

2022: Issue #1

New Feature for the Online Exams

2022 Workshop Preview

ICEAAWorld

The magazine for the International Cost Estimating & Analysis Association



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Professional Development & Training Workshop

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ICEAAWorld

The Magazine for the International Cost Estimating & Analysis Association

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Manager

The International Cost Estimating and Analysis Association is a 501(c)(6) international non-profit organization dedicated to advancing, encouraging, promoting and enhancing the profession of cost estimating and analysis, through the use of parametrics and other data-driven techniques.

ICEAA World is a publication of the International Cost Estimating and Analysis Association. Members of the association receive copies as a benefit of membership. Subscriptions for non-members are available on a yearly basis for \$30.00 per year.

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President's Perspective

Bob Hunt, ICEAA International President

In this inflationary and uncertain time, the cost analyst will find their skill set very important. You are going to be asked to predict an uncertain future. "It's tough to make predictions, especially about the future" is attributed to the baseball-playing philosopher, Yogi Berra. This may be a quote for this time. In this article, I want to talk about three technical trends I see ahead.

- **More interest in data analytics**
- **More emphasis on software engineering, and**
- **Dominance in space will drive federal and commercial investments**

Data analytics is the process of examining data sets to find trends and draw conclusions about the information they contain. Historically, cost analysts have depended

on traditional statistical techniques. Data analytics is done with the aid of specialized systems and software. Data analytics technologies and techniques are widely used in commercial industries to enable organizations to make more-informed business decisions. Expanding our knowledge of and skill with R, Python, artificial intelligence (AI), and machine learning (ML) will be critical to our future.

For some time, our principal focus has been on hardware systems (I know I just offended a host of software engineers and estimators!). Software and software systems are becoming more prevalent. Software engineering is a detailed study of engineering to the design, development, and maintenance of software systems. Software engineering addresses the issues of low-quality/high-cost software projects. The Agile or hybrid-Agile software development model is becoming the standard. As cost analysts, we will be called upon to understand new and emerging sizing techniques like Simple Function Points and other

development techniques, while data analytics will be used to refine and update models. The implications of software maintenance will need to be expanded, and the application of earned value metrics will emerge as a major trend.

A recent article in Defense News, *Space Dominance Requires Taking Technology and Policy Risks*, says: "Future conflicts are also likely to be what we call 'wars of cognition' — a struggle for real-time intelligence and a comprehensive picture of the battlespace." Commercial firms are quickly moving into the launch and control business. Space systems are often software and data intensive systems. Our ability to accurately predict development and launch costs for space systems will become critical, and our ability to complete cost reduction and cost realism analyses will be critical to commercial and Federal entities.

Keep learning, keep moving, and be Agile might be a motto for our future.




PREDICTIVE
ANALYTICS

by Systecon
**opus
suite**

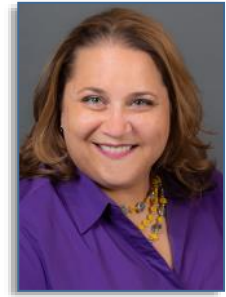
Understand How
Decisions Impact
Cost and Capability

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Business Office Update

Megan Jones, ICEAA Executive Director



It's happening. It's really happening. WE'RE HAVING A WORKSHOP AGAIN. A real-deal, face-to-face, hi-how-are-ya workshop. After all this time, I was starting to fear we'd never be together again, but here we go. Just a few short months, less than a dozen weeks, not even 75 days. I could count the minutes but you get the point.

Sharon Burger, Chelsea Torres, and I are buzzing about your International Business Office getting everything ready for the big return, and we hope the Workshop Preview pages later in the issue will both get you psyched up with us, as well as dust off some of those three-year-old cobwebs that have gathered over your memories of the main event.

According to Google, Pittsburgh is known as the Iron City, Steel City, the Burgh, and for reasons I am curious about but not curious enough to pursue, the Paris of Appalachia. But the nickname that stands out as the best for our situation is clear. After such a long span of time, where better to reconnect (*truss* me, with that, I'm all out of bridge puns) than the City of Bridges!

The 2022 Workshop Committee isn't the only group of ICEAA volunteer leaders that's busily preparing for the spring: the ICEAA Original Equipment Manufacturers'

Cooperative Opportunities Group (you may know them as the OEM COG) had their first webinar of 2022 back in February, and already have planned two more webinars: *Storytelling for Cost Estimators*, with **Karen Richey Mislick** from the Naval Postgraduate School, and then an update from OSD CAPE in June.

Another group hard at work planning for their next event is the ICEAA Canada Chapter, who are equally excited to welcome everyone back for the 2022 ICEAA Canada Workshop, September 27-28 in Ottawa. Save the date now; registration, call for papers, and all the other details are coming soon!

Everything seems to be coming up ICEAA and wouldn'tcha know it, it's ICEAA's 10th birthday! For some of you it may feel like just yesterday when two organizations came together to form this great association, but for some of you we've always been ICEAA. We have come a long way in ten years: improving CEBOK, developing new offerings and benefits for our members, increasing our presence and visibility in the cost community, and sharing and showcasing the groundbreaking research and accomplishments of our world-class members. Happy birthday, ICEAA, and mannnnnny moooooooooooooore!!!



2022 ICEAA  Canada Workshop

Save the Date:

September 27-28, 2022

Westin Ottawa



Professional Development Update

Jennifer Kirchhoffer, CCEA®

Vice President of Professional Development

Welcome to 2022! The new year has brought excitement and energy to improving myself and tackling the projects I have let stall. Beyond required projects like decluttering my garage, I am looking for professional opportunities to improve my skills. As VP of Professional Development for ICEAA, I want to make sure that ICEAA is delivering the desired and necessary resources to aid in that pursuit for all of us.

Professional development refers to the process of identifying goals and learning new skills to help you grow and succeed at work. The purpose of professional development within ICEAA is to help cost estimators and analysts be more successful in their jobs and to further their careers by developing new skills and staying up to date on current and emerging trends. For us, professional development is all about building and enhancing our skills and knowledge of cost estimating, cost analytics, and allied fields. As cost estimating and analysis become increasingly complex and competitive, to achieve our goals, we must embrace professional development more than ever before. While some people view continuing education as a chore they have to get out of the way every year, proactive professionals take advantage of continuing education courses to extend their knowledge and update themselves on advances in their industry.

There are many professional development opportunities within ICEAA, some of which are listed below. The specific opportunities that are right for you will depend on your personal goals and requirements for your job or certification. The easiest way to find out what works best for you is to try different opportunities. It is important to note that as you and your career evolve, different methods of

continuing education may fit better into your life. Trying a new method from time to time may foster growth. Examples of ICEAA professional development opportunities include:

Attend the ICEAA 2022 Professional Development and Training Workshop

Join us in Pittsburgh, May 17th-19th. ICEAA workshops provide a great opportunity to learn directly from experts in our field, network with like-minded professionals, and relax in an atmosphere where your brain can absorb new information. Attending presentations will allow you to gain new skills, but if you really want to strengthen your skills, challenge yourself to be a presenter.

Participate in chapter meetings

(or regional events). ICEAA has 24 chapters and 8 regions. Chapter meetings provide an opportunity to socialize and share best practices with estimators/analysts in your local area while regional events bring together professionals from an extended area. Unlike most conferences, regional events usually provide more active participation for those attending. This hands-on experience can be especially useful in learning new techniques.

Get a Certification – PCEA/CCEA

ICEAA's certifications provide professional credentials that set the standard for the entire cost estimating and analysis community. Demonstrate your mastery of our core skills through testing for a certification, and your commitment to maintaining your skills through the continuing education required to maintain your credentials.

continued

Teach Others

One of the best ways to become an expert on a subject is to teach it, whether it is teaching college classes, teaching workplace classes for clients/customers, or leading formal or informal classes for your subordinates and peers. Teaching pushes you further by forcing you to explain not only the processes and best practices, but also explain why they came into practice. If teaching sounds like a daunting prospect, consider starting to serve as someone's mentor. Nothing will up your game more than skill testing questions from an enthusiastic novice.

Take advantage of professional journals and magazines

Read the *Journal of Cost Analysis and Parametrics* and *ICEAA World*. Better yet, be a contributor to these publications. Submit an article or volunteer to be an editor. Writing practices observation, invites new ideas, and can strengthen your confidence on a topic.

Get involved with a cost estimating related working group, committee, event, or publication

Opportunities include conference committees, awards committees, paper judges, and seminar/webinar event coordinators. There are places across our community where your help is a resource needed for both small and large time commitments. Volunteering in these areas get you out of the office and ensures that these opportunities remain available when you need them.

Read a book

There are a lot of books out there, and we have some great authors right here in ICEAA. If you're unsure of what to read, check out the Book Reviews in many of our ICEAA World editions.

Watch a webinar, listen to a podcast, or attend a distance learning event

If your spare time is limited but you still want to engage, our distance learning offerings might be

perfect for you. You set the schedule and pick the times when you want to engage. In the Webinars and Groups tab of iceaaonline.com, you will find numerous webinars and recordings available to aid your growth.

No one is born brilliant at their job – it takes hard work, time investment, and effort. Successful people take advantage of professional development opportunities over the entirety of their career to reinvest in themselves. Don't get left behind: take advantage of your membership in ICEAA. Please reach out to me if you have ideas on how ICEAA can improve our professional development opportunities.



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Money Changes Hands... ...A Good Book Changes Minds

Book review by David Peeler

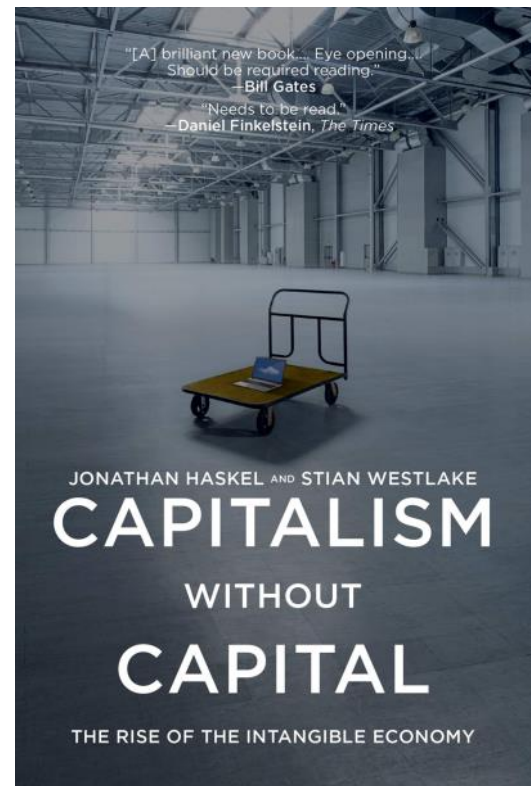
Book Review

Over the past four installments of this book review series, we have looked at titles of a strategic, operational, and tactical nature, exploring topics in statistical, cost and schedule analysis. The focus of this edition's book review is more philosophical; albeit the thinking associated with capturing and reporting costs and value. This title elucidates the role of intangible costs, their understanding and possible ways to measure them. Such information is valuable for estimators and analysts as the role they play is increasingly influenced by indiscrete and intangible investment.

Split into two parts of eleven chapters total, **Capitalism Without Capital** is an informative read, providing key critical insights into cost measurement and reporting. My review copy was from the library, so I wasn't able to freely mark it up, with highlighter and green ink, as is my usual practice. Nonetheless, this would be a nice reference book for the shelf, if you regularly delve into the realm of cost accounting or are involved in cost measurement, cost estimating or contract negotiation.

After an engaging introduction, showing the reader a thousand-year history of tangible valuation, Part I of the book addresses the rise of the intangible economy. After an explanation of the nature of investments, assets, and capital, the authors walk readers into things of value you can't touch. Intangible investment has steadily grown over the past few decades and the reasons are important. Capital is vanishing due to information technology, industrial structure, the business climate and global market sizes. Part I also explains how to measure intangible investment and what's different about it.

Part II deals with the consequences of the rise of the intangible economy. This part addresses a number of interesting aspects of intangible valuation, including: scale, spillover, sunkenness, synergy, inequality, and soft infrastructure. Also discussed are leading,



competing, financing, and managing in the realm of intangible assets. No attempt is made to sugar-coat the challenges of intangible assets. The authors provide detailed and

continued

thought-provoking discussions around five hard questions for public policy vis-à-vis economies with growing, and industries with dominating, intangible investments.

Probably the most eloquently written book regarding cost accounting and asset valuation I've ever read; **Capitalism Without Capital** has storied examples and engaging vignettes which entertain as well as inform. The authors convey elusive subject matter with clarity for easy understanding. This book is a recommended read for anyone looking to better understand the changing nature of business or economy valuation.



CAPITALISM WITHOUT CAPITAL THE RISE OF THE INTANGIBLE ECONOMY

**JONATHAN HASKEL &
STIAN WESTLAKE**

Princeton University Press.
Princeton, New Jersey; 2018





David Peeler is an associate with Dayton Aerospace Inc. and Deputy Director emeritus of Financial Management and Comptroller for the Air Force Life Cycle Management Center. He is a certified cost estimator/analyst and a DoD certified acquisition professional in financial, program, and test management. He is a member of both the American Society of Military Comptrollers and the International Cost Estimating and Analysis Association .



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2022 Professional Development & Training Workshop

May 17-19, 2022

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2022 Professional Development & Training Workshop Preview

by Megan Jones

Are you excited? It's been three entire years since many of us have seen each other, and only a few short months until we're all together again!

The 2021 ICEAA Online Workshop was a greater success than even we anticipated, and though the interactive features of the event allowed us to share photos of our home workspaces, introduce our two-and four-legged coworkers, and chat on various message threads, it just wasn't the same. Your 2022 Workshop Committee and the ICEAA Board of Directors carefully analyzed the pros and cons of going virtual again this year, and the conclusion was clear: we owe it to ourselves and our membership to meet in person.

ICEAA had big plans in early 2020 to introduce some new features for the Workshop. Like so many 2020 plans, they've had to lay in wait along with us to debut in 2022. We know it's been a while, but your

memory hasn't failed you (at least not for this): some aspects of the Workshop won't be exactly how you remember.

On Tuesday morning, we'll be getting started like we always have with coffee and breakfast amongst our sponsors' and exhibitors' booths. Then, to give everyone a sense of the outstanding paper presentations scheduled for the days to come, we'll start with the 2022 Best Paper Awards presentation. The presentations that feature an accompanying whitepaper for their presentation will be broken into categories, then scored by our team of judges to determine the best in each category. Then a second round of judging will select the Best Paper Overall from the category winners. Take note of when these sessions are scheduled in the coming days, they'll definitely be ones to check out!

Those best paper-winning presentations will be just a few of the 64 presentations that will be grouped into eight themed tracks that

continued



2022 ICEAA Professional Development & Training Workshop Preview

should help guide attendees to the presentations they will find most applicable, and arranged (as best we could) to keep similar topics from being scheduled at once.

As always, the best way to keep track of which presentations you want to see and when is by using the Workshop app. We're using Whova again in Pittsburgh, the app that all the 2021 Online Workshop and 2021 Training Summit attendees enjoyed so much. If you have Whova still installed on your device from one of these events, you'll be all set for when you receive your invitation to join the 2022 ICEAA Workshop event. If you're new or deleted the app, search "whova" in the App Store or Google Play to download.

64 Presentations in 8 Tracks:

- ♦ Analytical Methods
- ♦ Data Science
- ♦ Machine Learning/NLP
- ♦ Management & Risk
- ♦ Modeling & Analysis
- ♦ Processes & Best Practices
- ♦ Software & Agile
- ♦ Trending Topics

After Tuesday morning's Best Paper Awards, we'll be treated to a keynote presentation from a speaker who uses many of the same methods, disciplines, and theories you do every day, but in a different market for a different result. We started experimenting with outside-the-ordinary keynote presentations a few years before the break, and have learned that our attendees enjoy starting their full day of heavy-duty cost learning with a less conventional topic and perspective. Those who joined us in Tampa will never forget the demonstration of how data analytics are used in baseball, and if you attended the Online Workshop in 2021, you probably remember hearing from the host of a podcast focused on cost issues across the globe. We aim to impress and inspire with our keynotes in 2022.

At the end of the day on Tuesday, we'll wrap with the first of our two main networking events in the exhibit hall. Year after year, our attendees tell us the most valuable part of the Workshop is all of the opportunities you have to make new connections, ask an extra question of a presenter, or get to know our sponsors, and this year it will be more valuable than ever. You'll have plenty of chances to meet face to face with colleagues and peers between sessions, during beverage



2022 ICEAA Professional Development & Training Workshop Preview

breaks, or at the receptions on Tuesday and Wednesday evenings.

There's one more change that will make itself known on Tuesday: drink tickets (this one deserves an exclamation point)! When collecting badges from our registration desk, registrants will receive two tickets to use for the beverage of their choice at either reception. Our attendees have been suggesting we offer drink tickets in their attendee feedback surveys for years (even before the missed years), and we hope their inclusion will make things a little easier for everybody.

All that and we're just at Wednesday morning! Most of Wednesday will be the similar to Tuesday: morning general session with a keynote speaker or panel discussion, and another evening reception where you can use your drink tickets (if you didn't use them both on Tuesday).

We'll also be continuing our tradition of honoring ICEAA's shining stars with the

Annual Association Awards presentation on Wednesday morning. ICEAA members around the world go above and beyond to make a difference in the community. From the emerging Junior Analyst of the Year to the legendary Frank Freiman Lifetime Achievement Award winner, ICEAA is proud to take the time to honor and thank these individuals (and teams) for their efforts and contributions. Learn more about the award categories and read up on previous years' winners at iceaaonline.com/awards.

On Thursday morning, we will open once again with a general session presentation, a morning full of training and presentations, and our now-traditional Best Paper Overall general session right before lunch. Back in the old days, the winning Best Paper Overall presentation was scheduled along with the other breakout presentations, which tended to draw the attendees away from those with the bad luck to have been scheduled at the same time. One room ended up overcrowded while the sessions scheduled

continued

View speaker bios, paper abstracts, training session descriptions, and hotel information on our website.

You can also download the latest detailed schedule, featuring session dates and times at:

www.iceaaonline.com/pit2022



2022 ICEAA Professional Development & Training Workshop Preview

2022 Workshop Committee

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Kellie Wutzke, CCEA®

Training Chair

Jennifer Kirchhoffer, CCEA®

Abstract Review Chairs

Nick DeTore, CCEA®
Cortney Collins, CCEA®

Best Paper Chair

Cat Dodsworth

Awards Chair

Christina N. Snyder, CCEA®

against it were empty. We've set aside time on the main stage again for all attendees to see and enjoy the year's best paper.

Another returning favorite will be the complimentary head shots. Our photographer will be on hand in Pittsburgh for everyone to sit for a brand new photo - after three years, we're probably all overdue!

Something that won't be coming back is the half-day of sessions on Friday morning. You may have noticed the 2022 Workshop is one day shorter than how long the Workshop has been since, well, since forever. The Friday sessions have always been unpopular, and left us closing the Workshop after a slow trickle of departures and no fanfare or farewell on Friday afternoon.

To end the 2022 Workshop properly, we will be reconvening in the grand ballroom for a closing general session featuring a panel discussion and some words of thanks from ICEAA before we say our goodbyes until 2023.

ICEAA has missed seeing our members over these past three years, but we're not the only ones. Workshops, conventions, and other events have been cancelled or postponed in every industry and in every town. It's been disappointing for us, but devastating to the businesses in the local communities that welcome professional groups like ours to spend evenings out to dinner with colleagues or a few extra days of sightseeing added on to your stay.

continued



2022 ICEAA Professional Development & Training Workshop Preview


Outline Schedule

Tuesday, May 17

Just staying at the Wyndham Grand means receptionists get to check you in, housekeepers have rooms to clean, and our attentive meeting staff can get back to work helping make your Workshop experience a better one. Every Uber or Lyft you take is one more trip that could help your driver get back on their financial feet.

Breakfast buffet available	7:00 - 8:00
Welcome & Best Paper Awards	8:00 - 8:30
Keynote/Panel	8:30 - 9:30
Papers & Training	9:45 - 11:45
Lunch	11:45 - 12:45
Papers & Training	12:45 - 4:45
Welcome Reception	4:45 - 7:00

Wednesday, May 18

We all know at least a few businesses in our own communities that didn't survive the pandemic, and still more that need customers' support to continue to thrive. Pittsburgh is no different. Look up some of the over 4,000 restaurants in town (or one of 40 breweries) and make a plan to show those businesses some love. Every meal, every coffee, every experience ICEAA members enjoy in Pittsburgh is one more than those establishments would have gotten had we stayed home. It's been being said for years and it's still true: we're all in this together. 

Breakfast buffet available	7:00 - 8:00
Welcome & Association Awards	8:00 - 8:45
Keynote/Panel	8:45 - 9:45
Papers & Training	10:15 - 12:00
Lunch	12:00 - 1:15
Papers & Training	1:15 - 5:15
Networking Reception	5:15 - 7:00

Thursday, May 20

Breakfast buffet available	7:00 - 8:00
Welcome & Keynote/Panel	8:00 - 9:00
Papers & Training	9:15 - 11:00
Best Paper General Session	11:15 - 12:00
Lunch	12:00 - 1:15
Papers & Training	1:15 - 3:00
Farewell General Session with Panel Discussion	3:15 - 4:30



Greater Dayton Chapter Report

*Greg Brown, Greater Dayton Chapter President and
Beth Hodson, Greater Dayton Chapter Vice President*

Recent Events:

In discussing the vision for the Greater Dayton Chapter in 2022, the board has agreed to support a continued focus on localized training and education. The board will promote CEBoK as the ‘go to’ source for training knowledge and training material. We hope to further grow local ICEAA membership via exposure to local training opportunities.

As background—during a recent board meeting, board members observed that some novice cost analysts have struggled with the transition to remote work, particularly because they lost the face-to-face training offered by the traditional office environment. Our board is not alone in these observations. Per the Harvard Business Review, people’s organizational connections—i.e. those coworkers they routinely interact with—have shrunk during the transition to remote work. Moreover, the shrinking network phenomenon has affected younger employees more than older, more experienced employees. Similarly, a New York Times piece posits that remote work is failing young employees due to reduced access to training.

Our board sees remote work as an opportunity to further expand our training and education, with a focus on younger analysts. Looking back to calendar year 2021, the board hosted a total of 10 webinars, with most sessions drawing directly from CEBoK. Before the pandemic, in-person training sessions were averaging less than 20 individuals. However, since transitioning to remote lunchtime webinars, attendance has averaged 38 individuals, an almost 100% increase! Looking forward to the remainder of 2022, the board hopes to go “12 for 12”, with at least one training webinar offered every month.

These lunchtime training webinars provide an opportunity for newer analyst to submit questions without fear of appearing naïve. Analysts can ask their questions without worrying about whether they are interrupting their boss or co-worker. Best of all, these trainings have successfully linked individuals from the many cost organizations that participate in ICEAA-Greater Dayton: the Air Force Life Cycle Management Center (AFLCMC), the Air Force Research Lab (AFRL), the Air Force Materiel Command (AFMC), the Air Force Institute of Technology (AFIT), and industry. Through webinars, we strive to expand organizational and social connections across all local cost organizations!

On March 3, 2022, the Greater Dayton Chapter will host three graduating AFIT students who will present the results of their thesis research on current cost topics.



ICEAA Greater Dayton Chapter 2021-2022 Board of Directors

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Vice President: **Beth Hodson**

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Lt. Sammantha Jones

Region 4 Director: **Joe Bauer**

ICEAA Chapter and Region Updates

Southern California Chapter Report

Nicole Leighton, Southern California (SoCal) Chapter Secretary

Recent Events:

In August 2021 the SoCal ICEAA Chapter hosted a virtual webinar with presentations about software cost estimating and GAO best practices. **Anandi Hira** (Tecalote Research Inc.) presented *Get to the Point, What's the Deal with Different Function Points Methodologies* describing how variants have emerged to simplify software sizing and improve cost estimation. **Brian Bothwell** (GAO Accountability Office) presented *GAO Best Practice Guides* covering GAO's responsibilities, best practice guides and how criteria is used in audits. Please go to our ICEAA SoCal chapter site for the presentations and recordings. The SoCal board was happy to present our SoCal recognition coin to both presenters. If you would like to present at an upcoming webinar (and receive the invaluable coin) please let us know!

Additionally, the SoCal chapter is spear-heading an initiative to develop a Design-To-Cost (DTC) training module for all ICEAA members. The content is currently in peer review and expected to be finalized later this year. If you would like to be involved please contact ICEAA SoCal chapter member **Hank Apgar** at hapgar@frontier.com for details.

ICEAA Southern California Chapter 2021-2022 Board of Directors

President: **Karen Mourikas**

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Treasurer: **Melissa Winter**

Directors at Large: **Henry Apgar**
Lisa Colabella, Justin Knowles,
Darin Hoffman, Mike Pfeifer,
Steve Sterk

Upcoming Events:

The SoCal Chapter is planning future webinars/in-person events and welcomes new participants from any location. Dates and times are still in work. Potential topics include the James Webb Space Telescope, F16 Collision Avoidance Software via smart phones, Optimism Bias in Estimating, plus more. We'd love to hear from you! So please get in touch with any of the board members if you are interested in presenting or have requests for topics.

The ICEAA SoCal chapter is looking forward to the 2022 Professional Development and Training Workshop in May. See you in Pittsburgh!



Estimating doesn't end with cost, schedule, and risk. Your clients' Valued Features determine Prices. They self-impose Demand, its extent, Price responsiveness, and rate of change. Don't analyze markets in 2D when they work across four or more dimensions.

Hypernomics, Inc. has described market forces for:



Describe them for yourself:

www.hypernomics.com
info@hypernomics.com

Washington Capital Area Chapter Report

Daniel Germony, Washington Capital Area Chapter President

The Washington Capital Area Chapter (WCAC) of ICEAA is eager to continue providing a mixture of high quality, engaging, and relevant in-person/virtual training, along with in-person networking opportunities to its chapter members.

Chapter Survey Results:

The WCAC recently surveyed its members to gauge chapter member's preferences on the type of content and meeting format folks were most interested in.

- ♦ The survey showed a strong desire for both presentations and networking opportunities with many members eager to return to in-person events (albeit with proper COVID-19 accommodations).

- ♦ WCAC members are eager to see estimate/analysis walkthroughs involving data visualization (e.g., ggplot, Tableau, Qlik, PowerBI), risk/sensitive analysis, and software cost estimating.

- ♦ Members overwhelmingly indicated that time was a scarce resource and would like the option to view events online and on-demand.

The WCAC Board of Directors and Committee Chairs value this feedback and are planning chapter events accordingly. Members can look forward to monthly training/presentation type events and quarterly networking/happy hours.

Chapter Leadership:

The team includes a healthy mix of Industry and Government with specialties in various market sectors. In addition to holding training and



ICEAA Washington Capital Area Chapter 2022-2023 Board of Directors

President: **Daniel Germony**, *OSD CAPE*

Vice President: **Robert (Bob) Nehring**, *Technomics, Inc.*

Secretary: **Courtney Silies**, *Tecolote Research, Inc.*

Treasurer: **Max Watstein**, *Herren Associates*

Former President: **Remmie Arnold**, *Technomics, Inc.*

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Membership Committee: **Chad Lucas**, *Galorath, Inc.*

Outreach Committee: **Katharine (Kammy) Mann**, *DHS*

IT Committee: **Kevin Coonce**, *Herren Associates*

Social and Service Committee: TBD

continued

ICEAA Chapter and Region Updates

networking events, the WCAC leadership team is spending time in 2022 focusing on streamlining and documenting various aspects of chapter management and administration. Although this process is neither exciting or outward facing, it will ultimately result in smoother chapter operations and will free up time to spend on chapter events and content.


Data Science and Cost Estimating/Analysis

The last decade has seen a proliferation in the popularity and accessibility of “data science” tools and techniques. Although “data science” can be difficult to define specifically, it generally includes the use of programming/code based languages like R or Python and “data science” models frequently include sampling, tuning, and machine learning (compared to more “traditional” orderly least squares regression and analysis of variance based models). Although these tools and techniques have completely consumed some industries, they remain largely unutilized by the cost estimating and analysis community.

The WCAC survey showed a strong interest in data visualization tools (e.g., ggplot, Tableau, Qlik, PowerBI) which may be seen as a gateway drug into - or suggests a latent interest in - “data science”. As individual topics, “Basic R/Python” ranked 6th and “Advanced R/Python” ranked 11th out of 16 cost estimating and analysis categories. However, if combined, “Basic + Advanced R/Python” would have received more combined interest than any other individual category. Informal surveys of newer/younger analysis suggests “data science” type techniques have already overtaken more “traditional” tools and techniques in many Colleges and Universities.

A complete review of the pros and cons of data science for cost estimating and analysis is beyond the scope of this chapter update for *ICEAA World*.

However, the WCAC intends to expand access and highlight training resources for “data science” type tools and techniques for cost estimating and analysis. These newer tools and techniques will not replace traditional methods but could offer new and novel ways to provide data driven insights for decision and policy makers. The WCAC welcomes feedback from other chapters or members and is eager to coordinate efforts related to training or resource development.



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Region 6 Report

Brent M. Johnstone, Region 6 Director

Region 6 held its first 2022 virtual meeting on February 9, 2022. Three distinguished panelists shared their views on the topic of professional development in cost estimating.

Mike Fuller, ICEAA Emeritus Member, compared cost estimating to baseball. Summarizing his career at LTV and later Lockheed Martin, Mike used his experience as a NCAA Division I umpire to emphasize the importance of teamwork, performance, and the ability to adapt to situations, commenting that “you never know what team you will be on, or whose team you will be on.” Mike’s advice to younger cost analysts who want to stand out from the crowd was to find something nobody else wants to do and become very good at it.

Lester Richmond traced his career from his first job at Eglin Air Force Base as an Operations Research analyst through positions at McDonnell Douglas Helicopters, Motorola Government Electronics, Sikorsky Aircraft and Lockheed Martin. Lester described his work as a design to cost analyst on the F-22 program and later as senior manager of parametric estimating. He also outlined his participation in the Joint Industry/Government Parametric Cost Estimating Initiative of the 1990s, leading to the publication of the first edition of the Parametric Estimating Handbook.

Ralph Smith, ICEAA Emeritus Member, shared his path from an English literature major at Penn State to Director of Estimating and later Technical Fellow at Lockheed Martin Aeronautics. Ralph referred to the gospel lyrics (*this little light of mine, I’m going to let it shine*) and urged listeners to showcase your little light by discovering their true interests, energizing the self, and letting your energetic light show. He described the benefits of ICEAA membership to entry-level and mid-

level estimators who want to learn and network within the profession.

The session was moderated by **John Deem**, former ICEAA Region 6 director and previous president of the Lone Star Chapter.

The audience exceeded expectations, and overall, the session received very positive comments. Region 6 plans to hold quarterly webinars in the future on different topics of interest to cost estimators.



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Another turbulent year has gone past us and we are returning to some sort of normality. I am extremely thankful to the SCAF committee who worked tirelessly to get the SCAF workshops to our members virtually throughout the pandemic. We had substantial amount of members logged in during the virtual workshop which showcased how important these workshops are.

Since the Annual General Meeting in Sept 2021, SCAF successfully delivered two more virtual workshops to our members. The first one was held on the 23rd November 2021 and focused on *The Impact of Disruptive Technologies on Cost Forecasting*.

Johnathan Milsom from TP Group spoke about the impact of using hydrogen as a disruptive technology to reduce the reliance on fossil fuels within defence. Followed by **Nathan D'Souza** from Whitetree who talked about *The Application of Machine Learning Techniques for Predictions in the Healthcare Industry*. **Andy Nolan** engaged the delegates with his interpretation of Benford's Law in estimating. **Dale Shermon** from QinetiQ talked about the cost of vulnerability in critical national infrastructure and finally the session was concluded by **Dennis Glover** from TP Group who talked about an introduction to machine learning and AI.

The second workshop was delivered virtually on the 9th of Feb 2022 on *Our Digital Future: The Costs, Social Value and Benefits*.

Professor **Andrew Langdridge** from ARES Software UK gave the first presentation of the day and it was entitled, *Estimating and Reporting Carbon for Capital Projects*. This was a very thought-provoking presentation that raised the question, as cost estimators/project controllers, how can we work better with our environmental teams to meet the COP 26 challenge to the world to keep global warming below a rise of 1.5 degrees in order to prevent social and ecological disaster.

The second presentation was from **Dale Shermon** from Qinetiq and was entitled, *Better Project Outcomes from Complex Procurements*. In this presentation Dale discussed that in a recent job move from cost estimator to Head of Project Controls, he has witnessed a different paradigm of the overall project delivery picture. In his presentation he discussed that project controls is dependent upon the establishment of a justified and defensible, risk adjusted, resourced schedule and a good technique for control.

Andy Nolan from Rolls Royce gave the third presentation in his usual entertaining manor. The presentation's title was *It's Not What You Do but the Way That You Do It! The Science of Estimating Series Judgement Based Techniques*.

And finally, I presented a paper on how machine learning estimating methodology is changing the future of software cost estimating.

Looking forward to meeting all our members in person on our first physical workshop at Bristol Aerospace for the SCAF Cost Challenge on March 29, where our new members undertake a cost challenge.



Upcoming SCAF Events:

29 March

**SCAF Challenge: Additive Manufacturing
Aerospace Bristol**

8 June

**Workshop: Project Controls
Rolls Royce Derby**

20 July

**Summer Reception
Bailbrook House**

New for the PCEA and CCEA Online Exams: ScratchPad

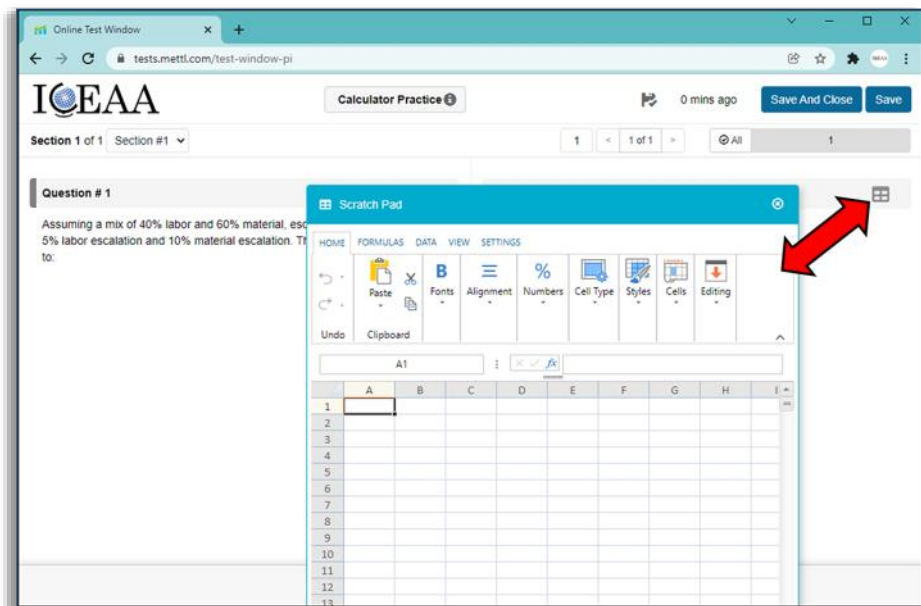
*by Sharon Burger
ICEAA Certification Manager*

Something new and exciting is happening in the world of ICEAA certification!

Everyone seems to agree that the online exam format is a great new benefit ICEAA offers its membership. The online format affords those pursuing certification a flexible and personalized exam schedule as well as the convenience of being able to take the exam anytime, anyplace!

The ICEAA Business Office values what our members have to say, and we thank those who have provided post-exam feedback regarding exam preparation, the exam itself and the functionality of the on-screen calculator. Of the 234 exams administered since the online certification exam was launched in the summer of 2020, about 45% of test takers completed the post-exam survey.

Most of the feedback we received was regarding the calculator provided with the exam software. It was the least liked feature. In fact, it has been the only feature that has required a tune up. After coordinating with our exam software provider, we have been able to upgrade the calculator with a basic -function spreadsheet app called ScratchPad that users access within the exam browser.



Click the icon in the upper right corner of the screen to expand and use the ScratchPad integrated spreadsheet tool

ScratchPad provides many of the same functionalities as MS Excel, except Visual Basic for Applications (VBA), user-defined functions and macros or graphing capability. You will be able to use formulas within the ScratchPad, but the formulae will not be pre-loaded or auto complete; you'll have to type the whole formula from memory.

Certification candidates will receive a link to use to familiarize themselves with and practice using ScratchPad prior to taking your exam.

You can read more about ScratchPad on the ICEAA Certification page at

www.iceaaonline.com/certificationfaq



ertification ongratulations

If you have been following along, you will remember that we saw a minor slow down in the number of those taking the exam in the last quarter. It's accurate to say the slowdown is over. Many took advantage of the Training Summit this fall and are now ready to make the commitment and take the exam and. As this is written, 25 applications have been received and another 20 individuals have completed the application process and have been issued their exam links.

Now for those who met the challenge of the certification exams, congratulations are extended to the following individuals for passing either the CCEA® or PCEA® exam between October 2021 and January 2022:

CCEA® Achievers:

Christine Clay, Tecolote Research, Inc.
Aaron Everly, Technomics, Inc.
Courtney Jones, Radiance Technologies
Patrick o'Driscoll, The Boeing Company
Iris Vildosola, Booz Allen Hamilton

PCEA® Achievers:

Ericka Kadner, Kalman & Company

The following recertified between October 2021 and January 2022:

Leslie Bacon	Townsend Kemp	Jennifer Kirchhoffer	David Peeler
James Black	Hanafourde	Kevin Kuphal	Douglas Reimel
Fiona Clifford	Nathan Honsowetz	Jennifer Lampe	Bruce Reynolds
Aidan Depetro	Benjamin Hooten	Brandon Lucas	Chris Schane
Sam Easterly	Kirk Hoy	Chad Lucas	Michael Shortell
Andrew Eyers	Kevin Jackameit	Donald McGuire	Jose Tejeda
Franco George	Mark Johnson	Elmira Mukailova	Elizabeth White
	Ryan Johnson	Robert Nehring	



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