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Development & Training
Workshop

ICEAAWorld

The International Cost Estimating and Analysis Association

Spring 2014

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DENVER**

International Cost Estimating & Analysis Association

2014 Professional Development & Training Workshop

JUNE 10 - 13  **Denver, CO**

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TUESDAY, JUNE 10:

Welcome Remarks & Keynote Speaker 8:00-9:15am
Training 9:15-12:30pm
Lunch 12:30-2:00pm
Training 2:00-5:15pm
Opening Reception in Exhibit Hall 5:30-7:30pm

WEDNESDAY, JUNE 11

Best Paper Awards Breakfast and Keynote 8:00-9:15am
Exhibit Hall Break 9:30-10:00am
Training/Papers 10:00-11:30am
Networking Lunch 11:30-1:00pm
Training/Papers 1:00-2:30pm
Exhibit Hall Break 2:30-3:00pm
Training/Papers 3:00-4:30pm
Pre-Game Reception 4:30-6:15pm
Baseball Game Starts 6:40pm

THURSDAY, JUNE 12

Association Awards Breakfast and Keynote 8:00-9:15am
Exhibit Hall Break 7:00-9:30am
Training/Papers 9:30-10:00am
Networking Lunch 10:00-11:30am
Training/Papers 11:30-1:00pm
Exhibit Hall Break 1:00-2:30pm
Training/Papers 2:30-4:30pm
Open Evening - Enjoy Denver

FRIDAY, JUNE 13

Continental Breakfast 7:00-8:00am
Training/Papers 8:00-11:15am
Conference Ends 11:15am

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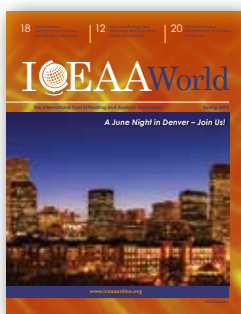
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ICEAAWorld

International Cost Estimating and Analysis Association

A non-profit organization dedicated to advancing the profession of cost estimating and analysis, through the use of parametrics and other data-driven techniques, and enhancing the professional competence of its members.

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President's Address

by *Brian Glauser, ICEAA President*

It is exciting to observe the many activities occurring across the association, from the International Business Office to our Chapters. This issue features our new Executive Director, **Megan Jones**, first International Office Update. There is a lot going on, so please take the time to read her report to the membership.

We conducted a Board of Directors meeting on March 1st. It was graciously hosted by Technomics in Arlington, VA. We covered a range of topics, many of which are discussed throughout the various articles in this edition of *ICEAA World*. I also, had the privilege to recently attend a Southern California workshop in El Segundo, CA. These events, as well as others that have occurred since our last issue, continue to shine a spotlight on ICEAA's volunteer members and their collective skills, knowledge and experience as the top strength of our association.

We recently signed a Memorandum of Understanding (MOU) with three organizations:

- Society for Cost Analysis and Forecasting (SCAF)
- International Function Point Users Group (IFPUG)
- Dutch Association of Cost Engineers (DACE)

In each of these cases, ICEAA and each of the above named organizations share several objectives. The MOU between each of us formalizes a relationship whereby we can cooperate, promote and support each organization's objectives and activities. We'll continue to develop formal relationships with other organizations internationally to both expand the ICEAA reach and to provide benefit to our association from these affiliations.

In November of this year, at the invitation of the Association of Cost Engineers (ACostE) in the U.K., ICEAA will conduct a two-day track running commensurate with the ACostE annual conference. It will consist of a day of presentations and a day of training sessions. The conference will be the 10th and 11th of November at the Hilton Birmingham Metropole at the National Exhibition Centre in the United Kingdom.

The Board has had several discussions regarding the formation of Special Interest Groups (SIGs). We have adopted a change to the Bylaws that allows for the formation of SIGs and a special committee has drafted a charter agreement that establishes the guidelines, operating procedures and obligations of a SIG. The formation of SIGs will provide yet another forum for networking with colleagues to advance the exchange of ideas, knowledge and learning in a particular area of interest.

ICEAA continues to provide a great value to its membership with the quality products and services that we deliver. In that vein, I call upon the volunteer spirit of every member to continue to spread the word as to the value ICEAA provides and ask that you encourage your colleagues to become members so they too can receive all of the benefits that membership provides.

We look forward to seeing many of you in Denver for what is shaping up to be another impactful annual workshop. In addition to the comprehensive training and certification activities, we will have a number of stimulating and enlightening presentations and keynotes. ■

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Letter from the Editor

by Joe Wagner, ICEAA World Editor

Spring of 2014 – we begin our second year of your *ICEAA World* magazine. The big news for this issue is the arrival of new leadership in the ICEAA business office. As you recall, **Erin Whittaker** departed her position as Executive Director in August of 2013. It took four months to find her replacement, but the efforts produced outstanding results. In January, 2014 we welcomed Ms. **Megan E. Jones** to the Vienna, Virginia office as the new Executive Director of ICEAA. Megan has many years of experience in association management, including conference planning, organizational development, and budget management. One very valuable asset she brings is a fresh and open mind on ICEAA and what the association should do to improve the delivery of services to our community and expand our reach as the focus of professional development for the cost community. Her unbiased perspective will allow her to ask why or why not for a wide spectrum of ideas and initiatives that will take the association forward into the future.

As always with our spring issue, we are touting the coming 2014 ICEAA Professional Development & Training Workshop. You'll find an overview of the Workshop from our co-chairs, **Andrew Drennon** and **Rich Harwin**, and some historical background on one of the local historical sites near our Denver Marriott City Center hotel. Baseball fans will especially enjoy our June week in Denver, with workshop-sponsored discount tickets to a Colorado Rockies baseball game against the Atlanta Braves. While we are discussing the workshop, let me draw your attention to the workshop logo, which was created from scratch by our member services staffer, **Brittany Walker**. Brittany also was responsible for designing the Exhibitor Prospectus for the Denver Workshop.

I mentioned in the last issue how much I think ICEAA has gained from the relationships with overseas organizations that ISPA brought with them into the ISPA-SCEA merger. One benefit is on display in this issue, in which we present an article written by **Dale Shermion**, Chairman of the Society for Cost & Forecasting (SCAF) and his co-author **Dr. Mark Gilmore**. It addresses the impact of estimator personality on the supposedly objective results of cost estimating. Other articles in this issue include the usual conference rundown, and another interesting and relevant book review by **David Peeler**.



New ICEAA Executive Director Megan Jones (left) and Member Services staffer Brittany Walker display the 2014 ICEAA Professional Development & Training Workshop logo shown on the conference exhibitor brochure.

As an ICEAA editor, I cannot fail to note the recent departure of another ICEAA editor, **Dr. Tony White**, co-editor of the *Journal of Cost Analysis & Parametrics* (*JCAP*). Tony is currently a full Professor faculty member at the Air Force Institute of Technology (AFIT) in their department of Mathematics and Statistics. He earned his PhD. from Texas A&M and was the editor of the original SCEA Journal, and then co-editor of the merged ISPA-SCEA Journal, now known as *JCAP*, for a total of 7 years. We very much appreciate his many years of work and the quality Journal he oversaw.

My thanks also to all of our regional and chapter leadership for their contributions to this issue, and see you in Denver in June.

As we completed preparation of this issue of *ICEAA World*, we received very sad news of the passing of **Ms. Gaile Argiro**, Executive Administrator of the College of Performance Management (CPM) for over 14 years. Gaile was a driving force behind the annual IPM conference held in Bethesda, Maryland each fall. SCEA and then ICEAA share the IPM conference management responsibilities with Gail's organization and the NDIA, so I worked with her over many years. She was a wonderful person and good friend, and the IPM conference will not be the same without her. ■



ICEAA Certification Director's Corner

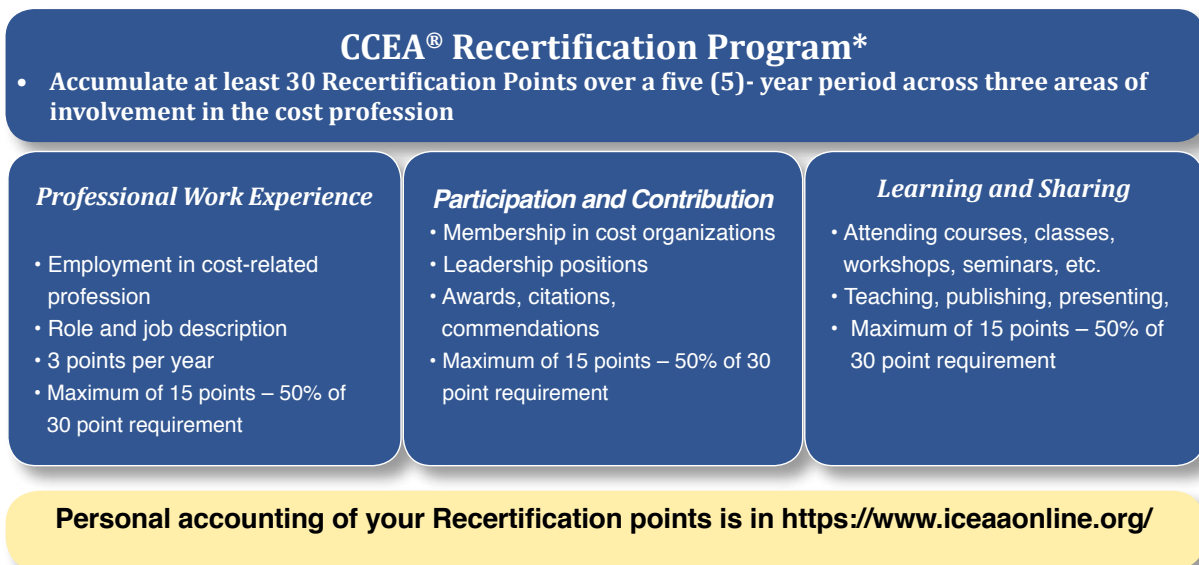
by Peter Andrejev, Director of Certification, CCEA®, PMP

Retaining your CCEA® Certification

The CCEA® designation implies that the holder is competent to generate credible cost estimates and to perform valid cost analyses. Consequently, to ensure the skills of our CCEAs® haven't atrophied to the point of incompetence, we require CCEAs® to remain active in the profession in three broad areas:

- Professional work experience – indicates where the CCEA® has retained their skills through cost-related employment
- Participation and contribution – acknowledges where the CCEA® is involved in the cost community beyond their local work environment and contributes to cost related activities
- Knowledge attainment and sharing – recognizes where the CCEA® has taken, attended, conducted, or presented cost-related training courses, classes, seminars, workshops, etc., or presented, authored or delivered cost-related papers, articles, speeches, lectures, etc.

The below depiction summarizes the CCEA® recertification requirements.



** Individuals who do not retain their CCEA® designation through accumulation of recertification points must reapply and successfully pass the examination in effect at that time.*

Making it Easier to Recertify

As we enrich the functionality of our web site, we intend to create a more user-friendly interface in which the CCEA® individual will be able to view a running tally of their recertification points so that at any point in time the CCEA® would know exactly how many recertification points have already been awarded, and where they will need to accumulate additional recertification points to renew their CCEA® designation.

And remember, keeping active in the profession is not the only way to keep your CCEA® designation; you can always reapply, take, and pass the examination that is in effect at the time your CCEA® expires. ■



ertification ongratulations

ICEAA would like to acknowledge both those who volunteer their time to proctor the certification examination and those who achieve certification.

Without CCEA® certified proctors to manage exam administration; ICEAA would be unable to offer the exam in so many locations throughout the year. If you are CCEA® certified and would like to proctor an exam in your area in exchange for points toward recertification, please contact the ICEAA International Business office.

Thanks go out to following individuals for volunteering their time to proctor the certification exam during November and December of 2013: **Savita Choudhry, Stacy Dean, Kevin Jackameit, Robert Ogrodnik, and Richard Osseck.**

Congratulations are extended to the following individuals for passing either the CCEA® or PCEA® exam during the summer and early fall:

CCEA® Achievers:		PCEA® Achievers/ CCEA® Eligible:	Recognized below are those who recertified:
<ul style="list-style-type: none">• Geoffrey Berntsen, Tecolote Research, Inc.• Brian Bothwell, Government Accountability Office• Donald Bowman, Tecolote Research, Inc.• Steven Cox, Tecolote Research, Inc.• Andrew Drennon, Cobec Consulting• Jermaine Garland, Tecolote Research, Inc.• James Gates, Tecolote Research, Inc.• Malachi Gray, Tecolote Research, Inc.	<ul style="list-style-type: none">• Diane Heckert, Tecolote Research, Inc.• Richard Heye, Boeing• Thomas Knoll, Tecolote Research, Inc.• Chad Larson, Boeing• Michael Noonan, Booz Allen• Michael O'Sullivan, Tecolote Research, Inc.• Robert Watts, Tecolote Research, Inc.• Robert Williams, Herren Associates	<ul style="list-style-type: none">• Matthew Henchey, Herren Associates• Nathaniel Honsowetz, Cobec Consulting• Yun Kim, Tecolote Research, Inc.• Richard Reese, TASC, Inc. <p>PCEA® Achievers:</p> <ul style="list-style-type: none">• Margarita Varela, Navy	<ul style="list-style-type: none">• Christina Donadi• Mark Gornall• Eric Hawkes• Ly Layser• Brian Octeau• Eric Peters• Corinne Price• Karen Rivaud• Justin Smith



Business Office Update

by Megan E. Jones, ICEAA Executive Director

ICEAA Members, it is an honor and a privilege to provide my first business office update as ICEAA's new Executive Director. Since joining the International Business Office team in January, I've been busy getting acclimated to my new environment and role, and filling the very impressive shoes of my predecessor, **Erin Whittaker**. My endless thanks goes out to **Joe Wagner**, **Sharon Burger**, and **Brittany Walker** for easing my transition with their wise counsel, vast experience, and extraordinary expertise. I am excited to explore the vast opportunities before us and to pursue new ways to support our members around the world.

New ICEAA Website

Visitors to iceaaonline.org will notice a new look and feel to the ICEAA website. We are

working diligently to migrate all of the content and functionality of the old website into the new format, and will be providing updates and seeking input and feedback as the project progresses. In the coming months we can look forward to new features that will allow members to update their individual profiles, log in to access content customized to their activities and interests, and position us to offer even more advanced capabilities in the future. We encourage you to send suggestions and feedback to iceaa@iceaaonline.org.

2014 ICEAA Professional Development & Training Workshop

This year's ICEAA Professional Development & Training Workshop is scheduled for June 10-13 at the

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Denver Marriott City Center in Denver, Colorado. Back in January, **Brittany Walker** and I had the pleasure of meeting up with conference co-chairs **Andrew Drennon** and **Rich Harwin** in Denver to visit the hotel and learn more about where we'll be for that content-rich week in June. Everything you need to know about the Workshop is available on our website at www.iceaaonline.org/denver14.

Registration is open and once again ICEAA is offering a discount to companies registering more than five attendees for the event. If your company is planning to send more than five employees to the Workshop, please contact us for group registration instructions. The ICEAA negotiated hotel room rate of \$189 per night (or \$156 for government employees) will be available until May 23 or when the block sells out. Book your room early to take advantage of this great deal!

The 2014 ICEAA Association Awards and Best Paper awards will be presented while attendees enjoy full hot breakfast buffets during the morning general sessions. On Wednesday, the Best Paper Awards will highlight the finest papers being presented throughout the week; and on Thursday, the members who have contributed so much to ICEAA and the cost community at large will be recognized with the 2014 Association Awards.

ICEAA is offering discounted baseball tickets in three different sections to see the Colorado Rockies take on the 2016 Workshop's host city team, the Atlanta Braves, on the night of Wednesday, June 11. The Denver Marriott City Center is within walking distance of Coors Field, and the Workshop schedule will be coordinated to provide attendees ample time to go out to the ball game — after some peanuts and Cracker Jack at Wednesday night's networking reception. Purchase a ticket when you register for a memorable night of baseball under the stars after an informative day at the Workshop.

Sponsorships are available and exhibit booths are going fast. We are offering a wide variety of sponsorship packages for every budget that provide outstanding brand visibility to strategically position your company before hundreds of professionals in the cost community. Sign up for a gold or silver package to combine an exhibit booth with recognition before and throughout the conference and across all of ICEAA's media outlets, from the website and the "Cost Estimating Newsbrief" to the pages of *ICEAA World*. Visit the website for more information and the latest map of available booth space.

Journal of Cost Analysis & Parametrics Subscriptions

ICEAA's *Journal of Cost Analysis & Parametrics* strives to provide our members with the most current and innovative research and analysis in the cost community. To keep you ahead of the curve, ICEAA has decided to expand the number of issues per year from two to three. Subscription to the electronic version of *JCAP* remains a complimentary benefit of your ICEAA membership. Members will be notified when the latest electronic edition of *JCAP* is available for download. For those wishing to receive a hard copy in addition to the electronic version, subscriptions are available for purchase for \$15 per year, or only \$5 per copy. If you are interested in a hard copy subscription to *JCAP*, please contact the International Business Office.

On a closing note, I would like to thank everyone for giving me such a warm and enthusiastic welcome. The passion and dedication that is so apparent on these pages has made me proud to serve the association, but it's the kind emails and friendly smiles from those of you I have had a chance to meet that make it a pleasure to serve the membership. I look forward to meeting many more of you in Denver! ■

ICEAA

is going out to the ball game!

Wednesday, June 11 at 6:40 pm



vs.



Get your discounted ICEAA group rate tickets when you register at www.iceaaonline.org/denver14



What's Causin' All This?

by *Brian Welsh, Training Chair and
Kevin Cincotta, Chapter & Organization Training Coordinator*

The 2014 Professional Development & Training Workshop is quickly approaching and will be held this year in Denver, CO, from June 10 – 13. This year is the second ICEAA Professional Development & Training Workshop after years of joint SCEA/ISPA workshops. **Ashlin Smith** and I (**Brian Welsh**) have the privilege of co-chairing the training portion. We're joined by Program Chair **Mel Etheridge** and Program Deputy Chairs **Christina Snyder** and **Leone Young** managing the professional papers. Conference Co-Chairs **Rich Harwin** and **Andrew Drennon** are taking care of all high-profile items including keynote speakers. The training program could not be possible without all of your help, as well as that of the ICEAA International Business Office which works tirelessly to put together this conference. Thank you all for your hard work and dedication!

This year, we plan to offer 43 training sessions in four training tracks. The tracks are Cost Estimating – Basic, Parametric Training, Cost Estimating – Advanced, and Integration. As in the past, content will be based on the Cost Estimating Body of Knowledge (CEBoK®), the *Parametric Estimating Handbook (PEH)*, and other authoritative sources. The training sessions will include twenty-one based on CEBoK®, six based on *PEH*, and sixteen created by community subject matter experts. Two new training sessions this year include cost estimating in the Program Management Body of Knowledge vs. CEBoK, and Advanced Software Cost Estimating. This year also marked our third annual “Call for Trainers and Track Chairs.” If you would like to volunteer (as a training instructor or track chair) for future conferences please contact **Ashlin Smith** (asmith@technomics.net) or **Brian Welsh** (bwelsh@technomics.net).

Instead of the usual update on non-conference, chapter,

and organizational training, I (**Kevin Cincotta**) would like to devote some time to remembering a friend and fallen mentor. As **Joe Wagner** reported in the previous issue of *ICEAA World*, we learned only recently of the 2011 passing of retired Air Force Colonel **Dave Olsen**. I worked with Dave at MCR from 2001 to 2003, and he influenced me greatly. One of his greatest talents was taking wise and time-tested adages and customizing them to be perfectly apt to situations that we were facing. I came to call these updated versions Olsenisms. Perhaps because of Dave's private and at times reclusive nature, these sayings never got the fanfare of those of other prominent thought leaders of our generation, but Dave's sayings always stuck with me. In fact, I'm going to end this column with a piece of advice that Dave gave me.

We all know, in our hearts, that don't bite the hand that feeds you isn't always the best advice. Sometimes, the hand that feeds you is wrong! What should one do in that situation? Ask others this, and they may shrug. But ask Dave this, and you got the words that everyone would do well to live by: When biting the hand that feeds you, you better make sure you're right.

Truer words were never spoken, Dave. We will miss you.

If you would like to share something (such as your organization's non-conference or chapter's cost-related training) to be featured in this column, let me know about it! Email Chapter and Organization Training Coordinator **Kevin Cincotta** (kevin.cincotta@icfi.com), or send a note by carrier pigeon, which works just as well.

Finally, do you (or someone you know) have training content to share? Or maybe you have feedback about the conference training. Or maybe you just want to ask what everyone else asks me: What's causin' all this?!? Whatever the feedback, you may share it with us, and it just might appear in the next *Training Corner*. ■



CALL FOR PAPERS

Journal of Cost Analysis and Parametrics

Editor-in-Chief: Prof. Ricardo Valerdi, *University of Arizona* • **Managing Editor:** Dr. Christian Smart, *Missile Defense Agency*

The *Journal of Cost Analysis and Parametrics* is the official publication of the International Cost Estimating and Analysis Association. It is a scholarly journal featuring peer-reviewed articles that provide the latest developments in cost estimating, cost analysis, and cost management. Its objective is to improve the theory and practice of cost estimating, analysis, management, and research results among cost-analysis educators and practitioners around the world.

The journal seeks to publish research that is interesting, intellectually rigorous, and advances the body of knowledge of cost analysis and parametrics. Papers involving a variety of topics, settings, and research methods are solicited. Manuscripts related to a broad range of application areas for any sector of the economy including manufacturing, financial services, construction, retail, defense, and not-for-profit are desired. New theories, topical areas, and research methods are encouraged. Areas of interest include, but are not limited to:

- Cost model development and validation
- Decision analysis
- Risk and uncertainty
- Simulation
- Trade studies
- Learning curves
- Productivity assessment
- Earned value management
- Design to cost
- Lifecycle costing
- Statistical techniques for analyzing data
- Data visualization

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Submissions will be evaluated based on their: (1) readability; (2) relevance; and (3) reliability. All papers accepted for publication in the Journal must have a high level of readability. Poor readability can impede the ability of a reviewer to evaluate the contribution of a paper and may lead to rejection. It is necessary to ensure the paper can be readily understood by individuals involved in the area discussed in the paper. References should not impede the flow of the paper and unnecessary obscure jargon should not be used. If applicable, details of the statistical methodology should be in an appendix rather than in the body of the paper if they are not central to the focus of the manuscript.

The second criterion is relevance. A paper is relevant if it has the potential to influence cost estimating, analysis, or management. A paper that appeals to a broad spectrum of readers or is unique or innovative has a better possibility of influencing practice and theory development and therefore, is more relevant than a paper without these features.

The third criterion is reliability. The paper is reliable if the conclusions of the paper can be reasonably inferred from the arguments. Reliability is easier to assess when a paper is statistical or involves empirical research with which the reviewer is familiar. Authors can improve the probability of acceptance of a paper by including a section on the limitations of the research techniques.

Authors are advised to consult previous issues of *JCAP*—and its predecessor journals—for suitable topics to submit for consideration. For questions from potential authors please contact:

Ricardo Valerdi, Editor-in-Chief
(rvalerdi@arizona.edu).

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Can psychology and sociology teach us to be better estimators?

Homo-Estimatus and observations of their behaviours

by Dr Mark Gilmour and Mr Dale Shermon, QinetiQ

Introduction

In the cost estimating process, anywhere an individual interacts with an estimate they have the opportunity to influence it, and that influence may act to compromise an estimates validity.

This paper is a provisional study conducted by QinetiQ exploring some of the human characteristics observed by the authors during estimating, their potential impact on our estimates and what psychology and sociology can teach us about why they occur.

Knowledge Based Estimating (KBE)

The remainder of this paper focuses on the 'People' element of cost estimating, more specifically on the 'Cost Estimator', who plays a lead role within the cost estimating process. In an ideal world we expect the 'Cost Estimator' to:

- Understand costing requirements and understand the importance of cost estimates for supporting decision making;
- Be able to communicate effectively with a diverse range of stakeholders;



Figure 1: KBE

- Understand technical and programmatic characteristics of new concepts;
- Capably source data for historic systems and to draw analogies with current concepts;
- Objectively interpret historical data, define cost drivers and identify logical Cost Estimating Relationships (CERs);
- Apply CERs and develop rational estimates;
- Be the first line of scrutiny for their own estimates;
- Confidently present (sell) results to peers and decision makers;
- Defend results under external scrutiny.

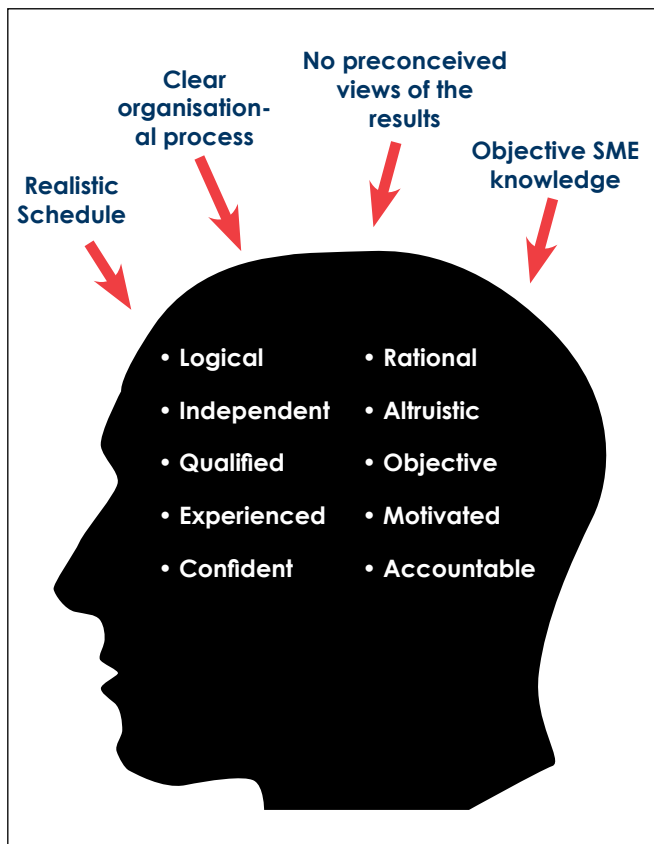


Figure 2: The Ideal Cost Estimator – “Homo Estimatus”

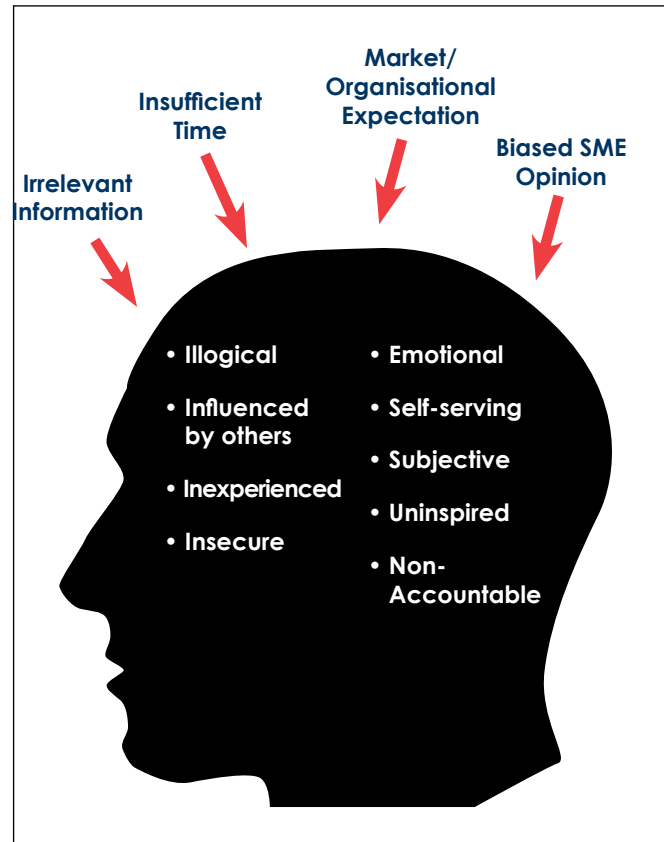


Figure 3: The Real Cost Estimator

While exercising these capabilities, as is observed in Figure 2, we expect these individuals to act logically, to remain independent and objective, to be appropriately qualified and experienced, to work confidently and rationally, all whilst putting the needs of their organisation before their own needs.

Ultimately we ask that our estimators are willing to be held accountable for their estimates. In addition to this we expect organisations not to impose any unrealistic constraints upon estimators when generating estimates (i.e. tight timescales), to be explicit concerning the expectations of any organisational estimating processes, not to have any preconceived expectations as to the value of the estimate, and to be able to provide them with objective knowledge, data and assumptions.

So if all these things were to happen in practice, combined with the right data, tools and processes, why does Homo Estimatus so often get their estimates wrong?

The Real Cost Estimator

Figure 3 highlights that people are, by virtue of being human, illogical and emotional, they often are influenced by others, they don't always have the necessary/desired estimating experience

or qualifications, they naturally act in their own self-interest, and they are often uninspired by the systems they are estimating.

Ultimately very few of our estimators are held to account for the estimates that they generate. In addition they are bombarded with surplus, irrelevant information and biased subject matter expert opinion - as opposed to fact. They are given insufficient time to conduct their estimates, and decision makers already have some expectation as to what they think the 'correct' estimate should be.

As a consequence, estimates are generated that are inherently flawed, not by the data, tools or processes used, but by the people involved in their production.

Observations

On the basis that cost estimators and those involved in the estimating process do not always behave in a manner in keeping with how we would expect them to behave, we have made the following four observations concerning some common estimating behaviours and have attempted to explain these behaviours using

common psychology and sociology principles. The list of observations are not exhaustive, nor are the psychology or sociology principles linked to each.

Technical Bias

Observation: Subject Matter Experts (SME - often engineers) are biased by nature and this often leads to biased estimates.

The understanding of technical subject matter experts regarding the solution or system to be estimated is a valuable and necessary part of the cost estimating process. The downside to this is that we often have limited scope for validating their input. Some commonly held psychological and sociological principles that can explain this are:

- **Selective Recall** – Even if an SME has interpreted evidence in a neutral manner, they may still remember it selectively to reinforce their expectations.
- **Illusory correlation** – individuals have a natural tendency to seek relationships between variables but this can lead to seeing non-existent correlations
- **Optimism bias** – Under normal conditions individuals are optimistic when they believe they are less at risk of experiencing a negative event than they actually are.
- **Pessimism bias** – Individuals, under certain circumstances, have been demonstrated to exaggerate the likelihood of a negative outcome occurring.
- **Serial position effect** – people tend to recall early events and recent events easier than those in the middle, irrespective of how relevant the middle event may be.

Social Influence

Observation: Estimation is conducted within the context of an organisational setting, and the expectations of that organisation will impact on the quality of an estimate.

Cost estimators sit within an organisation, and typically generate estimates on its behalf. That organisation has the ability to reward (or punish) their cost estimators for their performance. Below are some commonly held psychological and sociological principles that can explain the influence that this can have:

WANTED

CCEA EXAMINATION TEST QUESTIONS

1 Topic Category
Parametric Estimating: CER 2 Topic
3 Question

1. QUESTION: If a CER for Site Development was developed giving the relationship, y (in \$K) = $31.765x + 145.32$ (where x is the number of workstations) for a data set cost driver that had a range minimum of 2 workstations to 52 workstations, and the independent variable has tested positively for significance, the predicted cost for a site that had 33 workstations would be:

a. \$1,193.57
b. \$1,193,565
c. \$1,797.10
d. \$1,797,100
e. \$208,850

4 5 multiple choice responses

ANSWER: B 5 The Answer

SOLUTION: $y = 31.765 * 33 + 145.32 = 1,193.57$ but must convert to \$K; value is $1,193.57 * \$1000 = \$1,193,565$

6 The Solution

REFERENCE: CEBOK Module 3 7 Reference

REWARD

Re-Certification Points for Questions Fully Documented as Above

Contact the ICEAA Office or Director of Certification at iceaa@iceaaonline.org for Specifics.

- **Group strength and social identity** – If a cost estimator recognises his/her peers as being proficient in what they are doing; then that estimator is likely to adopt their behaviours and seek assurance from individuals within the peer group that what they are doing is correct.
- **Group proximity** – organisations must be aware of the team influence trade-off between the advantage that a cost estimator has when embedded within a project team (i.e. access to data) with the need to maintain a degree of professional independence.
- **Relationship to group** – consider the situation in which a cost estimator is answerable to a particular manager and that this manager has control over the estimator's career. Should this manager have any views as to what an estimate 'should be', then it may be likely that an estimator would act to comply with such views so as to maximise their potential career progression.
- **Group Size** – compliance of an individual increases as the number of people in the group increases but once the size exceeds 4 or 5 compliance is less likely to occur.

Information Exchange

Observation: Estimation is facilitated by a complex set of social information exchanges, all of which impact the quality of the generated estimate.

An estimator can influence the individuals with whom they engage and consequently they need to be aware of the effect their behaviours have on others. Some commonly held psychological and sociological principles that can explain this are:

- **Reciprocity** – When approached for information, stakeholders (such as SMEs, project managers, finance managers, and end users) are more motivated to provide it if they believe that they will get something worthwhile in return.
- **Anchoring** – Individuals have been shown to rely too heavily on the first piece of information offered, and then make insufficient adjustments away from this number when arriving at their estimates.
- **Framing** – People react differently to a particular choice depending on whether it is

presented as a loss or as a gain.

- **Halo effect** – Individuals place greater confidence in an individual's evidence if they can find attributes of the individual that they like, regardless of whether that evidence is correct.

Estimator Experience & Qualification

Observation: The generation of justified and credible estimates needs to be produced by suitably qualified and experienced professional (SQEP) cost estimators.

Estimators are responsible for collating data, structuring it, and analysing it in a manner that enables them to generate and articulate estimates. However, estimators need to be aware of their own personal biases that can impact on their ability to draw conclusions on the evidence with which they have been presented.

- **Over-confidence** – An individual's subjective confidence in their judgments is reliably greater than their objective accuracy, especially when confidence is relatively high.
- **Classical or operant conditioning** – The experience of an estimator may act to diminish their objectivity which may be disadvantageous or advantageous depending upon the circumstance.
- **Attentional biases** – Individuals who lack experience may focus on limited information within their immediate environment but fail to understand the wider context of their tasking.
- **Small probabilities** – it has been shown that people tend to under-react to low-probability events. An experienced estimator will instinctively know not to ignore low probability events, regardless of how unlikely they are to occur.

Conclusions

This paper is the first step in an exploration of some of the human characteristics observed during cost estimating, their potential impact on our estimates and what psychology and sociology can teach us about why they occur.

The next step of the study, yet to be undertaken, is the development of mitigation strategies associated with these behaviours to ensure that do not corrupt our estimates. ■



A Tale of Two Homes

By Joe Wagner

Do you know anyone from Hannibal, Missouri? The name of the town is familiar to most people, and it doesn't take long to bring up the image of a young boy growing up along the great Mississippi River in the 19th century; its Mark Twain of course – Samuel Clemens. Of course a lot of people grew up in Hannibal over the years, and this piece actually concerns another native of Hannibal – someone lesser known than Mr. Clements - and two of her homes. Thirty two years after Samuel was born, and about 8 blocks west from his boyhood home on Hill Street in Hannibal, a young Irish lady by the name of Margaret Tobin came into the world on July 18, 1867.

With 5 brothers and sisters, along with her parents, living in a small frame house perched on a steep hillside above Hannibal, it is very understandable that Margaret, called Molly, would take the first opportunity to move on from Hannibal and seek her fortune. In 1885, at the age of 18, she followed her brother Daniel west to the gold fields around the town of Leadville, Colorado. She found a job in a General Store in town, and romance soon entered her life, in the person of a miner and fellow Irishman named James Joseph Brown, known as "J.J." J.J. was as poor as Molly, and when they married in 1886, Molly worried



Margaret "Molly" Tobin Brown

about the life they would have, and how she could help support her parents and siblings back in Hannibal. She needn't have worried.

A few years after their marriage, while J.J. was working as chief mining engineer for the



Molly Brown Birthplace, Hannibal, MO, before restoration in 1960s.

At the Ibbex mining company in Leadville, he was instrumental in the discovery of a gold seam that became known as the Little Jonny Mine. At the time, it was hailed as the richest gold discovery in the history of American mining. For his role in the discovery, J.J. was given over 12,000 shares of stock in the mine – about a one-tenth ownership, and a seat on the company's Board of Directors. J.J. and Molly were rich.

Because rich people in the 1890's didn't live in Leadville when the booming city of Denver was only 100 miles away, J.J. and Molly paid \$30,000 for a fine Queen Ann style stone home on Pennsylvania Street, practically in the shadow of the Colorado State Capital. While the house was quite grand, they didn't stay home very much for they both enjoyed traveling extensively

around the world. They spent so much time out of town that in 1902 the house was rented for the Governor of Colorado as a temporary residence during renovations of the Governors' mansion.

While the two traveled together often, J.J. was lucky he did not go along on one trip to Europe in 1912, when Molly's solo trip home began on the RMS Titanic and, after a short stint in a lifeboat, was completed on the RMS Carpathia. Molly was hereafter dubbed "Unsinkable".

The house on Pennsylvania remained Molly's home after the death of J.J. in 1922, and through the great depression in the early 1930's. Her wealth was seriously reduced during this period, and she began taking in boarders to make ends meet. When she died in 1933, the house was sold for \$6,000 and the new owner remodeled it completely into a boarding house. It was narrowly saved from demolition in 1970 when a group of Denver citizens known as Historic Denver purchased it and restored it to its 19th century appearance.

If you find this story of Molly Brown and her two homes interesting, you have an opportunity to visit one of them by attending the June 2014 ICEAA Professional Development & Training Workshop in Denver. Molly's last home on Pennsylvania Street is only about 10 blocks from the Marriott – Denver City Center, home to the Workshop. To see her first home, you'll have to arrange your own trip to Hannibal. ■



Molly Brown Birthplace today.



Pennsylvania Street home, Denver



**Arming America:
How the U.S. Buys Weapons**

By J. Ronald Fox

BOOK REVIEW

Lt Col Peeler is currently a Secretary of Defense Corporate Fellow, working at Amgen, Inc. He is a certified cost estimator/analyst and an Air Force certified acquisition professional in both financial and program management. He is a member of both the American Society of Military Comptrollers and the International Cost Estimating and Analysis Association

Money Changes Hands... A Good Book Changes Minds

Book Review by Lt Col David Peeler

In the previous issue, for the first time in this series of book reviews, I reviewed a sequel. While this series isn't meant to be thematic, except to review books of interest to the cost estimating community, I nonetheless appear to be taking readers on a journey through my current thread of research into defense acquisition. The current selection isn't a sequel per se, however, it is — and was meant to be — a complement to the works of Merton Peck and Frederic Scherer previously reviewed in the two preceding issues of these pages. The two previous selections analyzed the economic structure and performance of (Peck & Scherer, 1962) and scrutinized the economic incentives within (Scherer, 1964) the weapons acquisition process. This month's selection complements the previous two by expanding the topic to management of weapons acquisition.

Like the Peck and Scherer books on the acquisition process, this one also has some age on it. Although turning 40 this year, *Arming America: How the U.S. Buys Weapons* is very enlightening for today's practitioner of the defense acquisition art. Unfortunately, not much has changed. However, the read is very worthwhile; it informs and educates with respect to the value and likely outcome of current recommendations and changes. The number and volume of recycled ideas is surprising. The re-animation of initiatives seems to track nicely with the corporate memory and average tenure of top defense decision-makers — the swing of the pendulum, if you will. The sheer number of ideas tried and then later retried and the persistence of particular management problems can serve to dampen the spirit of the most passionate advocate of the craft. Defense acquisition management is a complex task; this book will advance understanding and improve performance for those that internalize its lessons.

The text isn't divided into formal parts but the 24 chapters do segment into topic areas. After a formal introduction explaining the nature of the study, research goals and methods, Fox provides a detailed portrayal of the roles and goals of the assorted contributors to the weapons acquisition process and its management. The initial couple of chapters outline the acquisition of a major weapon system and the defense marketplace. Both chapters provide critical insights regarding the acquisition process and the macroeconomic effects associated with defense.

The topical segments begin with chapter four, where Fox discusses the role of defense contractors. Subject matter herein addresses contractors versus arsenals, top contractors — circa 1974, financial comparisons between the defense industry and non-defense private industry, and funding (in)stability. A compelling argument is made regarding profit vis-à-vis risk assumed, based on the varied temporal nature of payment for defense work versus private market risk/reward timeframes and investments.

Moving to the government side of acquisitions management, chapters five through seven deal with the Pentagon, the five-year defense plan, and Congressional approaches to the acquisition process. With respect to the Pentagon, Fox highlights the political nature of acquisition decisions and the inability to implement business

decision-rules. Significant mention is made of information filtering, program manager accountability, the over-complex nature of systems, the treatment of cost as a secondary consideration, and to — what is now referred to as — low-information leadership. Additionally, considerable discussion is given to David Packard's tenure as Deputy Secretary of Defense and his view that billions are wasted due to bad management within DoD and the defense industry.

Cost estimating is the subject of chapter eight; program management in chapter nine; and ten addresses the role of a government representative at contractor plants. The primary focus of these chapters is cost estimating, personnel and program management, and the relationship between program managers, plant representatives, and defense contractors. Much of the personnel and skill mix discussion is the same as we continue to have today.


In another "past is prologue" discussion, chapter eleven walks the reader through contract types. The most interesting part of this examination is the historical swing in preferred contract approaches – cost plus vs fixed price. The swing from decade to decade is prominent, and roughly persists today. Of particular interest is a descriptive look at the F-111, AH-56A, and C-5A development and procurement efforts in light of their contracting approaches. Also interesting are features surrounding cost shares, lack of government expertise, and the exercise of default options.

Chapters twelve through nineteen deal with government procurement, source selection, marketing, profits, and indirect costs; leading up to negotiations and contracts, which are incomplete and thus require multitudes of changes. Discussion here lays out the process before World War II and brings you to the 1970s.

In chapters twenty through twenty-three, the role of a program control function is scrutinized. Specific attention is paid to government management techniques, performance measurement of contractors, personnel and contractor

incentives. Much relevant information is provided and the reader can draw direct analogies with respect to both people and programs. An interesting discussion of the C-5A contract and F-111 design and concurrency approaches easily inform the KC-46A and the F-35 acquisitions; and they serve to valid Edmund Burke's admonition, "Those who don't know history are destined to repeat it."

Fox concludes in chapter twenty-four with recommendations. Many of these remain germane, and are just as elusive today as forty years ago. Rather than list his recommendations, I encourage you to read at least the conclusion, if not the entire book. Enriched, you will be! Fox provides a tour de force through the issues that embroil management of defense acquisition. ■



Want to Be Published???


ICEAA World is always in need of articles and studies of a professional/technical nature. If you have a project or research effort that may not be suitable for the *Journal of Cost Analysis & Parametrics*, send to us!

Recent published articles have included:

- "Getting (and Sharing) COST Facts: Factors, Analogies, CERs & Tools/Studies" by Daniel Harper and Ruth Dorr. – Summer 2013 Issue
- "Integrated Cost-Schedule Risk Analysis" by David I. Hulett and Michael Nobisch – Spring and Summer 2013 Issues
- "Analysis of Joint Strike Fighter Cost Growth" by Brad Ellis – Fall 2013 Issue

Come on – see your name in print and your work recognized by your peers – the Spring 2014 Issue needs your work. Deadline for submission will be the end of March 2014.

Send your articles to:
jwagner@iceaaonline.org





International Cost Estimating & Analysis Association

2014 Professional Development & Training Workshop

JUNE 10 - 13  Denver, CO

ICEAA

by Rich Harwin and Andrew Drennon, 2014 Workshop Co-Chairs

The 2014 ICEAA Professional Development & Training Workshop, taking place June 10-13 in Denver, Colorado, will be an opportunity to stay up-to-date on the most recent developments in the field, exchange best practices with your colleagues, and take lessons learned from industry experts back to your employer or customer.

This year we expect to offer 81 professional papers and 43 training sessions that can be used to keep your current skills sharp or to prepare to take the CCEA® or PCEA® exams. The training sessions are designed for all skill levels and organized into 4 tracks: Cost Estimating - Basics, Cost Estimating - Advanced, Parametric Training, and Integration, featuring enhanced content from the Cost Estimating Body of Knowledge (CEBoK®) and the Parametric Estimating Handbook. Those preparing to take the CCEA® exam after the Workshop on June 14 can attend daily two-hour study sessions and work through sample problems with others.

The professional papers are written, reviewed by your fellow ICEAA members, then presented at the Workshop in a format that allows you to meet with and discuss the most relevant topics in the cost community with the authors themselves. The papers will be organized into tracks that will allow you to quickly identify the sessions most relevant to you and your work. Areas are expected to include Information Technology, Methods and Models, Parametrics, Risk, Life Cycle Cost, EVM, and Management.



Michael Gass

We are pleased to announce two of the keynote speakers for the 2014 Professional Development & Training Workshop: **Michael Gass**, President of United Launch Alliance (ULA), and **Merri Sanchez**, Senior Director, Space Explorations Systems Sierra Nevada Corporation. These leaders in the commercial space transport industry will offer

fascinating insights into the costs and opportunities of space travel, and how the future of space travel is reflected across the entire cost profession.

The conference will open on Tuesday, June 10 with training sessions and exhibitor showcase sessions, where vendors will be discussing and demonstrating new tools. The official kickoff of the 2014 Workshop will be during Tuesday evening's attendee reception in the exhibit hall where attendees can mingle and network.

For Wednesday night, taking advantage of our location in the heart of Denver, with close proximity to the 16th Street Pedestrian Mall and the LoDo District, we have coordinated a group discount for the June 11 Colorado Rockies/Atlanta Braves game at Coors Field. Discounted baseball tickets can be purchased on the conference registration page at www.iceaaonline.org/denver14 or on the registration form on page 27 of this issue. We're all looking forward to seeing you in Denver! ■



Merri Sanchez

SO HOW ABOUT THOSE ROCKIES??

By Tres Bagger, Sports Analyst

In the 2013 season, the National League Colorado Rockies (74 wins - 88 losses) showed some strong hitting from the likes of **Carlos Gonzalez**, **Troy Tulowitzki**, **Michael Cuddyer**, and **Wilin Rosario**. With these guys coming back in 2014, the Rockies aren't going to have much trouble scoring runs. Their likely problem, again, will be keeping the other guys from scoring runs. It's the pitching they need to bring up to snuff, and this is where it's hard to predict. They have a few minor league up and comers, such as **Jonathan Gray** and **Eddie Butler**, who might be called up, but the guys there now are not very deep when you need five to go as starters. For a team that finished four places behind the



Atlanta Braves (96 wins - 66 losses) last year, each new meeting of the Rockies and the Braves in 2014 will bring the fear of another embarrassment coupled with the delightful desire to punish the Atlanta boys with a surprise victory. Unfortunately for Denver, the season match-up between these two opens in May with three games in Atlanta. Any Denver victory there will be sweet, but assuming things go badly, the next meeting – in June at Denver, will put the Braves in the clutches of the Coors Field crowd, which on June 11th, will include a sizable group of rabid fans from the ICEAA 2014 Professional Development & Training Workshop. They could spell the difference. ■

ICEAA WORKSHOP PAPER LISTING

TRACK	AUTHOR	TITLE
Cost Management	Peter Braxton	The Other RCA: Restaurant Cost Analysis
Cost Management	Eugene Cullen III	Intelligence Mission Data Cost Methodology Guidebook
Cost Management	David Eck	Supplier Cost/Price Analyses – Best Practices for evaluating supplier proposals and quotes
Cost Management	Steve Green	A Balanced Approach to Meeting Fiscal Constraints
Cost Management	David Peeler	Gödel's Impact on Hilbert's Problems Or Cost Consistency and Completeness as an Impossible Exercise
Cost Management	James Roberts	Innovative Business Agreements and Related Cost & Pricing Methods at NASA in Support of New Commercial Programs
Cost Management	Linda Williams	Achieving Affordable Programs NRO Cost Analysis Improvement Group (CAIG) Support of Cost Driver Identification

As of April 1, 2014

TRACK	AUTHOR	TITLE
Earned Value Management	Glen Alleman	Big Data Meets Earned Value Management
Earned Value Management	Erin Barkel	The Canadian Department of Defence and Design to Cost: Misunderstood and Misapplied
Earned Value Management	Thomas Coonce	A Cure For Unanticipated Cost and Schedule Growth
Earned Value Management	Allen Gaudelli	Unleashing the Power of MS Excel as an EVM Analysis Tool
Earned Value Management	Eric Lofgren	Trust but Verify – An Improved Estimating Technique Using the Integrated Master Schedule (IMS)
Earned Value Management	Steve Sheamer	Don't Let EVM Data Mislead You
Information Technology	Shelley Dickson	Software Maintenance: Recommendations for Estimating and Data Collection
Information Technology	Daniel Harper	The Federal IT Dashboard: Potential Application for IT Cost & Schedule Analysis
Information Technology	Michael Jeffers	Relating Cost to Performance: The Performance-Based Cost Model
Information Technology	Chuck Knight	Testing Benford's Law with Software Code Counts
Information Technology	Nicholas Lanham	How I Continued to Stop Worrying and Love Software Resource Data Reports
Information Technology	Zachary McGregor-Dorsey	In Pursuit of the One True Software Resource Data Reporting (SRDR) Database
Information Technology	Arlene Minkiewicz	Costs of Migration and Operation in the Cloud
Information Technology	Arlene Minkiewicz	Lessons Learned from the ISBSG Database
Information Technology	Tammy Preuss	Mobile Applications, Functional Analysis and Cost Estimation
Information Technology	Teresa Price	Cloud...The Game Changer
Information Technology	Wilson Rosa	Improved Method for Estimating Software Effort and Schedule
Information Technology	Denton Tarbet	Optimizing Total Cost of Ownership for Best Value IT Solutions: A Case Study using Parametric Models for Estimates of Alternative IT Architectures and Operational Approaches.
Information Technology	Michael Thompson	An Update to the Use of Function Points in Earned Value Management for Software Development
Information Technology	Adri Timp	Early Function Point Analysis and Estimating
Information Technology	Jenny Woolley	Estimating Hardware Storage Costs
Life Cycle Costing	Walt Cooper	Integrating Sustainability into Weapon System Acquisition within the Department of Defense (DoD)

As of April 1, 2014

TRACK	AUTHOR	TITLE
Life Cycle Costing	Caleb Fleming	Ground Vehicle Reliability Analysis Using the Mean Cumulative Function
Life Cycle Costing	Alan Gideon	Cost Overruns and Their Precursors: An Empirical Examination of Major Department of Defense Acquisition Programs
Life Cycle Costing	Nathan Honsowetz	Which Escalation Rate Should I Use?
Life Cycle Costing	Omar Mahmoud	System Utilization: An Indepth Method of Modeling and Measuring Military Manpower Costs
Life Cycle Costing	Justin Woulfe	Cost Analysis & Optimization of Repair Concepts Using Marginal Analysis
Methods & Models	Nicole Barmettler	Military Construction Cost Estimating
Methods & Models	Erik Burgess	Weibull Analysis Method
Methods & Models	Steven Ikeler	Cost and Performance Trades and Cost-Benefits Analysis
Methods & Models	Brent Larson	Meet the Overlapping Coefficient: A Measure for Elevator Speeches
Methods & Models	Myung-Yul Lee	Study of Cost Estimating Methodology of Engineering Development:
Methods & Models	Matthew Leezer	Excel Based Cost Roll Up Method
Methods & Models	Michael Mender	Validation and Improvement of the Rayleigh Curve Method
Methods & Models	Michael Metcalf	Lessons Learned from Estimating Non-Standard Equipment Returning from Overseas Operations
Methods & Models	Jennifer Tarin	Kill Vehicle Work Breakdown Structure
Methods & Models	F. Gurney Thompson III	Rotorcraft Cost Model for the Future Vertical Lift Program
Parametrics	David Bloom	Building a Complex Hardware Cost Model for Antennas
Parametrics	Cassandra Capots	Tactical Vehicle Cons & Reps Cost Estimating Relationship (CER) Tool
Parametrics	Eric Druker	Moving Beyond Technical Parameters in our CERs
Parametrics	Shu-Ping Hu	Using Dummy Variables in CER Development
Parametrics	Herve Joumier	ESA Project Office Cost Model
Parametrics	Doo Hyun Lee	A Study on Life Cycle Cost Estimating Methodology for Korean Maneuver Weapon System
Parametrics	Bruce Parker	UAS Cost Estimating Handbook
Parametrics	William Roetzheim	Hybrid Parametric Estimation for Greater Accuracy
Parametrics	Christian Smart	Bayesian Parametrics: Developing a CER with Limited Data and Even Without Data
Parametrics	Mike Smith	Linking Parametric Estimates to Program Management Artifacts (LPEPM)

As of April 1, 2014

TRACK	AUTHOR	TITLE
Parametrics	David Wang	Improving the Accuracy of Cost Estimating Relationship (CER) for Software Systems
Parametrics	Brianne Wong	Impact of Full Funding on Cost Improvement Rate: A Parametric Assessment
Risk	James Black	Risk Adjusted Inflation Indices
Risk	Blake Boswell	Improved Decision Making with Sensitivity Analysis
Risk	Marina Dombrovskaya	Using Bayesian Belief Networks with Monte Carlo Simulation Modeling
Risk	Mohamed Elghafari	Critique of Cost-Risk Analysis and Frankenstein Spacecraft Designs: A Proposed Solution
Risk	William Evans	Excel Based Schedule Risk and Cost Estimates
Risk	Marc Greenberg	Expert Elicitation of a Maximum Duration Using Risk Scenarios
Risk	Marlena McWilliams	Affordability Engineering for Better Alternative Selection and Risk Reduction
Risk	James Northington	Quantifying the Necessity of Risk Mitigation Strategies
Space	Hamid Habib-Agahi	NASA Instrument Cost Model (NICM)
Space	Jairus Hihn	A Next Generation Software Cost Model
Space	Chad Krause	NASA's Phasing Estimating Relationships
Space	Andy Prince	The NASA Project Cost Estimating Capability
Space	Ryan Timm	Developing Space Vehicle Hardware Nonrecurring Cost Estimating Relationships at the NRO CAAG
Space	Steve Wilson	NASA JCL: Process and Lessons
The Business and Art of Cost Estimating	William Barfield	What Happens to a Cost Estimate When It's Done?
The Business and Art of Cost Estimating	Michael Butterworth	BOE Development: Scope Evaluation and Criteria
The Business and Art of Cost Estimating	Kevin Cincotta	A Comprehensive CES and BCA Approach for Lifelong Learning
The Business and Art of Cost Estimating	Zachary Jasnoff	Long Term Affordability through Knowledge Based Bid & Proposal
The Business and Art of Cost Estimating	Daniel Nussbaum	NPS and AFIT Masters Degree in Cost Estimating and Analysis
The Business and Art of Cost Estimating	Dale Shermon	E-voting Workshops to Identify the Strengths and Weaknesses Within the ICEAA Community

ICEAA WORKSHOP TRAINING SESSIONS

TRACK	TOPICS COVERED	INSTRUCTOR
All Tracks	Training Tracks Overview	Ashlin Smith, Technomics, Inc. Peter Braxton, Technomics, Inc.
Cost Estimating Basics (CEB)	Cost Estimating Overview / Basics	Chris Dalton, MITRE David Bach, Quantech Services, Inc.
Cost Estimating Basics (CEB)	Basic Probability and Statistics	Timothy Anderson, Aerospace
Cost Estimating Basics (CEB)	Cost Estimating Techniques	Sam Toas, TASC Christina Snyder, MCR, Inc.
Cost Estimating Basics (CEB)	Data Collection and Normalization	Jeffrey Locke, Lockheed Martin Company Joseph Sarage, Booz Allen Hamilton
Cost Estimating Basics (CEB)	Basic Cost Risk	Eric Druker, Booz Allen Hamilton Greg Hogan, Air Force Cost Analysis Agency
Cost Estimating Basics (CEB)	Basic Data Analysis Principles	Melissa Winter, PRICE Systems Joe Bauer, PRICE Systems
Cost Estimating Basics (CEB)	Learning Curve Analysis	Remmie Arnold, Technomics, Inc. Michael Gonzales, Lockheed Martin Company
Cost Estimating Basics (CEB)	Inflation and Index Numbers	Neil Chakrabarti, Booz Allen Hamilton Blaze Smallwood, Booz Allen Hamilton
Cost Estimating Basics (CEB)	Basic Economic Analysis	Tucker Moore, TASC Blaze Smallwood, Booz Allen Hamilton
Cost Estimating Basics (CEB)	Basic Software Cost Estimating	Michael Metcalf, Technomics, Inc. Harold Van Heeringen, Sogeti
Cost Estimating Basics (CEB)	Basic EVM	Michael Nosbisch, PT&C Emily Foglia, Technomics, Inc.
Cost Estimating Basics (CEB)	Contract Pricing	Marie Colitti, Naval Surface Warfare Center Dahlgren Division
Cost Estimating Advanced (CEA)	AIS: Cost Estimating Methods and Metrics	Wilson Rosa, DHS
Cost Estimating Advanced (CEA)	Development of Work Breakdown Structures	Neil Albert, MCR, Inc.
Cost Estimating Advanced (CEA)	Monte Carlo Simulation	Eric Druker, Booz Allen Hamilton Blake Boswell, Booz Allen Hamilton
Cost Estimating Advanced (CEA)	Manufacturing Cost Estimating	John Deem, Lockheed Martin Chuck Kurtz, BAE
Cost Estimating Advanced (CEA)	CCEA Exam Overview	Peter Andrejev, Booz Allen Hamilton
Cost Estimating Advanced (CEA)	Cost and Software Data Reports	James Parnham, Technomics, Inc.
Cost Estimating Advanced (CEA)	Probability Distributions for Risk	Peter Braxton, Technomics, Inc.
Cost Estimating Advanced (CEA)	Technical Baselines	Jason Dechoretz, MCR, Inc. Greg Hogan, Air Force Cost Analysis Agency Sam Toas, TASC
Cost Estimating Advanced (CEA)	Advanced Cost Risk	Greg Hogan, Air Force Cost Analysis Agency Linda Nichols, Noblis
Cost Estimating Advanced (CEA)	Advanced Probability and Statistics	Zachary Strider McGregor-Dorsey, Technomics, Inc. Carolyn Smith, QuantiTech

As of April 1, 2014

TRACK	TOPICS COVERED	INSTRUCTOR
Cost Estimating Advanced (CEA)	Advanced Economic Analysis	Joe Hamaker, The Millennium Group Virginia Stouffer, LMI
Cost Estimating Advanced (CEA)	Advanced SW Cost Estimating	Harold Van Heeringen, Sogeti Bob Hunt, Galorath
Parametric Training (PT)	Parametric Analysis Overview	Jason Dechoretz, MCR, Inc. Rick Garcia, MCR, Inc.
Parametric Training (PT)	Cost Estimating Relationships (CERs)	Cassie Capots, Technomics, Inc. Kyle Thomas, TASC
Parametric Training (PT)	Linear Regression	Peter Braxton, Technomics, Inc. Stacy Dean, Boeing Company
Parametric Training (PT)	Other Uses of Parametrics	David Eck, Dixon Hughes Goodman
Parametric Training (PT)	Multivariate Regression	Kevin Cincotta, ICF International David Harris, Booz Allen Hamilton
Parametric Training (PT)	Multiplicative-Error Regression	Hervé Joumier, ESA
Parametric Training (PT)	CER Risk and S-Curves	Christian Smart, Missile Defense Agency Marc Greenberg, NASA
Parametric Training (PT)	Complex Hardware Models	Greg Kiviat, Sikorsky David Bloom, Raytheon
Parametric Training (PT)	Government Compliance	Joyce Friedland, Defense Contract Audit Agency
Integration (INT)	Basic Schedule Analysis	Justin Hornback, Reed Integration, Inc. Jim Peoples, Booz Allen Hamilton
Integration (INT)	Advanced Schedule Analysis	David Hulett, Hulett and Associates
Integration (INT)	Cost Management	Tom Dauber, Booz Allen Hamilton John Deem, Lockheed Martin Company
Integration (INT)	Cost Estimating in PMBoK vs. CEBoK	Kevin Cincotta, ICF International Ashlin Smith, Technomics, Inc.
Integration (INT)	Target Costing Implementation	John Deem, Lockheed Martin Company Tom Dauber, Booz Allen Hamilton
Integration (INT)	Source Selection	Marie Colitti, Naval Surface Warfare Center Dahlgren Division Christina Brims, Air Force Cost Analysis Agency
Integration (INT)	Integrated Baseline Review (IBR)	Tim Fritz, AzTech International, LLC Luis Contreras, AzTech International, LLC
Integration (INT)	Schedule Risk Analysis	David Hulett, Hulett and Associates
Integration (INT)	Integrated Cost/Schedule Risk Analysis	Eric Druker, Booz Allen Hamilton David Hulett, Hulett and Associates
Integration (INT)	Contracts Risk	Peter Braxton, Technomics, Inc. James Linick, BCF Solutions, Inc.
Integration (INT)	Advanced EVM	Luis Contreras, AzTech International, LLC Tim Fritz, AzTech International, LLC



REGISTRATION FORM

ICEAA

REGISTRATION FEE

\$895 – ICEAA Member
\$765 – Govt. ICEAA Member
\$835 – Govt. Non-Member
\$975 – All other attendees

GROUP DISCOUNTS

For 5+ attendees from the same organization, the registration fee is \$825 per attendee. Contact 703-938-5090 to add your company as a group.

WHAT'S INCLUDED?

Registration includes breakfasts, morning and afternoon coffee breaks, lunches, Tuesday's reception, networking events, and access to all sessions. All attendees will have access to the conference proceedings.

GUEST MEAL PASS

Guest meal pass includes breakfasts, breaks, Tuesday's reception. \$200 per person.

WED NIGHT BASEBALL

Join your fellow attendees for a night of baseball under the stars as Colorado Rockies face off against the Atlanta Braves, Wednesday night, June 11 at 6:40pm. Go to iceaaonline.org/denver14 for ICEAA group pricing and stadium map.

HOTEL

The conference hotel is the Denver Marriott City Center. The ICEAA conference room rate is \$189. To reserve a hotel room go to: iceaaonline.org/denver14

CANCELLATION

Before 05/27 = Full refund.
After 05/27 = NO refund.
Substitutions are accepted at any time. To cancel call: 703.938.5090

PAYMENT BY CHECK

Mail completed registration form to:
8221 Old Courthouse Rd.
Suite 106
Vienna, VA 22182
FAX: 703.938.5091
Email: iceaa@iceaaonline.org

PERSONAL INFORMATION

Last _____ First _____ Middle _____

First name as it should appear on your badge: _____

Address _____

City _____ State _____ Zip _____ Country _____

Email _____ Phone _____

I am an active member of ICEAA: ☐ Yes ☐ NoFirst Time Attendee: ☐ Yes. ☐ No, I've attended an ICEAA, SCEA or ISPA conference.Are you CCEA® or PECA® certified? ☐ CCEA® ☐ PECA®**COMPANY INFORMATION**

Company _____

My institution is a branch of: ☐ US Military* ☐ US Government*☐ Other Government/Military (please specify country) _____

* To receive the government/military rate, your email address must include .gov or .mil

Job Title _____

Primary Job Function:

☐ Cost Estimating/Analysis☐ Finance/Accounting☐ Procurement/Contracting☐ Engineering/Manufacturing☐ Other (specify) _____☐ Program/Project Management☐ Earned Value Management☐ Information Management**PAYMENT**

Select Fee:

☐ \$895 – ICEAA Member☐ \$765 – Government/Military ICEAA Member☐ \$975 – ICEAA Non-Member☐ \$835 – Government/Military ICEAA Non-Member☐ \$825 – Company Group

Add Ons: \$200 – Guest Meal Pass

☐ \$26 – Baseball (Grey)☐ \$40 – Baseball (Green)☐ \$55 – Baseball (Light Green)

Visit iceaaonline.org/denver14 for more baseball game information and the stadium map. Final ICEAA section numbers TBD.

TOTAL AMOUNT DUE: _____

PAYMENT METHOD☐ CHECK (payable to ICEAA)CREDIT CARD: ☐ AMEX ☐ VISA ☐ MASTERCARD

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

CARD NUMBER

EXP. DATE _____

SIGNATURE _____ Date ____/____/____

Air Force Institute of Technology (AFIT) Research

Research Outreach

As part of the AFIT Cost Analysis degree curriculum, students immerse themselves in individual research topics of interest to the cost community (i.e. a thesis). In what has now become an annual event, the Greater Dayton ICEAA Chapter invited graduating students to present their research. This year's presentation occurred on Feb 27th, with **Lt Jake Petter** and **Capt Joshua Johnson** getting the opportunity to share their findings with 30 + cost professionals from the Dayton area. The feedback from these working professionals was immensely valuable in furthering their research. Thanks to **Chris Hensley** (Greater Dayton Chapter President) for making this happen.

ICEAA Thesis Award

The annual AFIT awards ceremony was held on March 27th. **Lt Jake Petter** was awarded the ICEAA 2013 "Most Outstanding Cost Thesis" for his research on cost and schedule Stability Properties. The ICEAA award is presented to the author of the thesis which best qualifies both as an outstanding research effort and as a significant contribution to the development and/or application of cost analysis or cost estimating. Special thanks go to **Dave Christensen, Wayne Abba, and Kym Henderson**. Their reviews, comments, and critiques greatly enhanced this research effort. ■



ICEAA Dayton Chapter President Chris Hensley presents the ICEAA "Most Outstanding Cost Thesis" award to Lt. Petter

Society for Cost Analysis and Forecasting (SCAF) Costing News from the UK

By Dale Shermon, Chairman

I thought I would start this article with a review of 2013. This was another wonderful year for the Society for Cost Analysis and Forecasting (SCAF) with four full workshops, an annual conference and the summer reception being organised by the meeting committee. We started with a workshop at the Royal Institute of Naval Architects (RINA) in London in February, when we had seven speakers considering the topic of economics and forecasting. This was followed by our SCAF Challenge in April on the topic of investment appraisals (IA) regarding a house move or renovation which inspired six novice teams to present a solution to an expert panel. In June the Society went to Preston and considered the theme of quantitative cost and risk analysis. The event was well attended and we will be traveling north to Preston again soon. In September we had our annual conference and AGM in Bath, when seven speakers gave us their opinion on why cost matters. Our keynote speaker was **Mr. Chris Boardman** (Managing Director, MAI, BAE Systems) who set the event running with some stimulating thoughts. Finally, in November we had our Vender Day which provided an opportunity for tool and service providers to enlighten us about their products.

Copies of all presentations given throughout the year are available through our online library; it's a great source of knowledge and a valuable research resource. I would like to thank the committee (Arthur Griffiths, Dave Headley, Neil Morrill, Paul Moseley, Dr Paul Wood, Dr Paul Baguley, Karen Sparks and Andy Nicholls) for all their help and support over the past year. A Society such as SCAF requires many people to make the work easier

Looking ahead to 2014 your committee has organized another set of great events including the return of the SCAF Challenge in April, a workshop in Preston and a joint Operations Research Society workshop in November. I know that these will all be great events with stimulating discussion and the opportunity to disseminate knowledge. In September we will be holding our Annual Conference, and for the first time we will be holding a summer reception

and awards dinner in the Marriott hotel in Bristol in July. Details of these and other events are now available on the SCAF website (www.scaf.org.uk).

- **June 3 SCAF Workshop. Theme: “Value Engineering and Value Analysis in the context of Austerity”, The Conference Centre, Ribby Hall Village, Wrea Green, Preston, Lancashire.** *Value Engineering is defined as a systematic method to improve the ‘value’ of goods or products and services by using an examination of function. Value can therefore be increased by either improving the function or reducing the cost. It is sometimes taught within the project management or industrial engineering body of knowledge as a technique which identifies and removes unnecessary expenditure to increase the value for the manufacturer and/or their customers. However, can we now afford to undertake such*
SCAF Costing News, continued on page 30

SCAF Workshop

Theme: “Value Engineering and Value Analysis in the context of Austerity”

Tuesday June 3, 2014
The Conference Centre, Ribby Hall
Village, Wrea Green, Preston, UK

**For information, please
email: ndmorrill@dstl.gov.uk or
call 0306 7703450**

Region 5 News

By Mike Doherty

CEAA Region 5 members look forward to seeing fellow ICEAA members at this year's conference in Denver. Region 5 has been busy over the last few months and I would first like to congratulate the new officers of the Rocky Mountain Chapter who were recently elected:

- **President: John Fasciani**
- **Vice President: Mitch Lasky**
- **Treasurer: Deby Lenzotti**
- **Secretary: Bruce Broussely**

Special thanks to Dennis H. Dal Pra for his work to organize and get the elections completed this spring. Dennis is working with the new officers to get chapter activities started soon.

The Pikes Peak chapter continues their luncheon activities while the Northwest Chapter is planning several activities including their bi-yearly certification class. I would encourage you to read about both the Pikes Peak and the Northwest Chapters and look forward to seeing you at this year's conference. ■

SCAF Costing News, continued from page 29

studies or have we reached a point where the benefits realization no longer matches the effort necessary to achieve it?

- **July 1-2 Joint International Meeting of the Space Systems Cost Analysis Group (SSCAG), European Aerospace Cost Engineering Working Group (EACE) and the Society for Cost Analysis and Forecasting (SCAF). Centre National d'Etudes Spatiales (CNES), Toulouse, France.** *A brief on the topics and potential areas for roundtable/panel discussion is available on the Website (www.scaf.org.uk). Abstracts should be forwarded to all 3 organisations using the following email addresses: dpine@cox.net, arthurgriffiths@das-ltd.co.uk, herve.joumier@esa.int and dave.lewis@costeng-solutions.com. This will be our seventh joint meeting and with your enthusiastic participation we are sure that it will be as successful as the previous six.*
- **July 8 SCAF Summer Reception and Awards Dinner. Marriott City Centre Hotel, Bristol.** *This year we will be holding an evening banquet event at the Marriott City Centre Hotel in Bristol*

to celebrate our 30th anniversary. All members and their spouses/partners are invited to attend and accommodation is available at discount prices

- **September 16 SCAF Annual Conference “Benefits of Cost Engineering and Accurate Cost Forecasting”. The BAWA Centre, Filton, Bristol.** *The Annual Conference attracts many delegates and provides the opportunity to hear presentations from government and industry expert speakers on a range of cost related topics*
- **November 18 Joint Workshop. Theme: Affordability and Value for Money, The BAWA Centre, Filton, Bristol.** *We are delighted to announce our joint meeting with the Operational Research Society, Defence SIG. Several of our members have attended previous ISMOR conferences and there is no doubt that there is a great deal of synergy between the Operational Research and Costing community. We plan to change the format of the day slightly by having three speakers from both organizations covering two principal themes (one for the morning and one for the afternoon) with specific periods for open Question and Answer discussions.* ■

United Kingdom Report

By Andy Nicholls, UK Regional Director

The first quarter of 2014 in the UK has been remarkable for being the warmest and wettest period since records began! Many in this area have suffered severe flooding of their homes and disruption to their lives, and I offer the photo below as evidence from my drive to work.

We are very pleased to announce the significant progress that has occurred between ICEAA and two other of the UK's costing societies – the Society for Cost Analysis and Forecasting (SCAF) and the Association of Cost Engineers (ACostE). Firstly, after discussions among the leadership of all organizations, and ICEAA Board consideration of the issue, a Memorandum of Understanding (MOU) between the Society for Cost Analysis and Forecasting (SCAF) and ICEAA was signed on February 18, 2014 during a SCAF meeting at the Royal Institute of Naval Architects, London. I signed on behalf of Brian Glauser, and Dale Shermon signed on behalf of SCAF. This parallels the MoU signed a couple of years ago between the Dutch Association of Cost Engineers (DACE) and the old ISPA.

In separate discussions, the ACostE leadership have offered ICEAA the opportunity to have a Paper Track at their Annual 2 day Conference in the late Fall of 2014. This will take a little organizing and will require something like nine or ten papers to fully cover the time. I am happy to be part of that Track and may be looking for volunteers to assist me during the Conference period.

I also have information of discussions about possible certification training within UK Industry, and this is an opportunity which I hope can be developed further, resulting in much needed training to reach certification level.

Membership has grown a little with new members, and more to follow. I would like to take the opportunity for the first time to welcome Jaguar Land Rover staff



Andy Nicholls (l.) and Dale Shermon (r.) after signing of the Memorandum of Understanding between ICEAA and SCAF



Driving to work in a soggy UK

to ICEAA. In a wider context I notice that there are several recruitments underway for Cost Engineers, Cost Forecasters and Cost Analysts in the UK and demand for this type of skill set has been growing over the last two years. That can only be good news for cost specialists in a profession where the gene pool is relatively small. ■

ICEAA Region 7 News (Southern California and San Diego Chapters)

*By Kurt Brunner, SoCal Chapter President and Region 7 Director, and
Quentin Redman, SoCal Chapter Vice-President*

The ICEAA Southern California Chapter had a very well received Winter ICEAA Southern California workshop that was sponsored by the Northrop Grumman Aerospace Sector (NGAS) on December 18, 2013 in Redondo Beach, California. Over 80 people attended from across the United States in person. Among the enthralling speakers were:

- **Tom Harwick**; NGAS Host; “Welcome to Northrop Grumman”
- **Christopher Cool**; VP for NGAS Affordability; “Northrop Grumman’s Approach to Affordability”
- **Paul Killingsworth**; Independent Consultant; “Pseudo Mathematics: A Critical Reconsideration of Parametric Cost Estimating in Defense Acquisition”
- **Shu-Ping Hu**; Chief Statistician, Tecolote Research Inc; “Fit, Rather Than Assume, a CER Error Distribution” [Best Overall Paper Winner at 2013 Conference]
- **James Fieber**; Systems Engineer, Lockheed-Martin Company; “Systems Engineering Affordability”
- **Kent Joris**; Chief Technology Officer, MEE, Inc; “Training: CEBok Module 13 - Economic Analysis”
- **Richard Brodkorb**; President, REB Management Company; “How EVM and CE&A Do and Do Not Work Together”.



Kurt Brunner



Quentin Redman

Additionally, the SoCal team held an exciting and thought provoking Spring workshop at Galorath on March 19, 2014 in El Segundo in California. Some of the dynamic and exciting speakers at this event included:

- **Brian Glauser**, VP Business Development, Galorath Inc./ICEAA President; “Welcome to Galorath and The State of ICEAA”
- Keynote Speaker: **Dan Galorath**, President, Galorath Inc; “Current Cost Model Developments and Issues”
- **Dr. Randall Jensen**, Software Acquisition Consultant; “The Effectiveness Formula: A Quantitative Measure of Organizational Capability”
- **Kurt Brunner**, Parametric Cost Estimator, Leidos; “Training: CEBok Module-Manufacturing Cost Estimating”
- **Bob Hunt**, Vice President, Services, Galorath Inc.; “The Cost of Software Testing and the ROI”
- **Anthony Shao & Elizabeth Koltz, PhD**, Candidates at USC (University of Southern California) and
- **James Wertz**, Technical Advisor; “Performance-Based Cost Modeling - Quantifying the Cost Reduction Potential of Small Satellites”

Usually we have 80 to 100 attendees from across the nation (and also from overseas) that participate in our no cost, daylong events. These forums have consistently drawn a huge cross section of the cost analysis and parametric community while presenting the latest concepts and techniques, and have produced animated and enthusiastic dialogues with great interest in the topics discussed.

The Fall 2014 workshop promises to continue this tradition! It’s scheduled for September 17, 2014 at Boeing in Huntington Beach. This will be a workshop

Regional Reports



Workshop Attendees – 18 December 2013 – Northrop Grumman, Redondo Beach, CA

organized jointly by the ICEAA Southern California and San Diego Chapters. More details of what promises to be an exciting event will follow, so start your planning now!

At the conclusion of our ICEAA Southern California workshops, and as an incentive to stay until the last presentation is complete, a membership drawing is held. Our Membership Chair, Steve Sterk, is always on hand with a selection of great gifts for the drawing – “winner must be present”. If you have questions about your membership status or would like information about membership in general, contact Steve Sterk at steve.a.sterk@nasa.gov or (661) 276-2377, or the ICEAA office at iceaa@iceaaonline.org or (703) 938-5090.

SoCal workshop agendas are available to all ICEAA members and to previous workshop attendees. The agenda containing registration information, a location map, and driving instructions is also posted on the ICEAA Southern California web site. As always, our workshops are free. We also have frequent lunchtime seminars at The Aerospace Corporation in El Segundo, so stay tuned.

If you would like a copy of these or previous workshop briefings, or you have any questions about the presentations please feel free to contact the ICEAA Southern California Board of Directors or the ICEAA office (iceaa@iceaaonline.org).

Please consider hosting a workshop or presenting at a workshop! It will be a rewarding experience. If you are interested in hosting a workshop or making a presentation at a workshop, please contact Kurt Brunner at kurt.r.brunner@saic.com or Quentin Redman at



Workshop Attendees — 19 March 2014 — Galorath, El Segundo, CA

quentin.redman@pricesystems.com.

Our workshop focus is always to “advance, encourage, promote and enhance the profession of cost estimating and analysis through the use of parametrics and other data-driven techniques for use by the membership as well as the general public”. The Southern California Chapter of ICEAA will continue to offer workshops that include a notable and diverse group of extraordinary speakers, training sessions, cutting edge topics, and knowledgeable attendees that are fully entertained and engaged.

We would like to thank the board for their tireless teamwork in making these workshops a great success, as well as all the members and participants for their support over the years. We look forward to seeing you at the next workshop!

The ICEAA Southern California Chapter Board of Directors consists of:

- President: **Kurt Brunner**
- Vice-President: **Quentin Redman**
- Secretary: **Evelyn Davalos**
- Treasurer : **Chris Hutchings**

Board Members: Tom Bosmans, David Graham (Program Director), **Doug Howarth, Suzanne Lucas, Carlos Zerpa**

The San Diego Chapter of Region 7 has introduced for 2014 “Estimator/Analyst of the Year” awards which will recognize the outstanding accomplishments of Junior and Senior ICEAA San Diego Chapter members. The San

Region 7 News, continued on page 34

Regional Reports

Region 7 News, continued from page 33

Diego Chapter Board is very excited about these awards and we hope our excitement extends to all of you.

Also, the ICEAA San Diego Chapter has been holding regular webinars and early evening get-togethers. They hosted a workshop the first week of December to encourage those interested in presenting at the 2014 ICEAA Conference in Denver, Colorado; to assist with brainstorming paper topics, facilitate peer reviews for draft abstracts, and answer any questions to help the participants prepare for the upcoming conference. The workshop featured past presenters, trainers, and white paper reviewers.

The ICEAA San Diego Chapter Board of Directors consists of:

- President: **Omar Mahmoud**
- Vice President :**Walt Bednarski**
- Treasurer: **Scott Hardy**
- Secretary: **Sheona Whitwer**
- Director of Membership: **Sam Toas**



Remembering Scott Tobin

On February 28, 2014, **Mr. Scott Tobin** lost his last battle with cancer. Scott was a long-time ISPA Board member and SCEA member, and friend to many in the profession, whose career spanned over 30 years as a cost estimator in the Los Angeles area. Over those many years, Scott only worked for three companies. He began his career at Hughes Aircraft in El Segundo, California in 1980. Twelve years later he moved to TRW and in 1999, to Northrop Grumman in Redondo Beach, where he specialized in developing parametric estimating models on a wide variety of military and civilian space systems.

Scott is survived by his wife Becky. He was born in Dallas, Texas, raised in Hawaii, and went to Santa Monica College. Scott loved sailing, owning two boats, and loved to play the guitar. He and Becky had no children.



U.S. Non-Aligned Region – At Large Members

By Greg Kiviat

One of the largest contingents within ICEAA are those who have not aligned their membership with a region or local chapter. There are several reasons for this including: not being located near an established chapter; limited time to support or attend regional meetings; those who prefer to simply receive news and technical information about cost estimating; and those who gain from attending the annual conference.

As your elected director for this large group I am interested in what priorities non-aligned members have and what more ICEAA may provide to remain a valuable resource to this group. I, too, am non-aligned as I am at least a 2½ hour drive from the nearest chapter (kind of hard to believe being in the densely populated northeast) – however, I am a longtime member of ISPA and now ICEAA. From a professional and career perspective I have found great

value in receiving the publications, attending and presenting at annual conferences, and participating in the board of directors' activity. There have been many benefits for my work organization and for personal career goals.

A key membership benefit is the ability to share learnings, methods and tools with others in my organization. I frequently share published papers, insights and training with others that do not have access to this information. Our management is supportive of this activity and despite tight budgets allows a few of our team to attend the annual conference and participate as presenters and other supporting roles.

To our non-aligned members - please feel free to contact me directly (gkiviat@sikorsky.com) and let me know why you feel that membership is important and what, if anything, ICEAA can do better to support your professional and career goals.

Greater Alabama Chapter News

By **Stephanie N. Lewis**, Greater Alabama Chapter President

2014 ICEAA/MDA/NASA Workshop

On January 15th, the Greater Alabama Chapter of ICEAA, along with the Missile Defense Agency and NASA, hosted an all-day cost estimating workshop in Huntsville, Alabama. Over 80 professionals were in attendance. We had six excellent speakers who presented a variety of cost-related topics. ■



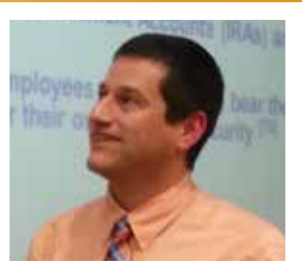
Mr. Andy Prince, NASA
NASA Project Cost Estimating
Capability



Dr. Wes Colley, University of
Alabama in Huntsville
Rethinking Affordability and
Systems Engineering at NASA



Dr. Christian Smart, Director of
Cost Estimating & Analysis, MDA
Parametrics with Limited Data



Mr. David Cowart, MDA/DOC
Pension Protection Act



Mr. Dan Strickland, MDA/DOC
Software Estimation Flowchart



Mr. Eric Hawkes, MDA/DOC
Leadership and Management in
the Cost Estimating Profession

Baltimore Chapter News

By **Bryan Kilmer and Asha Dacheppalli**

With the newly elected Board of Directors, the Baltimore Chapter has plans for a busy schedule in the coming year. We've already kicked off the new board with a social event held in January to reengage with our members as well as plans for several more events in the near future. As part of this re-invigoration effort, we recently issued a survey to gauge membership interests. The Baltimore Board is using these results to effectively plan events to support the needs of our membership.

One of the exciting events coming up is an informational webinar on a cost forum called Cost

FACTS. This is a site where there is dialogue and knowledge sharing amongst the cost community (including academia, government and industry). It's built on a platform that allows search of a repository to help practitioners share reusable, non-restricted cost-estimation tools, metrics, and information. We're hoping to use this as a tool to increase our outreach and involvement with the cost community in the Baltimore area and beyond.

If there are any ICEAA members that would like to get in touch with the Baltimore chapter, please feel free to reach out to **Asha Dacheppalli** at adacheppalli@mitre.org or **Bryan Kilmer** at bryan.kilmer@us.army.mil. ■

Canberra, Australia Chapter News

By Stacey Wehmeier, Chapter President

The Australian (Canberra) chapter has undergone another round of elections and growth, after only 2 and a bit years in operation. Chapter meetings consist of chapter business, networking and globally known experts presenting on the topic of estimating.

The latest round of elections strengthens the chapter executive team to ensure continued growth and capability for the Australian network.

Election results were: President, **Mrs. Stacey Wehmeier**; Vice President, **Ms. Tracey Clavell**; Secretary, **Miss Chloe Kempster**; Treasurer, **Ms. Karen Lloyd**; and Project Officer, **Mr. Angus Stubbing**.

We would like to take this opportunity to thank the past board members for their time and contribution to the chapter. Without their hard work and dedication, we would not be where we are today.

Outgoing board members are: President, **Mr. Andrew Nicholls**; Vice President, **Mrs. Stacey Wehmeier**; Secretary, **Ms. Karen Lloyd**; and Treasurer, **Ms. Tracey Clavell**.

The first Canberra Chapter meeting of the year is held in Canberra in April 2014. An invitation was sent to the membership with details. For more information please contact **Miss Chloe Kempster** via email (chloe.kempster@defence.gov.au). This is a planning meeting for the year to come, with further discussions on the new team and how we function.

ICEAA has also been growing in Adelaide where the inaugural meeting was held on 16th October 2013, with nearly 15 people in attendance across a wide range of markets. This has resulted in more memberships and a call for more networking. The next event will be held on 7th May 2014 at the KPMG offices in the heart of Adelaide. There will be a presentation by **Tony List** (Costplan) —‘Estimating for Civil Engineering Infrastructure’. The meeting includes question/discussion time and networking. For more information please contact **Mrs. Katie Andrews** (kandrews1@kpmg.com.au) by 21st April 2014.

Thanks to the membership for their continued support. As we move forward in 2014, your support and participation will ensure the continued viability and growth of the Chapters. ■

Houston/Clear Lake Chapter News

By Krista Stroh

Over the past few months the Houston/Clear Lake Chapter held several luncheons with some very interesting speakers. **Mr. Glenn C. Lutz** is the Director for Performance Management and Integration (PM&I) Office at the Johnson Space Center (JSC). The PM&I office is responsible for the integration of the JSC’s technical-cost-schedule-risk performance at JSC. Most recently, he served as the Manager for the Extravehicular Activity (EVA) Office since 2007 and as the Deputy Manager since 2003. He previously served as the Deputy Manager of the White Sands Test Facility, Manager of the Constellation EVA Systems Project Office, and Chief of the Spacesuit Systems Branch in

the Engineering Directorate. Mr. Lutz has a Bachelor of Science degree in chemical engineering from Texas A&M University.

Mr. Lutz spoke with us on how cost estimating and analysis, EVM, and schedule analysis fit into the Performance Management and Integration (PMI) Office at Johnson Space Center. He explained how these various tools and procedures of program management benefit the programs and NASA. He also reviewed the employee skills that he looks for as a manager and the trends/needs for employees that he sees for the future. We had a good turnout for our speakers and are looking forward to some new and different fun networking activities, as well as informative speakers, as we move into spring. ■

Central Virginia Chapter News

By Tucker Moore, Chapter President

The Central Virginia Chapter kicked off the New Year in February with a lunchtime brownbag in Dahlgren, Virginia. Our members at Tecolote hosted the presentation by **Brad Ellis** with the “Analysis of Joint Strike Fighter Cost Growth”. Mr. Ellis is the current Treasurer of the Central Virginia Chapter and is the Senior Cost Lead at Cask, LLC. This brownbag session attracted an audience of approximately 20 participants from across Virginia and sparked a follow-on discussion about the possible causes, contributing factors, and potential solutions to issues like cost growth. The Central Virginia Chapter is currently planning additional presentations to

be held on a regular (monthly or bi-monthly basis). We are always looking for intriguing presenters and topics, and we have several openings available in the next several months. Our next C.Va chapter-sponsored event will occur in the Quantico area, likely in the mid-April timeframe. We will also be participating in a joint presentation hosted by the Baltimore Chapter related to “Cost Factors, Analogies, CERs, Tools, and Studies (FACTS)” in April. Additionally, we will have several members that plan to present, teach, or participate as track chairs at the 2014 conference in Denver this summer. We look forward to seeing all of our members at the conference or at our next event in the Quantico area. ■



Brad Ellis presenting at the Tecolote office in Dahlgren, VA

Pikes Peak Chapter News

The ICEAA Pikes Peak Chapter has moved ahead with monthly luncheons arranged by the newly elected Pikes Peak Chapter board members. Two individuals return from the previous two year board: Kim Clark and Gerry Corwin. The remaining board members are new to the board and the chapter membership greatly appreciates their dedication, willingness to contribute, and individual support to the chapter. The new ICEAA Pikes Peak Chapter board members are: President, **R. Kim Clark**; Vice President, **Justin Woulfe**; Secretary, **Elizabeth White**; Treasurer, **Abbey Turnau**; Program Chair, **Jason Rupinski**; and Awards Chair, **Gerry Corwin**.

The chapter began their monthly meetings on Wednesday, February 26th, 2014 when the chapter hosted a luncheon meeting at the Leidos facility in Colorado Springs. Our featured speaker for the event was **Mr. Kurt Brunner** who presented on the topic of “Improvement Curves: Beyond the Basics.” During his presentation, Mr. Brunner spoke about improvement curves as well as the phenomenology behind measuring and testing slopes/curves. He laid out the case that improvement curves are not solely the result of human learning but impacted by many other variables, some discrete and others materially

measurable. The presentation reminded us all that we must all be cognizant of the many signposts involved in our analysis and modeling. An analyst must understand the information that they are working with and understand the constraints of the information and subsequent analysis techniques. The chapter concluded the meeting by making a donation to the Wounded Warrior Project on behalf of Mr. Brunner.

On March 27th, the Pikes Peak Chapter held a luncheon with **Mr. Mike Hickey** as the speaker also hosted at the Leidos facility in Colorado Springs. His topic was titled, “Contractor Estimating Systems – The Foundation for Producing Sound Estimates.” This session provided a brief overview of contractor estimating systems and associated government requirements, from an estimator’s point of view, and insight into current government trends with respect to audits of proposals as well as audits of the overall estimating system. This session enabled those involved in cost development and proposal activities to have a better understanding of the importance of having a solid foundation for estimating activities. The Chapter concluded the meeting by making a donation to the Wounded Warrior Project on behalf of Mr. Hickey. ■

Chapter Updates

Northwest/Washington Chapter News

On December 12th, ICEAA Northwest Chapter hosted its annual year-end event, the ICEAA NW Chapter 2013 Year End Gala. This year's event had a Casino Night theme and also included a very successful Silent Auction. In addition to the Casino Night and the Silent Auction, we also had **Mike Doherty**, who is both BCA SM Finance Director and ICEAA Region 5 Director as a guest speaker.

For the Silent Auction portion of the event, we received

over 25 items up for auction with the items such as 2 tickets to the Seattle Men's Choir, Renton Civic Theater Tickets, Gifts of Wine, Putt Putt Golfing tickets and an Italian-themed food basket.

We were also able to recognize the great contributions of our members at this event from the past year as teachers during the certification course, new CCEA®-certified members, volunteers at Mariners games, as well as those who contributed to the financial goals of the chapter.

Photos from the ICEAA NW Chapter 2013 Year End Gala



Northwest/Washington Chapter News

Education — Recognition

In 2013, the following individuals taught ICEAA CEBoK® classes to help our members achieve

certification. They invested a significant of their personal time in developing others, and we truly appreciate their sacrifices!

Year	Name	Org	Function	Course
2013	Aldrich, Randall J.	BCA	Estimating	Spring/Fall SCEA Certification Preparation Course
2013	Comert, Spencer	BCA	Estimating	Spring/Fall SCEA Certification Preparation Course
2013	Dean, Stacy	BCA	PFA	Spring/Fall SCEA Certification Preparation Course
2013	Kou, Kerry	BCA	PFA	Spring/Fall SCEA Certification Preparation Course
2013	McMains, Tim A.	BCA	Estimating	Spring/Fall SCEA Certification Preparation Course
2013	Torgerson, David K.	BCA	PFA	Spring/Fall SCEA Certification Preparation Course
2013	Du, Darren E.	BCA	PFA	Spring SCEA Certification Preparation Course
2013	Florey, Glenn	BCA	Estimating	Spring SCEA Certification Preparation Course
2013	Klippert, Chricelle	BCA	Estimating	Spring SCEA Certification Preparation Course
2013	Padineant, David	BCA	Estimating	FINEST270 Fall SCEA Certification Preparation Course
2013	Shores, Murray Alan	EO&T	Estimating	FINEST270 Fall SCEA Certification Preparation Course
2013	Perry, Monte J.	BOS	Estimating	FINEST270 Fall SCEA Certification Preparation Course

Recognition — Fundraising

A very big “Thank you!” to those who volunteered to help in any way they can!

- **Darren Du**
- **Frank Rose**
- **James Deignan**
- **Krystal Boring**
- **Kimara Freeman**
- **Jeani Tommervik**
- **Larry Palomino**
- **Katherine Coyle**
- Renton Civic Center
- Seattle Men’s Chorus
- Desilu’s Dog & Cat
- The Landing
- Barbara’s Florist
- Mike & Terry’s Outdoor Fun Park
- Doherty Wineryards
- **Patricia Zedaker**
- **Rod Olin**
- **Paul Breon**
- **Stacy Dean**
- **Shawn Mahoney**
- **Spencer Comert**
- **Mike Doherty**
- **Cheryl Wilson**
- Museum of Flight
- Petett Chiropractic
- Pyramid Alehouse
- West Coast Entertainment
- Starbucks Mukilteo
- Rock Pizza
- UW Bookstore

2014 Opportunities

NW Chapter Officers are excited for the year ahead and already are planning great development opportunities for their members. The spring certification classes are taking place in Everett on Tuesdays and Thursdays from 4 P.M. to 6 P.M. As usual, classes are taught by our certified members. We are also in the process of planning for the society meeting and our fundraising activities. While we are hoping to increase our membership this year, we are also focused on getting our membership more involved with all of our activities. There will be more to come on this in the next few months. ■



Washington Capital Area Chapter News

Annual Meeting

The Washington Capital Area chapter held its annual meeting on February 18th, 2014. A special thanks goes to the sponsors of the event: Kalman, Tecolote Research, TASC, and Technomics. After some socializing and networking time, the chapter board provided an update of the chapter's activities over the past year. **Ms. Karen Richey**, from the Government Accountability Office, was the keynote speaker. She spoke about the GAO's *Schedule Assessment Guide* and a few case studies in which it was used. Many thanks to Ms. Richey for the interesting discussion! To round out the evening, the chapter recognized a few of our outstanding members for their good work during 2013 through our awards program. The award winners were as follows:

- Leadership & Management: **Kevin Schutt** – Cobec Consulting
- Team Achievement: Cost Assessment Productivity Program Team – Technomics, Inc. – Team members: **Paul Hardin, Cassandra Capots, Elizabeth Koza, Mike Metcalf, Jack Smuck, Ashton Bulloch, Colleen Craig, Eric Lofgren,**

Robert Nehring, and Jim York

- Technical Achievement: **Dave Brown** – Technomics, Inc.
- Junior Analyst: **Caleb Fleming** – Kalman & Company, Inc.
- Best Luncheon Presentation: **Greg Bell** – MCR, LLC – “A Cost Assessment: Substitution of Gallium Nitride Substrates for Gallium Arsenide Substrates in Radar T/R Module MMIC Circuits”



Dave Stem presenting Team Achievement Award to Paul Hardin and Jack Smuck



Dave Stem thanking Karen Richey for Keynote Speaker



Dave Stem and Tim Anderson presenting Luncheon Speaker Award to Greg Bell

Washington Capital Area Chapter News

Monthly Presentations

The chapter has continued to offer a monthly speaker series featuring individuals who work in the Washington Metro area.

- March 2013: “MAIS Hardware and Software Cost Development 101”. Presented by Steven Oxman of the Naval Center for Cost Analysis. **Regretfully, Mr. Oxman passed away in August of 2013 after a long battle with cancer.**
- May 2013: “Price to Win (PTW) Analysis Process”. Presented by Bob Hunt of Dulos, Inc.
- July 2013: “Cost FACTS: (Factors, Analogies, CER’s & Tools/Studies) Handshake Group”. Presented by Dan Harper of MITRE.
- September 2013: “Methods to Analyze Services Portfolio Cost Drivers and Efficiencies”. Presented by Valerie Reinert of MITRE.
- November 2013: “A Cost Assessment: Substitution of Gallium Nitride Substrates for Gallium Arsenide Substrates in Radar T/R Module MMIC Circuits”. Presented by Greg Bell of MCR, LLC.
- February 2014: “A Method for Estimating the Cost of Joint Open Air Range (OAR) Test and Evaluation Programs”. Presented by Greg Bell of MCR, LLC.

Chapter Board Elections

The chapter is holding Board elections during the month of March. A new Chapter Board of Directors will be announced soon.

Interested in Getting Involved?

Interested in attending or presenting at our monthly luncheons, attending our monthly Board of Directors Meetings, or need more information on the Chapter? Check out our website at www.washingtoniceaa.com. ■



Dave Stem presenting the Junior Analyst Award to Caleb Fleming



Dave Stem presenting the Tech Achievement Award to Peter Braxton



Attendees at the Annual Meeting

New England Chapter News

Kelly Kane, Chapter Vice President

Greetings from New England!
Brian Fersch, New England Chapter President, renounced the cold up here in early February for the (slightly) warmer temperatures of Georgia. He is attempting a 2,180 mile “thru hike” of the Appalachian Trail! He and his hiking partner hope to complete their journey in Maine in about 6 months; only 25% of those that try this feat succeed. According to his blog, he’s making tremendous progress so far and has about 150 miles under his pack already!

This November we hosted a members only luncheon where we introduced the new Board of Directors, presented the treasury report and results of a chapter survey, and discussed the way ahead for the chapter.

In January, **Mr. Joe Dean**, Air Force Cost Analysis Agency Operating Location Chief at Hanscom Air Force Base, was well received by the membership when he presented “Domain-Driven Software Cost, Schedule, and Phase Distribution Models”. Mr. Dean will be sorely missed when he retires this summer after a very long career as a cost analyst and dedicated member of ICEAA. He has served the organization in many positions over the years, most recently as the Region 1 VP. Have fun, Joe!

Each year the NE chapter provides a forum to its membership for preparing for the certification exam. This year was no exception. **Eric Timinski**, NE Chapter Treasurer, organized the certification training for our membership, with an exam offering in March.

We also conducted a March luncheon and are still collecting nominations for our 2014 New England Chapter Annual awards, which will be presented at our Cost Workshop in the spring.

We are expecting to repeat the last three years’ successes with another cost workshop on 20-May. It is currently in the early planning stages. Speakers so far include: Keynote Speaker **Mr. Enrique Zuniga**, Massachusetts Gaming Commissioner and **Dr. Adam Ross**, MIT research scientist in the Engineering Systems Division. Anyone looking for an excuse to travel to New England in the spring should contact us as we’re looking to fill out the roster of speakers and topics for the workshop.

If any ICEAA members are planning to travel to the Boston area, please contact us about attending or speaking at one of our planned events! ■

Jessica Karnis, ICEAA New England Chapter Secretary, (781)225-9102, jessica.karnis@hanscom.af.mil

Kelly Kane, ICEAA New England Chapter Vice president, (781-225-4191), kelly.kane.ctr@hanscom.af.mil



Brian Fersch, New England Chapter President on the Appalachian Trail

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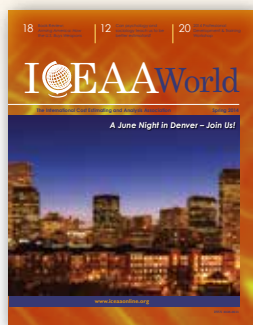
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