ICEAA 2023 Association Awards

ICEAA thanks everyone who nominated one or more of their colleagues for a 2023 Association Award. The stories our nominators shared gave us unique glimpses into what makes our members the best of the best in the cost professions. As you read the summaries of their achievements below, give thought to the dedicated and inspiring members you interact with regularly and consider nominating them for a 2024 Association Award!

Junior Analyst of the Year:
Aubrey Davis, PCEA®

I am pleased to congratulate Ms. Aubrey Davis for receiving the ICEAA 2023 Junior Analyst Award, in recognition of her outstanding support to the Naval Sea Systems Command (NAVSEA) Program Executive Office (PEO) Integrated Warfare Systems (IWS) 2.0 – Above Water Sensors and Lasers Program Office and contributions to the DoD cost community at large. Ms. Davis earned her BS in Mathematics at the Virginia Polytechnic Institute and State University in 2017. Additionally, in May 2023 she earned a Master's in Data Analysis and Applied Statistics (also from Virginia Tech) while working full-time. Her studies positioned her well for her career in cost analysis, which began when she joined Technomics, Inc. in May 2019. Ms. Davis is a Lead Analyst at Technomics currently supporting the high visibility acquisition program Shipboard Panoramic Electro-Optic Infrared (SPEIR). Since joining the field four years ago, her cost-estimating skills have steadily grown, and she recently received her Professional Cost Estimator/Analyst (PCEA) certification. Ms. Davis is a current member of ICEAA in good standing.

Ms. Davis supports NAVSEA PEO IWS 2.0 – Above Water Sensors and Lasers Program Office. PEO IWS 2.0's mission is to "develop, deliver, and sustain the radars, electronic warfare, directed energy and imaging systems that ensure operationally dominant combat systems for our Sailors as we help build the Navy the Nation needs." Ms. Davis primarily supports the Shipboard Panoramic Electro-Optic Infrared (SPEIR) program. SPEIR Block I is an ACAT II program to develop and deploy Electro-Optical/Infrared systems on USN surface ships. SPEIR Block I will passively find, fix, track, and target current/emerging threats to support the following warfare missions: Anti-Ship Cruise Missile defense, Mobility, Counter Fast Attack Craft, Fast Inshore Attack Craft, Counter Unmanned Aerial System, and Anti-Terrorist/Force Protection.

Ms. Davis spearheaded the cost support for the SPEIR Block I program (ACAT II) Integrated Baseline Review (IBR) for the Engineering and Manufacturing Design development contract in October 2022. Ms. Davis was instrumental in the IBR prep, coordination, training, facilitation, and analysis, leading to an approved baseline. SPEIR is the first EO/IR Program of Record, and an IBR was new for almost all technical leads (on both the government and Original Equipment Manufacturer (OEM) side). Ms. Davis held a government team training which was instrumental in the IBR success and walked the government through expectations and answered questions. Ms. Davis reviewed contract language, established the IBR schedule, and worked directly with the contractor to identify and collect required documents. She led the junior staff in developing the IBR workbook. This dynamic IBR workbook contained in-depth analysis and visualizations that allowed the Government team to drill down to lower levels and develop questions for Control Account Manager (CAM) interviews. Ms. Davis facilitated a risk workshop, an all-day working meeting with the government team to discuss each CAM, areas of concern, and scope discussions. Ms. Davis

Aubrey Davis

supported the overall process from inception to closure, working with both the client and the OEM, furthering her reputation within IWS 2.

In December 2022, Ms. Davis challenged herself to use her knowledge of R to write IPMDAR-specific functions in the Technomics-developed "costverse" (akin to "tidyverse" within R). She designed the read_IPMDAR and tidy_IPMDAR function(s) that generate a flat file from the individually delivered JSON files. Before this began, Ms. Davis had never supported EVM analysis. Ms. Davis created a standard flat file that can now be fed into a PowerBI dashboard, and any program receiving IPMDARS can leverage this. This work is instrumental in streamlining and standardizing the analysis files and will serve the cost community in the future.

Ms. Davis has demonstrated her ability to generate credible estimates backed by robust analysis and cost models leading to informed decisions by leadership. Over the last year, her technical knowledge of the commodities (electronic sensors) and acquisition process has significantly expanded. As a result, she has served as a critical member of the IWS 2 team. Her detailed approach to estimating has elevated her status from a team contributor to a leader.

Aubrey's outstanding leadership and engagement with government and industry leaders exemplify her work to raise community of practice standards and advance state-of-the-art. With just four years of experience, she has served as the lead estimator for mission-critical acquisition programs. In addition, she has been responsible for communicating results up the chain of command. Her foundational cost-estimating skills have grown tremendously as she completed the Technomics Training Institute (TTI)

program, which uses the Cost Estimating Body of Knowledge (CEBoK®) curriculum to prepare students for the ICEAA certification exam. As part of her commitment to training, she continues to give back to the cost community and facilitates the Technomics Learn at Lunch program. In addition, her cost-estimating knowledge and skills have sparked her further curiosity as she contributes to developing applied cost-estimating simulation training internally at Technomics, Inc.

-Nominator **Emily Hagerty**

Technical Achievement of the Year: Olivia Johnson, CCEA®

Olivia Johnson, a Senior Analyst at Technomics, Inc., serves as a key cost analysis support contractor to Contracts and Business Operations within the Program Executive Office, Integrated Warfare Systems, Surface Ship Weapons (PEO IWS 3.0). In support of PEO IWS 3.0, she maintains life cycle cost models, supports production cost negotiations, leads independent cost assessments, facilitates contracting milestone planning, conducts acquisition strategy cost analysis, such as multiyear procurement and competition analysis, develops CSDR Plans, and conducts CSDR analyses.

Her specific achievement that led to this nomination centers around her leadership in the cost proposal evaluation for the Standard Missile-2 procurement contract, which included over 200 All-Up Rounds. This complex proposal encompassed US Navy Requirements and 54 FMS CLINs across 9 nations. Olivia combined technical inputs from multiple stakeholders with fact-finding data collection to apply data-driven methods for determining the fairness and reasonableness of the offeror's proposal. She developed an innovative cost model that integrated her data science skillset and cost analysis experience, reducing the offeror BOEs with facts and data, rather than relying on the typical, less defensible approach

of using SME inputs. The cost model employed data-scraping techniques in R, compressing relevant data into a flat-file using Power Query, calculation of all burdens to reflect an accurate price, and building a graphical user interface in Excel for ease of use. This process ensured that Olivia understood the mechanics of the contractor's proposal and enabled her to calculate the impact of her proposal analysis accurately. She applied a systematic approach to each area of the proposal, including the evaluation of 126 labor tasks and over 1,800 unique parts across 100+ suppliers.

Olivia's proposal evaluation determined a position 16% below what was proposed. Her cost model was then leveraged by the Procuring Contracting Officer (PCO) to support contract negotiations over a two-month period. During this time, Olivia met daily with contracting officers and key stakeholders to defend the US Navy's position. She ran countless "what-if" scenarios in the model to determine potential paths for contract award. By establishing multiple estimating approaches to each of the offeror's BOE, Olivia was prepared to inform the Government Team how they could modify each offer to reach an award that remains fair and reasonable to both the Government and the contractor. Her techniques enabled efficient data-driven analysis in an environment that is almost always time- and resource-constrained. More importantly, Olivia's work made an immediate impact on the bottom-line price recommendation. Her positive attitude and commitment to the Government Team and negotiations were the driving force behind an on-time contract award. Ultimately, the award led to $94M in savings from the original proposed contract value. This significant savings will assist in future technology and asset acquisition for the US Navy and our Allies and provides for significant savings to taxpayers. Her efforts promoted teamwork and synergy among the contracting officer, technical SMEs, and cost analysts, and was an excellent demonstration of the tremendous value that cost estimating and analysis provide to acquisition.

Olivia Johnson

Olivia was directly recognized by the PCO, stating "You have gone above and beyond, and your efforts have far exceeded my expectations. I cannot thank you enough for all of the late hours, changing directions, adding requirements and pushing the boundaries." The Deputy Division Director of Surface Systems Contracts also complimented the team for which Olivia was the driving force. "Your detailed approach brought convincing arguments that could not be disputed," she said. Without the detailed cost model and her diligent efforts to modify inputs based on real-time fact-finding discussions and consistently drive to close the negotiation gap with ongoing data collection and analysis, contract award would not have been possible. Too often, cost estimating and analysis results in just a number on a briefing. Olivia's work leveraging data and innovation in data analytics delivered value in every step of the proposal evaluation process leading to real and significant savings.

-Nominator **Sarah Campbell**

Team Achievement of the Year: Adaptive Engine Transition Program (AETP) Cost Team

The adaptive engine transition program (AETP) is located within the Propulsion Acquisition Division, Air Force Life Cycle Management Center (AFLCMC/LPA). The adaptive engine program strives to develop and acquire a jet engine offering a third stream of air that can be dynamically modulated between the engine core and the bypass stream, allowing increased thrust during combat conditions and increased fuel efficiency during cruise conditions. This presents an unprecedented evolution in propulsion technology, offering increased fuel efficiency, increased range, and an increase in max thrust over the current F-35

propulsion system. In March 2022, a team was brought together for the purpose of creating two unique cost estimates for the lifecycle costs of developing, procuring, integrating, operating, and sustaining an adaptive engine on the Air Force-variant of the Joint Strike Fighter, the F-35A. The team consisted of three seasoned cost analysts from AFLCMC's Cost & Economics Division and two in-house cost analysts from the program office. The analysts being nominated for this award include:

Zachariah Sayre, Team Lead, AFLCMC/FZC, Operations Research Analyst Josh Winner, EMD Estimator, AFLCMC/FZC, Operations Research Analyst Aaron Bingham, Production Estimator, AFLCMC/LPA, Operations Research Analyst Beth Hodson, O&S Lead Estimator, AFLCMC/FZC, Operations Research Analyst Adam McGee, O&S Estimator, AFLCMC/LPA, Operations Research Analyst

The analysts were challenged with developing two cost models to support an estimate requirement for a potential competitive source selection cost realism evaluation. The team had to consider outcomes for two different engine manufacturers, each with different strengths/weaknesses, business accounting structures, and technology maturity at the component level. The team led discussions with the LPA program office and the F-35 Joint Program Office (JPO) to establish ground rules and assumptions and integration efforts to include in the estimate. The team leveraged relational cost databases, detailed historical program history, hundreds of Cost Software Data Reports, FFRDC studies, and Navy cost libraries to build a robust repository of propulsion data. Analogy and parametric models were then established for both the development and production phases of the estimate, relying on advanced parametric techniques such as logarithmic transformations. A significant portion of the estimate was also driven by complexity-adjusted analogy using detailed subject matter expert (SME) input. During SME discussions a variety of analogous cost data was presented at the component element-level to better inform uncertainty discussions and avoid biases such as anchoring and overconfidence. SME inputs and rationale were thoroughly documented to improve estimate validity and ensure reproducibility by outside agencies. After completing the risk and uncertainty analysis, a

AETP Cost Team Members Aaron Bingham (L) and Zachariah Sayre (R)

variety of advanced costing techniques were employed to finalize the estimate. Development budget phasing was completed using a Beta distribution fit to a historical analogy. Production utilized a cost improvement curve based on over 30 historical engine programs. For all portions of the lifecycle, sensitivity analysis was used to identify key cost drivers and their corresponding effect on the total cost estimate. Schedule analysis and burn rate analysis was used to determine the realism of the program.

Having completed and documented their lifecycle estimates, the team next briefed and defended the results. Despite significant differences between the two estimates along with a previous contractor agnostic estimate that was developed the year before, the team used effective communication to articulate the methodology and results of both estimates. Presentations were delivered to the Senior Materiel Leader and the AFLCMC Chief of Cost and Economics, with representatives from the Air Force Cost Analysis Agency (AFCAA) in attendance. At all levels, the estimates were approved 'on the spot' without requiring further correction. In addition to presenting and defending the two unique program cost estimates, the team became a vital part of the acquisition planning team. Serving as acquisition advisors in addition to cost estimators, the team provided critical information on the acquisition approval process and source selection expectations, particularly as it relates to cost realism evaluations under cost-plus type competitive contracts. The experience and knowledge that the AETP cost team members possessed ultimately led to team members being the de-

facto subject matter experts on certain topics and helped craft the programs contracting and acquisition strategy briefs that were presented to the Directorate PEO and Air Force Service Acquisition Executive. Subsequent to estimate approval, the team continued to work with AFCAA and OSD CAPE to further communicate details of the estimate. The results and actions of the AETP cost team provided senior Air Force leadership with vital decision support along with providing the cost community with a more comprehensive propulsion data set to be used by cost estimating professionals.

The complexity associated with AETP far exceeded that of a traditional USAF acquisition program, as the engine's intended platform of operation is within the Joint Strike Fighter (F-35) weapon system. As a result, the cost team had to navigate two program offices (AETP and JPO) to produce their two separate and distinct life cycle cost estimates that accounted for the different strengths/weaknesses, business accounting structures, and technology maturity of each contractor. The team's successful communication of the estimates allowed the program to establish realistic cost and schedule baselines, enabling successful program execution. Moreover, the team went above and beyond by not only providing expert cost analysis and analytical support but also served as acquisition strategy advisors which enabled an acquisition approach that was realistic and executable. For these reasons, the AETP Cost Team embodies the description of the ICEAA Team Achievement of the Year Award.

The Cost and Economics Division, Air Force Life Cycle Management Center (AFLCMC/FZC), serves as the central cost organization within AFLCMC providing cost estimating support through centrally managed resources along with final review and approval authority of all AFLCMC produced cost estimates and products. The AFLCMC Cost and Economics Divisions mission is to provide credible decision support through objective analysis. AFLCMC/FZC executes this mission by offering first-rate research tools and capabilities and experienced cost estimating personnel that are subject matter experts in cost estimating, decision analysis tools, and source selections. AFLCMC/FZC is a centralized staff organization that uses these resources and personnel to support the 13 AFLCMC PEO Directorates and their supporting organizations, covering more than 50 different aircraft platforms.

The AETP Cost Estimating Team supported the Propulsion Acquisition Division, Air Force Life Cycle Management Center (AFLCMC/LPA), which is the preeminent propulsion program office for the Air Force, ensuring the rapid delivery of dominant, war-winning technologies from the research laboratories and providing them in Ready, Affordable, Safe and Effective propulsion systems to the warfighter.

-Nominator **Zachariah Sayre**

Management Achievement of the Year:
Christopher Massey

Christopher Massey is the Vice President for Civilian Accounts at Technomics. He provides direction and guidance to over 60 analysts supporting contracts at the Department of Energy (DOE), Department of Homeland Security (DHS), National Nuclear Security Administration (NNSA), and other civilian federal agencies. He provides cost estimating expertise to shape the Strategic Integrated Roadmap for improving and advancing NNSA's cost estimating capability. Prior to his current role, Chris supported the Air Force Research Lab (AFRL), Air Force Cost Analysis Agency (AFCAA), National Reconnaissance Office (NRO), Defense Acquisition University (DAU), Headquarters Marine Corps (HQMC), and National Aeronautics and Space Administration (NASA).

In his support to NNSA over the last year, Chris has worked with leadership to implement a Cost Capability Maturity Model that shapes the Strategic Integrated Roadmap to better support planning, programming, decision support, and portfolio resource allocation for major projects. His expertise has allowed

Christopher Massey

NNSA to focus on improving policy, people, and tools related to cost estimating and analysis.

For policy, Chris and the Technomics team provided the foundational elements and tools for new policies that improve and codify cost estimate-related activities in standard NNSA business processes including NNSA Policy (NAP) 413.3A. "Responsibilities for Independent Cost Estimates," NAP 413.5, "Programmatic Cost Estimating," and NAP 413.6, " Confidence Levels and Escalation for Cost Estimating."

For people, he leads a team that supports the Cost Estimating Analysis Group (CEAG) and Cost Estimating Community of Practice (CECOP), a community focused on developing and expanding the use of cost estimating and analysis best practices within the agency and contractor-run sites that perform and execute major projects in support of the NNSA mission. CEAG is dedicated to increasing NNSA's ability to forecast the scope, resources, and funding required for program execution; developing associated skill sets; and fostering communication, collaboration, and information sharing. Chris and his team also provide support to the CEAG in facilitation of the Annual CECOP Symposium, an event for training, education, and the exchange of cost estimating methodologies and best practices within NNSA. Within Technomics, Chris works with his employees and managers to identify resources, development plans, and career paths for his analysts and their areas of interest.

For tools, Chris and the team are developing and refining tools and data collection approaches to enable the development of more tailored and refined cost estimates for planning, programming, decision support, project execution, and portfolio resource allocation. The team developed the Cost, Schedule, Parametric Estimating Relationships for Construction (CSPER-C) model, which uses multiplicative error regression to estimate the cost of future infrastructure projects based on technical cost drivers. The data are used by program managers and analysts to better understand the impact of technical changes on project costs, obtain accurate and defensible estimates for use in planning, and to provide accurate benchmarking for future projects. To further the cost estimating capability, Chris and his team have been collecting, normalizing, and storing data in the Construction Cost Database (C2DB) to analyze data on major capital infrastructure for use in infrastructure planning, program management, cost estimating,

schedule estimating, and acquisition support. To support cost and schedule benchmarking, the team has employed innovative natural language processing to standardize projects to a common WBS which can be used to compare and gain insights into projects to support leadership decisions. Many of these tools and methodologies have resulted in ICEAA papers presented at the 2023 ICEAA Conference, are indicators of a maturing capability, and align with the strategic development Chris has worked on with the leaders within DOE and NNSA. .

Chris has continued to grow his teams in terms of both quantity of analysts and capabilities, support given to various cost analysis and decision support offices within the DOE, and support given to management and operating partners. The policy, processes, and tools Chris has helped develop within the past few years have increased the quality of NNSA cost estimating products and supported the delivery of robust planning studies, Analysis of Alternatives, programmatic cost/schedule estimates, and independent cost estimates and reviews while enabling increased capacity and improving quality. NNSA has come to rely on Chris and his team for their analytical rigor and unique vision.

Chris was fortunate to have started his cost career in highly developed cost shops, and over time he has mastered the fundamentals, risen to a management position in which he is able to influence, and created rich work environments where individuals can learn and grow into excited and capable cost analysts and support organizations to perform and innovate in cost estimating to quantitative analysis.

---Nominator **Victoria Dinh**

Association Service Award: Kevin Cincotta, CCEA®

Kevin Cincotta has demonstrated continuing dedication to the interests of ICEAA and made significant and sustained volunteer contributions to ICEAA (and its predecessors, SCEA and ISPA) for over 14 years. The association and cost analysis community are much better off for his
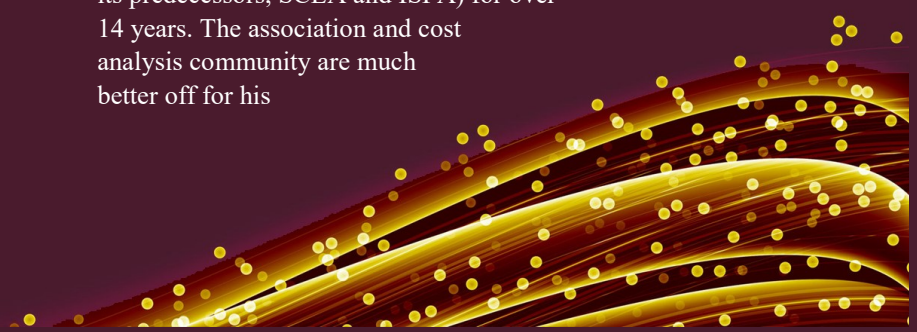
accomplishments. I have served as an elected member of the board in four different positions since 2015, including but not limited to President and Past President, and can say without doubt that no other volunteer has delivered as impactfully and reliably as Kevin during this timeframe.

His accomplishments, ordered from most to least recent, follow:

Kevin Cincotta

- Served as a member of the six-person ICEAA Nominating Committee that developed the slate of candidates for the 2023-2025 ICEAA Board of Directors election.

- Served the ICEAA Board, specifically the Vice President for Professional Development, in the appointed Director of Certification position for two board terms (2019-2023) and has agreed to continue for two more years.

- **Led** development of the companion certification exam for the Cost Estimating Body of Knowledge – Software (CEBoK-S). In addition to creating his own exam questions, he coordinated development of questions from other volunteers, vetted the questions and provided feedback leading to a pool of questions that constitute the exam that is available for testing today. This new ICEAA offering should serve to increase ICEAA membership and certifications in North America, Europe and Asia.

- Contributed significantly to CEBoK-S development. He routinely provided the most significant/thorough review comments of the seven-person review group and, by virtue of his value, became a trusted advisor to the ICEAA consultant awarded the CEBoK-S development contract. (Note: said consultant, Carol Dekkers, won the 2022 ICEAA Educator of the Year in large part for her CEBoK-S work!) He laid the foundation for this development effort by facilitating a memorandum of understanding (MOU) between ICEAA and the Defense Acquisition University (DAU) that allowed ICEAA to use content from DAU's well-established Software Cost Estimating course, aka BCF-250. This MOU was the result of his strong professional relationship with a key DAU representative. Similar to the companion exam, this new ICEAA offering should serve to increase ICEAA membership and certifications in North America, Europe and Asia.

- **Led** migration of the CEBoK certification exam from paper to an online platform that is delivering a number of benefits to test takers (scheduling flexibility, elimination of live proctor requirement, quicker and more illuminating test results, built-in scratch pad feature) and ICEAA (test statistics feature that provides feedback regarding test question strengths/weaknesses, reduced administrative burden for exam registration, administration and grading).

- **Led** expansion of the CEBoK certification exam question pool after years of the exam including the exact same set of questions. In addition to creating his own exam questions, he coordinated development of questions from other volunteers, vetted the questions and provided feedback leading to the pool of questions that now constitute the certification exam.

- Co-chaired conference training at four consecutive international conferences (2010-2014) and served as a trainer or co-trainer for at least one of the 36-48 training sessions offered each year.

- Helped/helping ensure the bright future of the profession by facilitating CCEA certification through most of the above activities, as well creation of the Technomics Training Institute (TTI) which during and since his Technomics tenue (2009-2013) has prepared not only Technomics staff, but also any ICEAA Washington Area Chapter member for the exam by virtue of Kevin opening the after-hours training to them. Kevin prides himself on doing whatever he can to "put people over," his way of saying help people develop and advance. His efforts to facilitate certification demonstrate exactly this.

- Contributed significantly to development of ICEAA certification exam by participating in a five-member team that created the original pool of questions related to Part 2 (i.e., the case study) of the exam. By the way, I too was a member of this team and first met Kevin during this effort.

In summary, Kevin's accomplishments are clear evidence that his selfless volunteerism has left an indelible mark on the Association and its members. He is well deserving of the 2023 Association Service Award.

--Nominator **Rick Collins**