycle with an installed capacity of 570 MW. This plant was the first in Peru to operate in a combined cycle since its inception.

The construction of the Fenix Power Thermoelectric Plant involved an investment of approximate US$ 900 million.

During her years of experience with EPCM companies, she has been involved in on-site offshore projects which she considers to be the most important goal in her professional life. She has been part of great teams and she applied her knowledge on how to establish an appropriate project planning and control system for activities in the ocean's subsurface. The Seawater Intake and Outfall System (complementary project of Fenix Power thermoelectric plant) involved the design and construction of a sea water intake located at a depth of -20 meters below sea level through a pipeline of approx. 2.5m in diameter and 900m offshore, as well as the design and construction of the sea water outfall and its diffusers (2.0m in diameter and 500m offshore) located at the same level.

In addition, the project considered the structural design and construction of 400 meters of quay launching pipe and the installation of 80Tns of intake concrete structures under the sea. One of her major challenges was compliance with the master plan objectives because of the variability of the ocean subsurface conditions where “one week look ahead planning” or weekly project plan implementation was one of the major efforts. She explained that using daily planning strategy with the divers was the key for project success.

Currently, Mayli works as a senior lead project controls worker for a consulting mining company managing and controlling the engineering and construction of raising phases for a tailing dam project – 240m (one of the highest retaining walls in the world) for the world's largest copper, zinc, and molybdenum mine located at 4,200 meters above sea level in Peru’s Andes Mountains. Mayli’s responsibility is to lead a strong project control team both on-site and off-site, including planners, cost control engineers, cost estimators, and other project controls professionals.

In terms of personal vision, Mayli believes in the power of women and their success. She says that any women can achieve her dreams and goals by making the right decisions. Mayli believes women can succeed by using skills, performance efficiency, and a motivation for taking on new challenges.

In 2015, Mayli became a Peru officer with the AACE Women in Project Controls Committee. She affirms that this is an opportunity to be a follower of the principles, tools, and AACE International’s philosophy, which she applies in all her projects, recommendations, and the concepts of total cost management, as well as related skills and knowledge.

Mayli has balanced her professional career with a healthy life. She is a sportswoman and enjoys swimming, trekking, running, and playing tennis. She considers herself a woman with a strong personality and a great attitude that helps her to achieve her goals in rough contexts.

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Pieter was born in Pretoria, South Africa. It was here he grew up and witnessed the many changes South Africa endured during the late 1980s. In the early 1990s, the country was gripped with the fear of an unknown future and then Nelson Mandela came into power and made peace where he could have made war. Not surprisingly, Mandela’s leadership did have a big impact on Pieter.

Pieter has always loved to get involved in many different activities and meet people from diverse backgrounds. While at school, he attended an exchange program in Sweden and learned firsthand how to live, study, and work in a completely different culture. This experience left him with an open mind and the ability to adapt to different surroundings and people.

After finishing school, Pieter decided he wanted to be involved in building things; creating a tangible product, and seeing people benefiting from his work. So, he enrolled at the University of Pretoria to study quantity surveying. Here he thrived, winning the Construction Law Prize in his undergraduate degree and he completed his honors year at the top of his class. During this time, he also completed an international internship for a consulting company, Faithful and Gould in California. Pieter worked with the infrastructure team and provided estimating services, value engineering, and contract administration services. While with Faithful and Gould, he also worked with Exxon Mobil to provide contract management services and assisted with shutdown productivity studies for BP.

When he returned to South Africa, he worked for a boutique professional quantity surveying company, called EIP Consulting. Here he worked on feasibility studies, provided estimating and dispute evidence and assessed claims for insurance companies. Pieter also worked for KK Construction, a mid-tier contractor where he was responsible for submitting tenders, administering contracts and submitting and negotiating claims.

In 2010, Pieter followed love across the ocean and relocated to Australia, where he started to work for international consulting company Turner and Townsend. Here, he mainly
provided post contract services on commercial, residential, and healthcare projects.

In 2012, Pieter started working for BHP Billiton where he provided project controls services including, schedule and cost ranging, estimating and planning for feasibility projects within the Coal and Olympic Dam groups. In 2014, Pieter was responsible for developing and delivering the Primavera P6 induction training on the $20b Origin Energy APLNG project.

In 2015, he became the contracts manager and formed part of the core management team for a mid-tier contractor called Team Group on a materials handling project in Central Queensland Australia.

Pieter has always loved to travel and throughout his career he has had the opportunity to combine his love for travel and his professional skills. In the Dominican Republic in 2009, Pieter came across Jonny and his family who were homeless after losing their home to fire. Pieter helped them get together the resources and plans by conducting an online campaign to raise funds and used his project controls skills to assist in the building of the home for Jonny. On a trip home to South Africa in 2013, Pieter assisted an NGO “Kopanang Community trust” that teaches women skills and ways to get an income. Pieter automated their manual excel processes to help them have better control of production costs and track orders and in the process taught some of the women new skills that they will pass on to others.

Today, Pieter lives in Brisbane, Australia. Pieter is a cost engineer and state manager for a project services company, The Red Arrow Group. He spends most of his time working with a major client - BHP Billiton in the projects group based in Brisbane. He also spends his extra time running a small online tech company called www.needtyres.co.za which he started a year ago. This is where Pieter discovered an interest in short term based planning methods, like Agile and Last Planner methodology. Pieter has since applied these techniques to some of his projects and has a strong interest in exploring these methodologies further. He is also an advocate of 4D planning and using BIM processes to deliver projects more efficiently and safely while reducing waste. Pieter implements 4D on his projects where possible and assists businesses in implementing 4D planning in their organizations.

Pieter is actively involved in the Australian Cost Engineering Council (ACES), the ACES Queensland Chapter. Pieter is part of the state committee and assists with marketing activities. He is an AACE member and believes that the AACE’s resources on total cost management are second to none. The webinars are world class, and the AACE papers have provided him with extremely valuable insights and information. Pieter encourages his peers to become members of the AACE and to use the great resources available and to meet like-minded individuals who understand the need for quality project controls services.

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Planning is a process performed to formulate intelligent answers to what is to be done, how it is to be done, and who is responsible for its execution. As a complementary to planning, scheduling is performed to set execution duration for what is to be done. The accumulated answers set a project management plan and project documents which are used as an execution roadmap and as a baseline during the execution of a project. Planning, scheduling, coordinating, and controlling are very critical to the success of any construction project.

The achievement of expected project outcomes depends on the quality of the developed plan for the project. If the developed plan is weak and/or faulty, then the chances of achieving the expected project outcomes will be very low. The vice versa is true. The chances of proper execution and successful completion of a project increase with a high quality planning [9]. Therefore, proper planning and scheduling are essential for achieving project objectives including cost, time, safety, and quality. F. Christiansen valued planning highly and considered it the pumping heart of construction project management [1]. H. Kerzner claimed that planning improves project parameters such as cost, schedule, technical performance, and customer satisfaction through the elimination or reduction of uncertainty, improvement of operation efficiency, enhancement of comprehending project objectives and availaing a basis for monitoring and controlling work [3].

Project plans are developed by individuals who are designated as planning engineers or by other similar connotations. These individuals are supposed to have acquired qualifications that enable them to develop sound and reliable plans for the execution of construction projects. The literature, however, reports that many projects fail to achieve their objectives. Planning is usually set as a prime cause of the reported failures. O. Zwikael and S. Globerson believe that the planning phase is rarely specific enough for project managers to perform their expected duties [9]. It is believed that planning tools such as Primavera™ influence and restrict planners to think of strategies that satisfy their paradigms and formats.

Many researchers have identified the importance of project planning; but, unfortunately, not many of them have investigated the characteristics of the individuals who prepare the plans. Therefore, the aim of this research is to identify the parameters which qualify an


\[ Importance \text{ Index} = \frac{\sum_{i=1}^{5} a_i x_i}{\sum x_i} \]

Where:
\[ a_i = \text{Constant expressing the weight given to } i; \quad x_i = \text{variable expressing the frequency of the response for } i = 1, 2, 3, 4, 5 \ [4]. \]

**Objective of the Study**

The objective of this research is to define the parameters which qualify an individual to be a planner for construction projects.

**Research Methodology**

This section presents the steps that were followed to achieve the objective of this study. The first step involved reviewing published relevant literature. The review of relevant published literature helped determine the various qualities and duties of planning engineers and develop the necessary tools for collecting the needed data. The second step was to collect the necessary data via two structured questionnaires from planning engineers and general managers employed with grade 1, 2, and 3 contractors that are located in the Eastern Province of Saudi Arabia. The classifying directorate of the Ministry of Municipalities and Rural Affair indicates that there are 86 classified contractors in the Eastern Province. Because the population is small at 86, two structured questionnaires distribution were sent via email to the 86 contractors. The questionnaire was followed up with emails and telephone calls to invite planning engineers and general managers to participate in the study. Thirty five planning engineers and thirty two general managers completed and returned the questionnaires. Improving the reliability of the collected data mandated restoring questionnaires that had at least 80 percent of their contents duly completed [8]. Twenty-eight questionnaires from each category satisfied the above restriction and comprised the total number of participants. This means that 33 percent of the population participated in the study, which is considered a very good representative sample.

The third step was to analyze the collected data using simple statistical tools such as frequency, mean, and standard deviation. Simple mathematical techniques such as percentage and average were used in analyzing the data. However, in addition to these techniques, importance and severity indices were calculated to reflect the relative severity of the relevant factors over the others. The indices were calculated as in Equation 1.

**Results Analysis and Discussion**

This section presents and discusses the obtained results. The first part presents the characteristics of the participating contractors; the second part describes the parameters of a project planner; and the third part discusses the evaluation of project planners in Saudi Arabia.

**Characteristics of the Respondents**

The results indicated that the majority of the planning engineers are well educated with college degrees, (82 percent) holding bachelor degrees and (18 percent) holding master’s degrees. The majority (54 percent of the planners) have more than 20 years of experience in the construction industry and about 64 percent of these planners have been with their current employers for more than five years. The results indicated that the participants belong to privately owned organizations, which, in the majority of cases (78 percent), have been in existence for more than 10 years. This, of course, ensures that the respondents represent well-established firms. Head offices of all organizations are located in the Eastern Province of Saudi Arabia. About 44 percent of these organizations employ more than 500 peoples. The combined extensive experience, rich knowledge in the Saudi construction industry, and the large workforce give these participating contractors capabilities to build large sized projects (buildings, industrial, highway, utilities, and infrastructure) and to generate large annual revenues.

**Planners’ Parameters**

This section includes the analysis of the results, focused on the third objective of the study, i.e., identify the parameters which qualify an individual to be a planner for construction projects.

The reason for getting this information from the top management was only to insure the reliability of collected information, since the planning engineer shouldn’t evaluate himself.

This section presents the participating contractors’ beliefs about the parameters such as qualifications and skills that should be found in the...
individual who is responsible for project planning, also it figures out the evaluation of the planning engineer according the contractors’ perspective.

**Planners’ Qualifications**

The results indicated that a planner’s qualification is based on experience in planning, experience in construction work, software knowledge, training in planning, knowledge of the economy, and certification. Figure 1 presents the participants perceptions on the importance of these planner qualifications.

The results indicated that the participating contractors believe that a planner must possess several skills to enable him or her to produce reliable and sound plans for construction projects. These skills are experience in planning, experience in construction work, software knowledge, educational degree, training in planning, knowledge of the economy, and certification. The results indicated that the level of experience in planning is the most important qualifying parameter for a project planner. Accumulated experiences from previous projects give a planner a better perspective on project execution and the challenges that projects commonly encounter. It seems that the experience in planning plays a very critical role in the success of project plans. Experience enables a planner to contemplate different scenarios and alternative solutions to create a reliable and sound plan for projects.

The results indicated also that the participants consider experience in construction work as a very important parameter that should be part of the skills of a planner. This importance may emerge from the importance of understanding the construction methods, activities requirements and sequencing, economics, constraints, and logistics to produce a sound plan with accurate calculations for time and cost requirements.

The third skill that the participants selected as a very important qualification skill is software knowledge. It is believed that working with planning software is essential for a planner to realize and consider their limitations and capabilities. This knowledge enables the planner to review plans and suggest modifications.

Educational degree, training, knowledge of the economy, and certification are considered important by the participants. The educational degree is a prerequisite and important to meet engineering practice requirements. This parameter is considered less important than the experience in planning and construction work. The assumption is that experience is built upon the educational degree foundation. Although training in planning is important, the participants rated this skill as only moderately important. It seems that the participants believe that most of the training involved is on the software rather than on the substance of strategic planning. Certification is the least important parameter for there is no certification available for planners as planning engineers. (AACE International does offer the Planning and Scheduling Professional (PSP) certification). Most of the relevant certifications are for project management in general.

**Planners’ Skills**

Table 1 presents the importance of the qualification that should be found in a planner for a construction project.

The results indicated that the participating contractors consider communication skills as the most important type of skill that a planner should possess. P.O. Connie and P. Ethan reported similar findings in support of this study [2]. G.M. Winch and John Kelsey recognized communication as one of the major contributors to a project success or failure [7]. PMI emphasized the importance and essentiality of communication within a project team and between a project manager, team members, and all external stakeholders [6]. Effective and clear communication enhances relationships among project team members, glues teamwork, creates mutual trust, and creates a gateway to high performance.

Decision making skills scored as the second most important type of skill to be held by planners. This may be because of its importance in problem definition and problem solution. In addition, decision-making helps in evaluating the planning process and outcomes [6].

The results indicated also that the participating contractors consider
coordination skills as a very important skill. Planners are responsible for coordinating work of many projects. Therefore, the participants evaluated coordination skills highly. Planners are required to solve problems during the course of the execution of projects. Usually, planners control project plans and develop recovery plans when needed. This is why the participants indicated the importance of a planner having analytical skills to manipulate field data and apply corrective actions, if needed, to bring the project in-line with the plan. This conclusion may be as a result of, the importance of such skills in appreciating the rationale of planning and the ability, as stated by C. Ozawa and E. Seltzer, to “follow a thin thread” to gather information from different sources [5].

The participants ranked computer skills fourth among other skills that a planner should possess. A planner with computer skills has the ability to review, critique, and improve the computer generated planning model.

The participants believed that critical thinking is an important skill that should be available in a planner who facilitates project plans. It seems that contractors consider critical thinking important because this type of thinking leads planners to select the best alternative for project plans. The participants indicated that a planner should have forecasting skill, influencing skill, and management skills. They rated those skills as important skills for a project planner. PMI supports this finding and lists these skills as important characteristics for a planner [6]. The importance of these perceived skills may emerge from their great impact on a planner and, consequently, on a project plan. Influence, as defined by PMI, “is a strategy of sharing power and relying on interpersonal skills to get others to cooperate towards common goals [6].” Management skills lead to completing high quality work on time and within a budget. Leadership skill was recognized as an important skill of a project planner. It seems that the participants believed that leadership skills are critical, as stated by PMI, especially during the early stages of a project and at the time when project participants are motivated and inspired to achieve high performance [6].

The participants indicated that the technical, presentation, teamwork and teambuilding, negotiation, research and investigation skills are important skills of a project planner. This importance may be claimed because the participating contractors grasp the role for each skill in developing and improving whether directly or indirectly, project plans, i.e., teamwork and teambuilding skills shall be used effectively to manage inevitable changes in a project environment. A continued or renewed team-building effort will, as PMI indicated, improve communication, facilitates smooth and credible exchange of information, make better conclusions, and manage project effectively [6]. Also PMI considers negotiation as an essential component of project management and, if done well, it may have a positive impact in achieving project goals successfully [6]. Furthermore, research and investigation skills help planners to identify problems and customer needs and appropriate information sources for problem solving.

Table 1 – Importance of Planners’ Skill Parameters

<table>
<thead>
<tr>
<th>Skills</th>
<th>Importance</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>1.59</td>
<td>0.98</td>
</tr>
<tr>
<td>Decision making skills</td>
<td>1.63</td>
<td>0.86</td>
</tr>
<tr>
<td>Coordination skills</td>
<td>1.68</td>
<td>0.89</td>
</tr>
<tr>
<td>Problem solving skills</td>
<td>1.71</td>
<td>0.94</td>
</tr>
<tr>
<td>Analytical skills</td>
<td>1.71</td>
<td>0.81</td>
</tr>
<tr>
<td>Computer skills</td>
<td>1.71</td>
<td>1.01</td>
</tr>
<tr>
<td>Critical thinking skills</td>
<td>1.82</td>
<td>0.82</td>
</tr>
<tr>
<td>Forecasting skills</td>
<td>1.86</td>
<td>0.89</td>
</tr>
<tr>
<td>Influencing skills</td>
<td>1.86</td>
<td>0.76</td>
</tr>
<tr>
<td>Management skills</td>
<td>1.86</td>
<td>1.00</td>
</tr>
<tr>
<td>Leadership skills</td>
<td>1.93</td>
<td>0.81</td>
</tr>
<tr>
<td>Technical skills</td>
<td>1.96</td>
<td>0.88</td>
</tr>
<tr>
<td>Presentation skills</td>
<td>2.04</td>
<td>0.84</td>
</tr>
<tr>
<td>Teamwork and Teambuilding skills</td>
<td>2.04</td>
<td>0.92</td>
</tr>
<tr>
<td>Negotiation skills</td>
<td>2.14</td>
<td>1.11</td>
</tr>
<tr>
<td>Research and Investigation skills</td>
<td>2.18</td>
<td>0.86</td>
</tr>
</tbody>
</table>

Note: 1 = Highly Important, 2 = Important, 3 = Moderately Important, 4 = Little importance, 5 = Not important
Finally, it is very important to notice that there are very slight differences among contractors’ responses on the importance of the listed qualifications and skills of a planner. This is apparent from the considerably small standard deviation of the parameters. These small standard deviations show great conscientiousness among the participants.

### Evaluation of the Planning Engineer

Although the level of satisfaction ranges between high and moderate, the results indicated that the average level of the participating top management satisfaction is just narrowly satisfied with their current lead planning engineers. The top management may not be highly satisfied because they are facing many problems that are resulting from weak plans which result from fragile skills and qualifications of their planners. The participating top managements were requested to express their level of agreement with a list of reasons for their given satisfaction levels concerning their planners. Table 2 presents the reasons for the given level of satisfaction among top management. The results indicate that planning engineers lack many skills and, hence, produce unsatisfactory plans for the execution of construction projects. The top management showed neutral opinions on skills in the areas of problem solving, critical thinking, leadership, negotiation, and research and investigation as reasons for their expressed satisfactions. It seems that the participating top managers do not appreciate these qualities in a planner despite their importance in shaping planners to produce quality plans. Top managers list moderate satisfaction with their planners in the areas of communicating, analyzing, forecasting, coordinating, decision-making, team building, technical, management, influencing, presentation, computer, and supporting skills. It seems that contractors in Saudi Arabia suffer from the lack of proper planners for their projects. The contractors are either hiring schedulers as planners or the hired planners are confined to the application of planning software.

### Conclusions

For creating reliable and sound plans for construction projects it is essential to assign qualified and skillful planners to prepare such plans. The qualification should include experience in planning, experience in construction work, software knowledge, educational level, and knowledge of the economy. The planner should possess many skills including communication, decision-making, coordination, problem solving, influencing, leadership, and many others.

### Table 2 – Reasons for the Given Level of Satisfaction

<table>
<thead>
<tr>
<th>Skills</th>
<th>Agreement</th>
<th>Std.Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent communication skills</td>
<td>1.86</td>
<td>0.89</td>
</tr>
<tr>
<td>Excellent analytical skills</td>
<td>1.89</td>
<td>0.88</td>
</tr>
<tr>
<td>Excellent forecasting skills</td>
<td>1.96</td>
<td>0.84</td>
</tr>
<tr>
<td>Excellent coordination skills</td>
<td>2.00</td>
<td>0.94</td>
</tr>
<tr>
<td>Excellent decision making skills</td>
<td>2.00</td>
<td>0.90</td>
</tr>
<tr>
<td>Excellent Teamwork and Teambuilding skills</td>
<td>2.07</td>
<td>0.86</td>
</tr>
<tr>
<td>Excellent Technical skills</td>
<td>2.11</td>
<td>0.99</td>
</tr>
<tr>
<td>Excellent Management skills</td>
<td>2.11</td>
<td>0.88</td>
</tr>
<tr>
<td>Preparing excellent procedures and guidelines for project planning</td>
<td>2.11</td>
<td>0.79</td>
</tr>
<tr>
<td>Excellent influencing skills</td>
<td>2.11</td>
<td>0.69</td>
</tr>
<tr>
<td>Excellent presentation skills</td>
<td>2.11</td>
<td>0.69</td>
</tr>
<tr>
<td>Excellent computer skills</td>
<td>2.18</td>
<td>1.12</td>
</tr>
<tr>
<td>Supporting project team efforts toward the development of the project plan</td>
<td>2.18</td>
<td>0.77</td>
</tr>
<tr>
<td>Excellent problem solving skills</td>
<td>2.21</td>
<td>1.00</td>
</tr>
<tr>
<td>Excellent Critical thinking skills</td>
<td>2.32</td>
<td>0.86</td>
</tr>
<tr>
<td>Excellent leadership skills</td>
<td>2.32</td>
<td>0.95</td>
</tr>
<tr>
<td>Excellent negotiation skills</td>
<td>2.36</td>
<td>0.91</td>
</tr>
<tr>
<td>Excellent research and investigation skills</td>
<td>2.54</td>
<td>0.88</td>
</tr>
</tbody>
</table>

*Note: 1 = Strongly Agree, 2= Agree, 3= Neutral, 4 = Disagree, 5= Strongly Disagree*
The top managements of construction contractors in the Eastern Province, Saudi Arabia, are not satisfied with their lead planning engineers because these planners lack the basic skills described above. It is recommended to use the above qualifications and skills as benchmarks whenever employing a planning engineer. In addition, the findings of this study could be used as a benchmark to improve the quality of currently employed planning engineers.

RECOMMENDED READING

REFERENCES

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How Safe are Crumbling US Bridges and Vulnerable Buildings? Douglas P. Taylor

America’s bridges need work. So do some of the nation’s buildings – both old and new – that were designed to avoid collapsing during an earthquake or other major catastrophe, but aren’t quite up to the task of remaining usable after disaster strikes.

“Earthquakes are possible just about any place, not just in California,” says Douglas P. Taylor, president of Taylor Devices. “New York, Ohio, Pennsylvania, and many other places that you don’t usually think about can have seismic activity as Oklahoma recently did. If buildings, bridges and other structures aren’t designed to withstand the shock, they can endanger the lives of drivers and the building’s occupants.” Taylor says these structural problems are more widespread than most people realize. Some of the issues include:

- Bridge aging and deterioration
- Older buildings without proper earthquake-resistant engineering
- The limits of building codes

“The good news is that we’re not facing something that’s unsolvable,” Taylor says. “We as a nation just need to recognize that these problems exist and have a determination to address them.”
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UPCOMING AACE ANNUAL MEETINGS

- 2017 Annual Meeting - June 11 - 14
  Hyatt Regency  Orlando, Florida, USA
- 2018 Annual Meeting - June 24 - 27
  Manchester Grand Hyatt  San Diego, California, USA
- 2019 Annual Meeting - June 16 - 19
  Sheraton  New Orleans, Louisiana, USA
### Arizona Section

The Arizona Section had a technical meeting at the Kitchell Office in Phoenix from 11:30 a.m. to 1 p.m. on Wednesday, Dec. 14, 2016. The meeting was a Webex that featured a video from the 2016 AACE Annual Meeting titled, *Performing Schedule Analysis and Productivity Using Linear Scheduling*, by Greg Hall and Abbaz Safi. The presentation focused on schedule analysis through the interpretation of actions while comparing projects and finding causality. Greg and Abbaz went into detail on the Linear Schedule Method (LSM) and the Linear Line of Balance Schedule Method (LLOB) using the graphical time-location planning software, Tilos. These techniques are meant to complement Critical Path Method (CPM) scheduling by visually representing the flow of resources and enhancing information from a Gantt chart.

The Arizona Section met from 11:30 a.m. to 12:30 p.m. on Feb. 22, at the Kitchell office in Phoenix. John Armstrong, PSP, presented on the topic of project control dashboards. The March Arizona Section technical meeting was from 11:30 a.m. to 12:30 p.m., at the Kitchell Office in Phoenix, on March 17. Chris Perry gave an overview of Autodesk and Building Information Modeling (BIM).

### Houston Gulf Coast Section

The February 7 presentation at the Houston Gulf Coast Section was “Young Professionals Month.” Adi Makaram, a project cost engineer at Shell, gave an interactive presentation titled, “Value of Cost Engineering.” The presentation was well attended. He gave his insight of what it was like to hit the ground running, being a young member of a project team and what it took to transition from being a chemical engineering to becoming a project cost engineering during the downturn of the oil and gas industry. As a newcomer to the project team, he liked the variety of work, the analysis involved in the work, and feedback from other team members. He highlighted the immense value cost engineers bring to the team and the tools they use to contribute to the success of projects.

On January 10, the Houston Gulf Coast Section kicked off the new year with a presentation from Alicia McKenley. The presentation was titled, “Critical Path Scheduling.” It was Women in Project Controls Month and the attendance was great. The interactive presentation focused on basic scheduling terminology and the importance of monitoring activities on a project’s critical paths (primary, secondary, and tertiary). Alicia gave examples from her scheduling experience with several oil and gas companies and the time she spent in the Army National Guard engineering battalion as an officer candidate combat medic. Alicia concluded the presentation with an example of a tier 3 critical analysis.

### Norway Section

The Norway Section had a successful conference on benchmarking in Oslo. This was the third annual conference and it was hosted on Dec. 1, 2016. The conference had over 50 participants in a wonderful venue at Fornebuporten in Oslo, and organizers believe it was the best panel the section has booked and this made for a great framework for a very enjoyable and informative afternoon.

The main purpose of these events are professional development and networking across industries and disciplines. This year’s focus was benchmarking – with a main goal for all participants to learn what benchmarking is and how project-intense organizations use benchmarking to secure project success.

Visiting were the U.S. benchmarking firm, Independent Project Analysis (IPA), and its newly appointed regional director for Europe, Mr. Nekkhi Mishra from its UK office, along with research analyst Melissa Matthews from its Washington office.
The Norway Section had a successful conference on benchmarking in Oslo. One of the speaker’s is shown above. This was the third annual conference and it was hosted on Dec. 1, 2016. The conference had over 50 participants.

They gave an interesting speech about benchmarking and how they have seen estimation functions deteriorate in many organizations – at the same time that best practices have never been more accessible. The President and CEO of Kvaerner, Mr. Jan Arve Haugan, was booked to be at the conference but had to cancel. In lieu of attendance, he recorded a 10 minute introductory video for the event. The Director of Metier Consulting, Paul Torgersen, along with Magne Lilleland-Olsen gave a talk on benchmarking in early-phase public projects and design-to-cost processes in the planning of a new police emergency response center. Other speakers were Statnett (Stig Olav Wull) on international benchmarking compared to other transmission-system-operators (TSOs). NTNU (Professor Bjørn Andersen) spoke on a summary of benchmarking methods.

This event shows how the Norway Section helps gather people and raises awareness of estimation and project management disciplines in Norway.

Spain Section

The first technical meeting of the Spain Section was on Nov. 22, 2016, in Madrid. Nearly 40 people, mainly from oil and gas operators and contractors such as Repsol, Tecnicas Reunidas, Statnett (Stig Olav Wull) on international benchmarking compared to other transmission-system-operators (TSOs). NTNU (Professor Bjørn Andersen) spoke on a summary of benchmarking methods.

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This event shows how the Norway Section helps gather people and raises awareness of estimation and project management disciplines in Norway.
SacyrFluor and Amec Foster Wheeler, gathered at SacyrFluor’s auditorium in Madrid. AACE Region 9 Director, Mr. Sean T. Regan, gave the welcome. A one hour presentation about AACE International was given to inform, promote, and encourage enrolling and collaboration with the section. This was followed by a coffee break for networking where people exchanged views and opinions. The session was finished with a software showcase by the meeting’s sponsor, Ontrack CEO Mr. Matt Milinusic.

Attendees’ feedback has been very positive and it was considered an exceptional good start. The section board worked on the topics for the March 8 meeting. It is the intention of the section to have their meetings available for streaming so they can be watched from other parts of Spain.

### Southern California Section

On February 21 the Southern California section hosted a presentation on Program Level Scheduling - Enterprise Alignment for Programmatic and CPM Schedules given by Brian Criss of DRMcNatty. The presentation provided recommendations and lessons learned from years of experience in managing programs within Primavera P6 and what key information is essential in the development of Program Level Scheduling best practices. Brian Criss has over 18 years of field experience in construction management and project controls and is DRMcNatty’s Principal VP of Operations overseeing the execution of software implementation projects and the firm’s professional services group along with DRMcNatty’s highly-skilled technical and integration development teams.

As organizations seek to perform more projects during annual budget cycles, the practice of program level scheduling becomes increasingly important. The program environment poses a unique set of challenges that may not be typically encountered when scheduling for a single project. Aligning project information with organizational goals, ensuring adequate resource availability, navigating the enterprise landscape, and development of meaningful reports for executives are all essential objectives of program level scheduling. In order to achieve these objectives, a further challenge is how to best to develop program level schedules that align both complex projects requiring Critical Path Method (CPM) analysis along with lesser projects and programmatic work. Programmatic work is usually low-complexity, unit-based production work, such as gas service or power pole replacement, but still requires shared resources with larger project work that is traditionally managed in Primavera P6. This leads to additional challenges in managing all projects and programmatic work with “one view of the work,” while not adding undue administrative burden, and maintaining tight data quality with thousands of jobs on a massive scale. This presentation provided recommendations and lessons learned from years of experience in managing programs within Primavera P6 and what key information is essential in the development of program level scheduling best practices.

On January 31, Southern California Section discussed the Los Angeles County Traffic Improvement Plan (LACTIP) recent ballot measure which entrusted Metro with the responsibility to plan and deliver one of the largest capital improvement pro-
grams in the nation. Metro’s Program Management Department (PMD) is focused on the successful delivery of capital projects, including transit, highway, and regional rail projects. The PMD is currently managing a large portfolio of projects valued at approximately $12 billion. The measure will significantly increase PMD’s responsibilities, adding $120 billion to the current program. The presentation took a look at the best practices implemented by LA Metro around planning and scheduling and how project intelligence gleaned through advanced analytics and problem resolution led to more predictable/reliable results in support of the project decision making processes. Speakers were Mark von Leffern of Hill International and Jarod Maloney of Deltek. There were 30 in attendance.

The Southern California Section sponsored its annual Fall 2016 student outreach at the University of Southern California (USC) on Thursday, Nov. 10, 2016. The presentation was a huge success and well attended with over 20 construction management graduate students. The AACE members who participated in the outreach were Devang Dedhia, PSP (Jacobs Engineering), John Matsumoto, PSP (Jacobs Engineering), Marc Glasser, PSP (Jacobs Engineering), George Lozano, CCP (Burns & McDonnell), and USC alumnus Phil Peterson, PSP (Ames Construction). The next student outreach is scheduled to take place at Cal State Long Beach. The Southern California Section would like to thank all participants of this successful event and look forward to other members volunteering at the next outreach.

On Oct. 26, 2016, Edward Tallmadge, Strategic Account Manager and BIM Specialist for U.S. CAD, Inc. discussed BIM Software Utilization to Reduce Project Risk, Time and Cost at the Southern California Section meeting. Ed works with the Architecture, Engineering and Construction industry, specializing in project solutions specific to Building Information Modeling (BIM), Cloud computing services, Computer Aided Design (CAD) and project management. U.S. CAD is the largest Autodesk authorized Gold Reseller Partner in the Western US and specializes in understanding customers needs and helping them integrate BIM, sustainable design and digital prototyping technologies within their organizations and projects. His presentation took place during the Southern California Section’s annual joint meeting with the Los Angeles chapter of American Society of Professional Estimators. Seven section members attended along with one guest.

Submitted photo

Shown above Edward Tallmadge, speaker at an October 2016 joint meeting of the Southern California Section and the Los Angeles Chapter of ASPE, is presented a certificate by Bruce Danielson of ASPE.

The Gastech Exhibition and Conference launches in Tokyo, Japan on April 4-7, hosted by the Japan Gastech Consortium, it will feature 10 leading companies representing the Japanese energy sector.

Gastech is the world’s leading gas and LNG event, enabling over 25,000 commercial experts and technical innovators from the up, mid and downstream sectors of the supply chain to discover business-changing insights, explore innovative solutions and build profitable business connections. The four-day multi-streamed commercial and technical conference program features 200 speakers, 130 presentations, and hosts 2,500 international delegates. A 54,000sqm exhibition showcases 600 exhibitors, five show floor zones and 12 country pavilions. Gastech is supported by leading brands including Shell, Qatargas, Rasgas, Chevron, KPMG, Uniper, GE Oil & Gas and ENGIE. Established in 1972, Gastech has been running for over four decades. (See www.gastechevent.co.uk).

As Japan plans its future energy landscape beyond 2030, security of gas & liquefied natural gas (LNG) supply are at the top of the agenda. The role that cleaner natural gas & LNG will play in a future that appears set to abandon any previous reliance on nuclear power puts Japan in a crossroads: does the country shift back towards greater consumption of fossil fuels – including higher-carbon-emitting coal – or does it turn full tilt towards renewable energy and a diversification of energy sources?

As the world’s largest importer of LNG – importing nearly one third of all global supply – Japan relies heavily on fuel imports, and on the predictability of stable and trustworthy supplies of natural gas & LNG. But with LNG prices having fallen to close to 50 percent of peak levels being paid in 2014, Japan (and other major Asian buyers) now find themselves in the rare position of being able to dictate and drive pricing and contracts closer to their own terms of interest.

A deregulated electricity market has opened up new competition between Japanese utility companies and further key changes will be announced in 2017 by the government, which makes this year one of the most pivotal in Japan’s energy history.

Japan to Host the Largest Energy Event in Over a Decade

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◆
When Will Your Section News Submission Be Published?

The digital Source magazine includes all "Section News" submissions. Source has a submission deadline of two months in advance of the issue date. Please review the following production schedule. It lists the submission periods for the six bi-monthly issues of Source magazine in 2017.

2017-2018 Source Section News Submission Schedule

February 2017
- Items submitted from Oct. 16 - Dec. 15, 2016

April 2017
- Items submitted from Dec. 16 - Feb. 15, 2017

June 2017
- Items submitted from Feb. 16 - April 15, 2017

August 2017
- Items submitted April 16 - June 15, 2017

October 2017
- Items submitted June 16 - Aug. 15, 2017

December 2017
- Items submitted Aug. 16 - Oct. 15, 2017

February 2018
- Items submitted from Oct. 16 - Dec. 15, 2017

April 2018
- Items submitted from Dec. 16 - Feb. 15, 2018

June 2018
- Items submitted from Feb. 17 - April 15, 2018

This production schedule is based upon production schedules at AACE headquarters, as well as our printer having two to three weeks production time to take our in-house files and convert them to the Nxtbook software for posting. Enhanced features like audio, video, website links, and more will be a part of each issue of the Source. Some technology features will require additional production time and earlier deadlines. The magazine is to be ready for posting by the first of the month.

Within 2 to 3 business days of submitting a "Section News" items, you should receive a return confirmation e-mail that your submission was received at AACE headquarters.

How to Submit Text and Photos

Please submit any and all text as a part of the e-mail or as a Microsoft Word file attachment. Please submit any photo or photos as individual attachments in tiff or 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). We can convert large 72 dpi submissions into the required 300 dpi. This process shrinks the size of the original submission. We cannot use photos taken on cell phones. For photos to be published, they must be in focus, of print quality, and wide enough to fill the width of the column layout.

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. Do not list the Section officer first unless he or she is photographed on the left with guest speakers on the right.

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. Never refer to the Section as a chapter.

Contact AACE Concerning 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.

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.

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.

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.)
Alan Pizzi, PE CCP
1951-2017

Alan Pizzi, PE CCP, of Philadelphia, Pa., died Jan. 16, 2017, at Thomas Jefferson University Hospital. He was 65. He had been an AACE International member since Feb. 11, 2005.

Mr. Pizzi was born on Aug. 11, 1951, in Philadelphia, attended Villanova University and graduated from Drexel University with a degree in civil engineering. He had a long career as a Professional Engineer and Certified Costing Professional and was a past president of the American Society of Highway Engineers.

He enjoyed a successful career with many prestigious firms including Urban Engineers, Allan A Myers, Buckley & Company, Conduit & Foundation, and Slattery & Associates. From 2010 to 2014, Mr. Pizzi worked at ITER, a multinational nuclear fusion experimental project in the south of France. He then returned to Philadelphia in July of 2014, to rejoin Urban Engineers as vice president, practice leader of cost estimating.

Mr. Pizza is survived by Deborah, his wife of 45 years, his sons Jason and Michael, his brother Larry, his father Elmer Francis Pizzi, daughter-in-law Marisa, and several nieces and nephews. His wry humor, loyalty, keen intellect and ability to quote Shakespeare, his love of family, friends, bicycling, books, and a good scotch, will be greatly missed by all.

In lieu of flowers, memorial donations may be made in Mr. Pizzi’s name to the Union of Concerned Scientists http://www.ucsusa.org/memorial or the Philadelphia Bicycle Coalition at the following link: https://bicyclecoalition.secure.nonprofitsoapbox.com/compont/donations/donate/id-79. ◆
Becoming a Certified Cost Professional is a proven way to enhance your value to employers and clients by providing an impartial endorsement of your knowledge and expertise.

Earning your Certified Cost Professional (CCP) Certification shows your professional commitment and ability to your peers, supervisors, and clients, and may give you that competitive “edge” when being considered for a promotion or future opportunity. In addition, AACE International salary surveys reveal that Certified Cost Professionals earn more at all steps throughout their career than those without certification.

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For more information visit web.aacei.org
COMING EVENTS

**APRIL 2017**

1. **PSP Certification Training Course**, Burns & McDonnell Office, Brea, CA
   - Contact: kblack@specservices.com
   - www.aace-sc.com

8. **PSP Certification Training Course**, Burns & McDonnell Office, Brea, CA
   - Contact: kblack@specservices.com
   - www.aace-sc.com

4-7. **Gastech Exhibition and Energy Conference**, Tokyo, Japan
   - Contact: www.gastechevent.com

9-11. **IFRS Based Accounting for Oil and Gas**, Dubai, United Arab Emirates
   - Contact: training@mobilityoilandgas.com

19. **CMAA Breakfast of Champions: Orange County K-12 Districts Capital Program Updates**, Long Beach Airport Marriott, Long Beach, CA
   - Contact: www.cmaasc.org

20. **CMAA Legal Seminar**, Long Beach, CA
   - Contact: www.cmaasc.org

26. **CMAA Southern California Chapter 25th Annual Awards Gala**, J.W. Marriott, Los Angeles, CA
   - Contact: www.cmaasc.org

27. **The 14th Annual Midwest Bridge Symposium**, Chicago, IL
   - Contact: www.seaoi.org/bridgesymposium/

**MAY 2017**

3. **CMAA Breakfast of Champions: Foothill Gold Line**, City Club of Los Angeles, Los Angeles, CA
   - Contact: www.cmaasc.org

   - Contact: www.truesummits.com

**JUNE 2017**

11-14. **AACE International’s 2017 Annual Meeting**, Hyatt Regency, Orlando, FL
   - Contact: phone 1-800-858-COST
   - fax (304) 291-5728
   - info@aacei.org
   - web.aacei.org

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

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For additional information about the listed advertisers or about advertising with us, please contact Cassie LoPiccolo at: +1.304.2968444 ext 122, or e-mail clopiccolo@aacei.org
NEXT MONTH IN THE
COST ENGINEERING JOURNAL

Articles announced for publication in the Cost Engineering journal are subject to change.

Technical Article
Contemporaneous Understanding of Criticality: Definitions and Application in Forensic Schedule Analysis

Technical Article
CPM Really Gets Interesting When You Consider Activity Status

Technical Article
A Tale of Two Tails: Chaos in Estimating Predictability

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AACE INTERNATIONAL'S

2017 ANNUAL MEETING

JUNE 11-14

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ANNUAL MEETING

JUNE 11-14

SEMINARS

JUNE 8-11

and JUNE 14-15

LOOK INSIDE to learn how to save $100 on your registration.
Frank Abagnale

Renowned Cybersecurity and Fraud Prevention Expert, Bestselling Author & Subject of Catch Me If You Can. Frank Abagnale provides entertaining insight into his life as the notorious imposter of the 1960s; a thrilling story told in the award-winning movie and Broadway musical, Catch Me If You Can. By age 21, Abagnale was known as America's most gifted con man, successfully impersonating an airline pilot, pediatrician, stockbroker, college professor, and assistant attorney general, all while cashing $2.5 million in forged checks. Audiences will experience an emotional roller coaster ride as he describes his escapades and reveals how he learned to live on the right side of the law.

Justin Newton

Tuesday Keynote Session Speaker - Tuesday, June 13

Justin Newton is the executive in charge of project management, planning, and controls at Walt Disney Imagineering – the creative engine of Walt Disney Parks and Resorts that dreams up, designs and builds all Disney theme parks, resorts, cruise ships, attractions, shows and spectacles around the world. In his role, Justin provides global leadership for the Project Management Studio and is responsible for innovation, process improvement, risk management, casting, talent development, and cost and schedule certainty. Since joining WDI in 2015, Justin has supported a number of major projects that include initiatives related to the Avatar and Star Wars franchises.

Prior to joining Imagineering Justin worked at Fluor Corporation, where he led domestic and international projects while developing talent, practices and standards, and other discipline initiatives. He holds a degree in industrial and systems engineering from the University of Southern California.
Reserve in AACE’s Block and Save US $100

Earn a US $100 discount off your Annual Meeting registration for staying at the host hotel, Hyatt Regency Orlando. Use the link above to access AACE’s reservation website and retrieve the discount code to be used when purchasing your meeting registration.

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Available June 7 – July 15 based on availability
Single/Double Occupancy: US $199.00/night
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Quad Occupancy: US $249.00/night
Resort Fee: US $5.00/night
(Rates do not include 13.5% sales tax per night.)

- complimentary high speed internet access throughout the hotel and meeting space
- complimentary access to the cardio room

AACE Annual Meeting Group Reservations Website

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MCO – Orlando International Airport
13.0 miles / 20.92 km to hotel

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BUSES and I-RIDE TROLLEY - www.golynx.com
TAXI: Approximate fare $34/way from the Orlando International Airport

The host hotel for this year’s meeting is the Hyatt Regency Orlando and AACE has a block of rooms at discounted rates available by reserving online HERE.
Showcase your Organization’s Brand in a Highly Focused Environment

Sponsorship of the 2017 Annual Meeting 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 to 2017 Annual Meeting attendees. Our sponsorship opportunities are among the most cost and time-effective means of capturing the Annual Meeting 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.
For more information on the 2017 Annual Meeting exhibitors, please visit web.aacei.org/meetings-events/exhibitors-sponsors

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 11**: 3:45 PM – 8:00 PM
- **Monday, June 12**: 7:00 AM – 3:30 PM
- **Tuesday, June 13**: 7:00 AM – 3:30 PM

MEETING EXHIBITORS INCLUDE:

- Administrative Controls Management
- ARES PRISM
- ASTA Development
- Bechtel Corporation
- Booze Allen Hamilton
- Compass International
- Conquest Consulting Group
- Cost Engineering Consultancy
- Digital Estimating Systems
- Deltek
- DRMcNatty & Associates
- Driver Trett Canada Limited
- EcoSys
- EOS Group
- HCSS
- InEight
- Imfuna
- Long International
- Navigant
- Nomitech Limited
- Omega Project Solutions
- OnTrack Engineering Ltd.
- Palisade Corporation
- Schedule Analyzer Software
- Sword Active Risk
- Synchro Software Ltd.
- University of Wisconsin – Platteville Online

CLICK HERE FOR THE EXHIBIT HALL FLOORPLAN
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; cost and schedule control; decision and risk management; earned value management; estimating; global projects; IT/IM in project and cost management; owner issues; planning and scheduling; professional development; and project management.

Please visit the TECHNICAL PROGRAM for more information.
To register for a seminar, please visit web.aacei.org/resources/interactive-learning/seminars/annual-meeting-seminars

**B.3 Project Risk Quantification - Hollmann**
**B.4 Estimating A to Z for the Process Industries - Leo**
**B.5 How to Assess an Ongoing Project - Mattos/Owen**

Wednesday – Thursday, June 14-15 (1.5 Days)
$1150 member/$1300 nonmember

**C.1 Advanced Project Controls from the Owner’s Perspective - Williams**
**C.2 Excellence in Project and Total Cost Management - Lavingia**

To register for a seminar, please visit web.aacei.org/resources/interactive-learning/seminars/annual-meeting-seminars
## TIP #1 - Take $100 off your registration fee for staying at the host hotel, the Hyatt Regency Orlando! Enter the discount code found at the Group Reservation Portal at check-out to receive the discount.

All prices in US Dollars.

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*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.

***Guest registrations are designed for access to selected programs such as receptions, the keynote sessions, breakfasts, and other social events at the annual meeting 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 #2 - Please note, register before the Early Registration Cut-Off Date of May 12, 2017, and save an additional $100!

## TIP #3 - If you are not a member of AACE, join now to experience the benefits of membership and save money on your meeting and/or seminar registration! Go to [here](http://www.aacei.org) and start your AACE International membership today!