

CPID Winter Newsletter

WINTER 2019

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Message From the Chair

Post-holiday greetings everyone! I'm not sure how the year passed so quickly. That's what happens when you are busy, and CPID has been very busy. Thank you to all of our member leaders and members who have participated in our events throughout the year. First, let's begin with our webinar series. We were pleased to offer three standalone webinars and one six-part webinar series this year. Our standalone webinars included Intro to R, Data Manipulation in R, and T-test in R. Our six-part series on Corporate Financial Savvy for Quality Professionals has been a hit as well. Many thanks to Deelan Jalil and Fred Faltin for their high-quality delivery and materials. Thanks to Anne Driscoll, past chair, who coordinated our first three webinars. We have trained more than 200 people this year who have been able to earn continuing education units at no cost. If you have suggestions for future webinar topics or would like to offer one in 2019, please contact me at vanmuljh@vt.edu. The webinar schedule for early 2019 will be out shortly.

Ashley Childress and I attended the 2018 World Conference on Quality Improvement in Seattle in late April/early May. We held our annual business meeting and networking session with our reception partner, the STAT Division. We had the opportunity to meet with many current and potential CPID members at the various functions at the conference, as well as learn about the impact of the ASQ Transformation on our division.

We are pleased to have co-sponsored a successful Fall Technical Conference in October in West Palm Beach, FL. Thanks to our conference co-chairs, Daksha Chokshi and Mindy Hotchkiss, for all their hard work. The FTC program committee chair, Sarah Burke from CPID, led the committee to provide an excellent all-around program. Many attendees commented that there were so many good talks that they had difficulty choosing which to attend. It just keeps getting better and better! If you were not able to attend, look for the Allison Jones-Farmer's Youden Address to be published (open access for three months!) in Quality Engineering in early 2019. What a great example of thought leadership in our field! We also hope to offer several FTC talks as webinars.

One of my favorite jobs at the FTC is the presentation of the awards. The Wilcoxon Award is presented for the best applied paper in *Technometrics*, and the Youden Award is for the best expository paper in *Technometrics*. CPID honored Matt Pratola from The Ohio State University and Ofir Harari, Derek Bingham, and Gwen Flowers from Simon Fraser University with the Wilcoxon Award for their paper "Design and Analysis of Experiments on Non-Convex Regions" (Issue 1, page 36). Anil Damle of Cornell and Yuekai Sun of the University of Michigan were selected to receive the Youden Award for their work entitled "A Geometric Approach to Archetypal Analysis and Nonnegative Matrix Factorization" (Issue 3, page 361). John Szarka, Kevin White, and Willis Jensen received the Shewell Award for the best presentation including written materials from their 2017 FTC presentation, "Stability Assessment with Stability Index." CPID also sponsored their first-ever student travel grant for the FTC, awarded to Shane Bookhultz, a PhD student in the Department of Statistics at Virginia Tech.

While member leaders have been busy bringing you these events and more, we have also been working behind the scenes to ensure the ASQ Transformation runs smoothly for CPID. This includes understanding how the Transformation will affect our offerings and budgets. We are pleased to say we will continue to provide member value next year through continuing our current initiatives and embarking on new ones. Webinars will continue for 2019 and be overseen by a webinar chair and a committee. The 2019 FTC will be held at NIST headquarters in Maryland. Other initiatives include networking and forming synergies with other organizations to promote CPID and ASQ, as

well as strengthening our body of knowledge. CPID will be offering additional student travel grants. We are also considering a name change to reflect that our reach is broader than the typical connotation of "chemical." Stay tuned! You will be in excellent hands as Ashley Childress from Eastman takes the helm as chair.

As I close, I would like to say thank you to our outgoing officers including Treasurer John Szarka and Secretary Ken Smith. CPID could not exist without body of knowledge updates from Education Chair Dotty Siempolinski, membership duties carried out by Jennifer Kensler, Shewell Awards and Fellows nominations coordinated by Malcolm Hazel, communications pushed to the website by Carly Metcalfe, a successful audit from Flor Castillo, FTC short courses and awards selection from Maria Weese, and Stephanie Dehart navigating the impact of the ASQ Transformation on the FTC as Steering Committee representative. Other member leaders will be taking on new roles including Sarah Burke as chair-elect (while still serving as FTC program representative) and Amanda McGough moving from newsletter chair to treasurer. They have expertly executed their current roles, and we are grateful for their willingness to try something new. New member leaders, Jennifer Williams and Mary Conroy, will on-board as secretary and communications chair, respectively. And, of course, a big thank you to Ashley Childress, chair-elect, who has been an excellent sounding board and co-leader in the execution of our business plan. I appreciate everyone's service to CPID. CPID looks forward to serving you in 2019!

Jennifer Van Mullekom
CPID Chair, 2018

Summary of the 62nd Annual Fall Technical Conference

Dear Members of the Chemical and Process Industries Division,

The 62nd Fall Technical Conference took place the first week of October to great success, so I wanted to give you a summary of the event for those who may have missed it. This year's conference was held in sunny West Palm Beach, FL, from October 3-5. Our conference theme was "Statistics & Quality: Riding the Big Data Wave." The conference was a great success with approximately 150 people attending, including many first-time conference attendees! The conference co-chairs, Mindy Hotchkiss and Daksha Chokshi, did an amazing job coordinating the conference – we cannot thank them enough for their hard work.

The conference kicked off on Wednesday, October 3, with four short courses covering topics in Bayesian statistics, 21st century screening designs, strategies for formulations development, and statistics and data science. We thank Yongtao Cao and the short course committee for selecting and organizing the short courses this year. Following the short courses, we had our first gathering at the opening reception sponsored by ASQ's Statistics Division outside in the hotel's courtyard. It was an excellent evening reconnecting with old friends and meeting new ones.

On Thursday, October 4, the general session began with Wayne Nelson's plenary titled "Collaboration." We congratulate him on winning the Gerald J. Hahn Achievement Award! Jerry Tarnacki, retired senior VP of the Space Business Unit, Aerojet Rocketdyne, gave a very interesting luncheon talk on "Aerospace Technologies: Past, Present, and Future." L. Allison Jones-Farmer provided an insightful Youden Address, "Leveraging Industrial Statistics in the Data Revolution" and Lisa

LaVange, ASA president, discussed "Statisticians Leading in a Data Science World." The technical program had a diverse mix of talks ranging in topics from design of experiments, Big Data, quality, education, and reliability, with a strong focus on applied problems. I thank the other members of the program committee for their invaluable help putting together this year's technical program. On both Wednesday and Thursday nights, the hospitality suite provided a venue to relax and network at the end of each day! The conference ended Friday with a wine and cheese reception and panel discussion sponsored by SPES on "Statistical Engineering: What is It and Where is It Going?" Slides from this year's talks will be made available on the conference website at falltechnicalconference.org.

I was very pleased with this year's conference and want to thank the sponsors and exhibitors who contributed to its success. I'd like to thank our diamond-level sponsor, Aerojet Rocketdyne, gold-level sponsor, Proctor & Gamble, silver-level sponsor, Shell, and bronze-level sponsor, Adsurgo, for their support. We'd also like to thank Minitab, JMP, and Stat-Ease for their continued support as exhibitors at the FTC.

Finally, I would like to thank the FTC Steering Committee, the CPID leadership, and the many volunteers for their support to make this conference such a success! Next year, the 63rd FTC will be held at the National Institute of Standards and Technology in Gaithersburg, MD, from September 25-27, 2019. You can visit falltechnicalconference.org for more details. I hope you'll make plans to attend, and I look forward to seeing you there!

Sarah Burke
2018 FTC Program Chair

Summary of the 62nd Annual FTC by Student Grant Winner, Shane Bookhultz

In July 2018, my supervisor, Kevin White, and mentor, Stephanie DeHart, recommended that I apply for the FTC student grant to further my education in statistical applications to industrial and educational settings. Based on the experience at Eastman and during my first year of statistics at Virginia Tech, I gained an interest to learn more about real-world applications. The Fall Technical Conference as a whole was very beneficial in terms of networking with professionals and learning about techniques applicable in research.

While at the Fall Technical Conference, I was able to connect with Joseph Voelkel and Amir Tavanaei. Joseph Voelkel is a professor at RIT, and Amir Tavanaei is a data scientist at Proctor & Gamble. Talking to both of these established professionals in their prospective fields gave me a great look into the future of academia, as well as industry. The receptions and luncheons were a great opportunity to network with other people who were not presenting. Starting a conversation was relatively easy, due to the number of Virginia Tech alumni who were there. One talk I enjoyed was the Recent Advances in Order-of-Addition experiments by Dennis Lin. He is a very passionate and funny speaker who conveyed his talk through jokes and specific examples. I really appreciated the opportunity to connect and to get fantastic ideas for future careers, in addition to possible research opportunities.

Shane Bookhultz

2018 FTC Student Grant Winner

Shane Bookhultz

Currently, Shane is a second year PhD student working under Dr. Leman in the statistics department. He is involved in the Urban Computing Program working on a research project to determine the monetary value of environmental events and difficulty to monetarily quantify events into a utility model. His research interests are in social media text analysis, modeling, and Bayesian analyses. Some hobbies he is involved in are rock climbing, ultimate disc, and tennis. Some of Shane's goals for the future are that he wants to be able to publish a paper in the next year and to improve his writing skills.

Awards presented at the 2017 Fall Technical Conference

The Chemical and Process Industries Division of ASQ presented the following awards at the 2017 FTC:

The **Frank Wilcoxon Prize** for the best practical application paper in the previous year's issues of *Technometrics* was awarded to Matthew T. Pratola, Ofir Harari, Derek Bingham, and Gwenn E. Flowers for their paper, "Design and Analysis of Experiments on Nonconvex Regions" (2017).

The **Jack Youden Prize** for the best expository paper in the previous year's issues of *Technometrics* was awarded to Anil Damle and Yuekai Sun for their paper, "A Geometric Approach to Archetypal Analysis and Nonnegative Matrix Factorization" (2017).

The **Shewell Award** is presented during the FTC for the best contributed talk from the prior year, based on real-time rankings from session participants and follow-up assessments by a panel of judges. This year, it was given to presenting author John Szarka of W.L. Gore and coauthors Willis Jensen and Kevin White for their talk, "Stability Assessment with the Stability Index."

Congratulations to all the award winners!

Both *Technometrics* award-winning papers are available open access sponsored by CPID until April 30, 2019. They can be accessed in the following links:

[Design and Analysis of Experiments on Nonconvex Regions](#)

[A Geometric Approach to Archetypal Analysis and Nonnegative Matrix Factorization](#)



World Conference on Quality and Improvement is fast approaching!

The 2019 conference will be held in Fort Worth, TX, from May 20-22.

For more information, please check out the link: <https://asq.org/conferences/wcqi>

Make sure to stop by the CPID booth while at the World Conference.

2018 William G. Hunter Award: Dr. James M. Lucas



The Statistics Division of ASQ is pleased to announce Dr. James M. Lucas is the recipient of the 2018 William G. Hunter Award. The William G. Hunter Award was established by the Statistics Division in 1987 to recognize the many contributions of its founding chair at promoting the use of applied statistics and statistical thinking. The attributes that characterize Bill Hunter's career—consultant, educator for practitioners, communicator, and integrator of statistical thinking into other disciplines—are used to help decide the recipient.

Dr. Lucas is the principal at J. M. Lucas and Associates, a consulting firm in statistics and quality management. This firm implements business systems with statistical aspects. Before starting his own consulting firm, Dr. Lucas was a senior

consultant at DuPont's Quality Management and Technology Center for more than 20 years where he conducted his early seminal work on applied statistics. Dr. Lucas's research focuses on practical solutions to real-world problems, emphasizing the underlying science for the problem. He has successfully integrated statistical thinking with other disciplines throughout his career. For example, he was a major contributor to the development of statistical systems used throughout DuPont, including experimental design systems and statistical process control initiatives.

He has been an adjunct professor at the University of Delaware and Drexel University, and he has directed six PhD dissertations. He is a Fellow of the American Statistical Association (ASA) and ASQ, an associate editor of the *Journal of Quality Technology*, and a past associate editor of *Chemometrics and Intelligent Laboratory Systems* and of *Technometrics*. He has more than 70 publications, and many are cited frequently. He authored the most cited paper in two volumes of *Technometrics* and in two volumes of the *Journal of Quality Technology*. He has won many awards including the Shewhart Medal, the Brumbaugh Award, the H. O. Hartley Award, the Ellis R. Ott Foundation Award, the Don Owen Award, the Shewell Award, and the Youden Prize. He has a PhD in statistics from Texas A&M University, an MS in statistics from Yale University, and a BS in engineering from The Pennsylvania State University.

2019 CPID Leadership

LEADERSHIP POSITION	NAME	EMAIL
Chair	Jennifer Van Mullekom	vanmuljh@vt.edu
Chair-Elect	Ashley Childress	anchildress@eastman.com
Secretary	Ken Johnson	kenneth.l.johnson@nasa.gov
Treasurer	John Szarka	jszarka@wlgore.com
Nominating Chair (Past Chair)	Anne Driscoll	adriscoll@vt.edu
Audit Chair (Past Chair 2)	Flor Castillo	fcastillo@sabic.com
Examining Committee Chair	Malcolm Hazel	malchazel@gmail.com
Membership Chair/VoC Chair	Jennifer Kensler	jennifer.kensler@shell.com
Communications Chair (newsletter/internet)	Amanda McGough	mcgougha@corning.com
Internet Liaison	Carly Metcalfe	carlymahany@gmail.com
Education Chair	Dotty Sempolinski	sempolinskide@gmail.com
Shewell Awards Chair	Malcolm Hazel	malchazel@gmail.com
Wilcoxon/Youden Awards Chair	Maria Weese	weeseml@miamioh.edu
Standards Committee Rep	Brenda Bishop	brend821@msn.com
FTC Steering Committee Rep	Stephanie DeHart	stephanie.pickle@gmail.com
FTC 2018 General Co-Chairs	Daksha Chokshi and Mindy Hotchkiss	Mindy.Hotchkiss@rocket.com Daksha.chokshi@rocket.com
FTC 2018 Technical Program Rep	Sarah Burke	seburke89@gmail.com
FTC 2018 Short Course Rep	Maria Weese	weeseml@miamioh.edu
Volunteer Relations Specialist	Michael Sullivan	msullivan@asq.org

CPID's Mission: The Chemical and Process Industries Division facilitates the interchange of ideas, tools, practices, and solutions necessary to address real chemical and process industry problems.

CPID's Vision: To be the customer-centered volunteer organization that is the primary and most credible global resource for quality improvement and management practices in the chemical and process industries.



How to get involved

For more information about the division, please visit our website at asq.org/cpi.

If you have any questions or suggestions for the division or would like to increase your involvement with the division, please contact Jennifer Kensler, membership/VoC chair, at: jennifer.kensler@shell.com or Jennifer Van Mullekom, 2018 CPID chair, at: vanmuljh@vt.edu.

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