



# Quality Through Collaboration



1st California Environmental Laboratory  
Accreditation Program Conference

**Tuesday June 1st - Thursday June 3rd**

## MESSAGE FROM THE 2021 ELAP CONFERENCE CO-CHAIRS:

For many, 2021 encompasses the hope of new starts and the promise of some return to normalcy. At ELAP, it also marks the establishment of a critical regulations update, and the highly anticipated inaugural ELAP conference. We are so grateful for this opportunity to join together with the laboratory community to celebrate the progress made in 2020 and inspire innovation for 2021.

The conference theme “Quality through Collaboration” embodies the most positive outcomes of a difficult season; how our industry has not only worked together, but persevered through unprecedented challenges. It is our hope that this conference will highlight some of the best and most exciting topics happening in the environmental laboratory community, provide an opportunity to learn from the experts, and spark new ideas for improving your laboratory. Whether you are most interested in hearing from our ELAP team, listening to the exciting science happening in the industry right now, or looking for ways to improve your laboratory’s workflow, we have worked hard to deliver a conference that everyone will enjoy and benefit from.

We would like to express our sincere gratitude to all participating in the 2021 ELAP Conference. First, to our amazing presenters – your time, effort, and participation made this conference possible. To the ELAP Conference steering committee – your guidance and inspiration were an invaluable resource. And, most importantly, to the laboratory community – your enthusiastic response to this conference is more than we could have imagined. Your dedication to providing quality data is the foundation for all environmental and public health decisions. We look forward to “seeing” you there!

Sincerely,

**Jennifer McClaren and Katlin Bloom**  
ELAP Conference Co-chairs



# QUALITY THROUGH COLLABORATION

## DAY 1 – MASTERCLASS IN ACCREDITATION

- 9:00 AM ● **Day 1 Kickoff**
- 9:10 AM ● **Keynote Speaker: State Water Resources Control Board Member, [Laurel Firestone](#)**
- 9:20 AM ● **ELAP 2.0**  
Christine Sotelo
- 9:30 AM ● **Passport to Proficiency Testing Success**  
Dr. Christopher Ryan
- 9:45 AM ● **Ace Your Assessment**  
Maria Friedman
- 10:05 AM ● **Navigating the ELAP Application Process**  
Katelyn Hilty
- 10:20 AM ● **Quality Systems Questions for Your Laboratory (Quiz Yourself!)**  
Christopher Hand
- 10:35 AM ● **Q&A Panel**  
Christine Sotelo  
Dr. Christopher Ryan  
Maria Friedman  
Katelyn Hilty  
Christopher Hand
- 11:15 - 11:45 AM ● **BONUS: Hear from Third Party Assessors - Perry Johnson Laboratory Accreditation, IAS, ANAB, and A2LA**

## DAY 2 – LABORATORY SCIENCE OF TOMORROW

- 9:00 AM ● **Day 2 Kickoff**
- 9:10 AM ● **Keynote Speaker: ELTAC Member, [Dr. Agustin Pierri](#)**
- 9:20 AM ● **Identification and Analysis of 6ppd-quinone, the Coho Salmon Toxicant**  
Zhenyu Tian
- 9:35 AM ● **WRF DPR-2: EPA 1693 Modified for Detection of Parasites in Untreated Wastewater**  
Dr. Yeggie Dearborn
- 9:50 AM ● **Intercalibration Study to Support Microplastics Monitoring and Methods Accreditation in Drinking Water**  
Dr. Charles Wong
- 10:05 AM ● **eDNA: Progress Towards Molecular Methods Standardization in California and Beyond**  
Dr. Susanna Theroux
- 10:20 AM ● **EPA Method 533: Why Did We Need Another PFAS Drinking Water Method?**  
Charles Neslund
- 10:40AM ● **Application of ddPCR for Detection of Enterococcus Spp. in Coastal Water Quality Monitoring**  
Dr. Chad Crain
- 11:00 - 11:30 AM ● **BONUS: Additional Q&A**



JUNE 1ST - 3RD

## DAY 3 – LABORATORY EFFICIENCY AND PERFORMANCE IMPROVEMENT

9:00 AM ● **Day 3 Kickoff**

9:10 AM ● **Keynote Speaker: ELTAC Member, Brad Meadows**

9:20 AM ● **What is Lean 6 Sigma?**

Dr. Robert Brogle

9:25 AM ● **US EPA Region 9 Laboratory Paperless Workflow Project**

Peter Husby

9:45 AM ● **Going Paperless**

Eduardo Morales

10:05 AM ● **Implementing a Quality Management System Makes a Difference**

Jerry Parr

10:25 AM ● **Meeting CA ELAP Regulatory Requirements Through Laboratory Automation**

Dr. Richard Danielson

10:45 AM ● **Water Boards Emergency Management Program**

Sarah Ries

10:50 AM ● **ELAP 2.0 and You**

Christine Sotelo

11:00 -11:30 AM ● **BONUS: Additional Q&A**





## **Laurel Firestone, State Water Resources Control Board Member**

Laurel Firestone was appointed to the State Water Resources Control Board by Governor Gavin Newsom in February 2019. Prior to joining the Board, Laurel co-founded and co-directed, from 2006-2019, the Community Water Center, a statewide non-profit environmental justice organization based in California's Central Valley and Central Coast. Her career has focused on ensuring all Californians have access to safe, clean, and affordable drinking water, and building increased diversity, equity, and inclusivity into water decision-making.

Laurel has received a variety of awards and recognitions for her work, including the James Irvine Foundation's Leadership Award in 2018, and the Gary Bellow Public Service Award by the Harvard Law School in 2013.

Laurel served on the Tulare County Water Commission from 2007-2012, as well as a variety of state policy advisory committees. She has partnered with universities to develop research and clinical programs to further the human right to water, and written articles and publications related to drinking water and the environment.

Laurel graduated with honors from Harvard Law School and holds a B.A. magna cum laude in Environmental Studies from Brown University.



## **Christine Sotelo, ELAP Program Chief**

Christine Sotelo is the Chief of California's Environmental Laboratory Accreditation and began her career with the California Water Boards in 1999 taking on leadership roles in the following areas: water quality monitoring and assessment; municipal storm water program permitting and auditing; water quality investigations and multi-agency enforcement actions; CEQA compliance and emergency management. From 2007 to 2012, she managed the Small Municipal Storm Water Program and advanced the state's regulation of storm water quality by developing rules and policies for protecting California waters. She served as Board of Directors for her local watershed council and currently serves as the Ex Officio Board of Director for the California Society of Environmental Analysts.



## **Christopher Ryan, PhD**

Chris Ryan received a bachelor's degree in Biological Sciences (1997) and a Ph.D. degree in Biochemistry (2004) from Southern Illinois University. After finishing his studies, Dr. Ryan went on to complete post-doctoral fellowships at the University of California Los Angeles. In 2013 he joined the Environmental Chemistry Laboratory with the CA Department of Toxic Substances Control as a Research Scientist. Dr. Ryan accepted a position in the Drinking Water and Radiation Laboratory with the CA Department of Public Health in 2014. In 2016 Dr. Ryan joined CA ELAP. In his current position he is the supervisor for the Monitoring Unit where he oversees review of proficiency test studies to ensure laboratory compliance with program procedures and regulations.



# CONFERENCE SPEAKERS



## **Maria Friedman, ELAP Assessment Unit Supervisor**

Ms. Friedman manages the Assessment Unit of the California Environmental Laboratory Accreditation Program and is a member of the program's management team. She has more than 25 years of experience in multiple roles in the environmental laboratory industry and served for 11 years as Quality Manager for commercial laboratories in California.

She is a US EPA Certification Officer for Organic and Inorganic Chemistry, Microbiology, and Parasitology (Cryptosporidium and Giardia) in drinking water, a certified ISO/IEC 17025 Lead Assessor, a Certified Quality Auditor, and a certified Lean Six Sigma Black Belt. She holds an MBA and a BS in Chemical Engineering.



## **Katelyn Hilty - Lead, ELAP Administrative Operations**

Katelyn Hilty leads administrative operations and communications for the Environmental Laboratory Accreditation Program. In addition to overseeing the ELAP accreditation process, Katelyn devotes time to assisting laboratories become ELAP accredited. Recently, this has included overseeing the development and implementation of the Roadmap to ELAP Accreditation initiatives, like webinars, website revisions, trainings, and Transition Appointments. Katelyn spent ten years honing her customer interaction skills in several arenas prior to joining ELAP in March of 2015. Kate holds a Bachelor of Arts in Government and Communication Studies from California State University, Sacramento and is currently pursuing her master's degree in Public Policy and Administration from the same institution.



## **Christopher Hand, ELAP Environmental Scientist**

Christopher is an environmental scientist in ELAP's Program Development, Research, and Enforcement unit. He graduated with a Bachelor of Science in Chemistry from California State University at East Bay where he worked in a research laboratory studying high temperature and pressure on amino acids. Prior to his role at ELAP, he worked as a lead analyst at an environmental laboratory where he analyzed complex matrices for heavy metals. Christopher is one of ELAP's Laboratory Certification Officers and assisted with ELAP's new regulations including the development of the regulation's checklists available on ELAP's website.

WEDNESDAY, JUNE 2ND



### **Agustin Pierri, PhD, Weck Laboratories**

Dr. Agustin Pierri obtained his B.S. in Chemistry from the University of Southern California and his Ph.D. in Chemistry from the University of California Santa Barbara where he worked on synthesizing photoactive pharmaceuticals and nanocarriers. He has authored many scientific publications and has given numerous presentations at technical meetings on topics ranging from inorganic photochemistry to environmental analytical chemistry. At Weck Labs, he has worked as a bench chemist in all sections of the laboratory, which includes microbiology, inorganics, and organics. Additionally, he has extensive experience developing and validating methods for emerging contaminants by sophisticated techniques such as LC-MS/MS, GC-MS/MS, and ICP-MS. Since becoming the Laboratory Technical Director in 2016, he continues to be active in developing methods for novel contaminants, as well as modernizing legacy analytical methods to lower detection limits and improve data quality.



### **Zhenyu Tian, PhD**

Zhenyu Tian is a postdoctoral research scientist at the Center for Urban Waters, University of Washington Tacoma, applying non-target screening to identify emerging contaminants in stormwater, marine water, and biota, and to evaluate engineered treatment systems. He received his Ph.D. in Environmental Sciences and Engineering from the University of North Carolina at Chapel Hill. His research interests include emerging contaminants, suspect and non-target screening, high-resolution mass spectrometry, metabolomics, and bioremediation.



### **Yeggie Dearborn, PhD**

Dr. Dearborn is the owner and founder of Cel Analytical Inc., a California ELAP certified environmental laboratory in San Francisco since 2005, specializing in the analysis of microbiological pathogens in water, wastewater and sludge. Recent project experience includes serving as the lead laboratory to two nationally certified sub labs for the Water Research Federation (WRF) Direct Potable Reuse Phase 2 (DPR-2) pathogen monitoring in raw wastewater campaign (2019-2021). Cel Analytical has been certified and approved to participate in many inter-laboratory projects, including the EPA ESWTR-LT2 monitoring for Cryptosporidium and Giardia and the US EPA UCMR3 groundwater prescreening survey for enteric viruses (US EPA Method 1615), bacteriophage (US EPA Method 1602) and indicator bacteria.



### **Charles S. Wong, Department Head Chemistry, Southern California Coastal Water Research Project Authority**

Dr. Charles Wong is Department Head Chemistry at SCCWRP. His research interests include developing novel methods for constituents of emerging concern, e.g., pharmaceuticals, polyfluorinated alkyl substances, metabolites and degradates, and microplastics. He also studies the sources, fate processes, and ecotoxicological consequences of these chemicals through bench- to mesocosm-scale controllable experiments; and in tropical, temperate, and polar climates through case studies. Previously, he was Professor and Canada Research Chair at the University of Winnipeg. He continues to hold concurrent adjunct



# CONFERENCE SPEAKERS

appointments there and at Jinan University (China), the University of Manitoba, and the Costa Rica Institute of Technology. He is Associate Editor for Environmental Pollution, and for Critical Reviews in Environmental Science and Technology, and served on the SETAC North America Board of Directors from 2012-2015.



## **Susanna Theroux, PhD**

Susie Theroux is a senior scientist at the Southern California Coastal Water Research Project. She focuses on algal bioassessment and the use of molecular methods in routine bioassessment and biomonitoring. She is also the lead for the California Molecular Methods Workgroup.



## **Charles Neslund, Eurofins Environment Testing PFAS Practice Leader**

Charles (Chuck) Neslund is the Scientific Officer for Eurofins Lancaster Laboratories Environmental, and PFAS Practice Leader for Eurofins Environment Testing US. Chuck has worked in environmental analytical chemistry for over 36 years and works out of the Lancaster, PA location. He is a subject matter expert in HRMS analysis and PFAS analysis. He is responsible for identifying and framing trends in analytical testing and equipment. Chuck initiates new methodology and directs research and development. He has a B.S. in Chemistry from the University of Pittsburgh (1982) and two years of graduate study credits in Organic Chemistry from the University of Pittsburgh (1982-1984).

He is a member of the American Chemical Society (ACS), Chromatography Forum of Delaware Valley (CFDV), Air & Waste Management Association (AWMA), Society of Environmental Toxicology and Chemistry (SETAC), and Sediment Management Workgroup (SMWG).



## **Chad Crain, PhD**

Dr. Crain is the Microbiology Unit supervisor at the Drinking Water and Radiation Laboratory Branch. He joined the laboratory in January 2016. Before joining CDPH, he worked as a Senior Research Scientist in the biotechnology industry where he conducted research on infection disease immunology and vaccine development. He received a PhD in cryobiology and MS in environmental engineering from UC Davis, and a BS in molecular biology from UC Santa Cruz. Chad runs the branch's certified water testing lab for microbial contaminants and is responsible for implementation of harmful algal blooms biotoxin methods for recreational water testing. In addition, he manages specialized research projects focused on environmental microbiology such as the application of ddPCR for beach water quality monitoring, validation of the receptor binding assays (RBA) for monitoring PSP biotoxins, and development of environmental Legionella testing methods. His hobbies include swimming, surfing, and soccer.

THURSDAY, JUNE 3RD



### **Brad Meadows, Babcock Laboratories**

Brad Meadows is the Vice President and Technical Director for Babcock Laboratories in Riverside, CA. Over his 32+ years in the industry, he has served in a variety of roles that include bench chemist, LIMS Administrator, Director of Quality and Laboratory Director. Brad relies heavily on key performance indicators (KPIs) to monitor laboratory operations and is an advocate of the “laboratory dashboard” as an effective business management tool. Brad attended California State University, Fresno and graduated with a Bachelor of Science in Chemistry and a Masters of Business Administration with a focus in Information Systems.



### **Dr. Robert Brogle, Ph.D. Physics; Lean Six Sigma Master Black Belt**

After avoiding the real world as long as possible by remaining in school for a Ph.D. in physics, Rob realized at his first aerospace job that academia does not prepare one for developing processes needed to properly run a lab (or any other real-world operation). After clearly demonstrating his deficiencies to the organization, Rob was sent to learn Lean Six Sigma where he eventually became a Master Black Belt. Since then, he has applied this methodology in technology, finance, automotive, food production, health care, and state government. Recently, Rob developed the State of California government Lean Six Sigma program that has certified over 300 Green Belts, 40 Black Belts, and 6 Master Black Belts across the state. His latest project is to figure out how to turn the Sacramento Kings into an actual NBA basketball team but so far has had no success.

### **Peter Husby, USEPA Region 9 Laboratory Director/USEPA Region 9 Drinking Water Laboratory Certification Program Manager**

Peter Husby has worked at USEPA Region 9 since 1986. He has been the director of the EPA Region 9 Laboratory since 2016. He was the team leader for Field Investigations and Biological Analyses at the EPA Region 9 Lab from 1993-2016.



### **Eduardo Morales, Weck Laboratories**

Eduardo Morales has been at Weck Laboratories for over 21 years. During this time, he has worked exclusively in the organic section where he has been involved in all aspects of its operation, and he now serves as the organic chemistry supervisor. Within the organic section, he is responsible for the development of new analytical methods and optimization of extraction techniques—mostly for constituents of emerging concern. Throughout the laboratory, he is also involved in implementing protocols that improve the operational aspect of the entire laboratory. Mr. Morales holds a Bachelor of Science degree in biochemistry from California State University Los Angeles.



STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS



# CONFERENCE SPEAKERS



## **Jerry Parr - Executive Director, The NELAC Institute**

Jerry Parr is the Executive Director of The NELAC Institute. He also is the conference organizer for the National Environmental Monitoring Conference. He has a BS in Chemistry from the University of Texas and has over 40 years of experience in environmental analytical chemistry.

Mr. Parr previously served on EPA's Environmental Laboratory Advisory Board, on the Board of the Environmental Sciences Section of ACIL and on several committees in the National Environmental Laboratory Accreditation Conference.



## **Rick Danielson, PhD**

Dr. Danielson was the Laboratory Director of IEH-BioVir Laboratories for more than 22 years. As the lab was State Accredited and ISO Certified, he has a wealth of experience in laboratory operations and producing legally defensible data. Previously, he served as the Chief of the Environmental Microbial Diseases Section (EMDS) of the Microbial Disease Laboratory (MDL) in the California Department of Health Services, and as a US FDA certified Laboratory Evaluation Officer (LEO). He is a Senior Sales Account Executive with Accelerated Technology Laboratories, a laboratory automation and LIMS software company.



## **Sarah Ries, Water Boards Emergency Management Program Chief**

Sarah Ries serves in the role of Emergency Management Program Chief with the State Water Resources Control Board. The program's responsibilities include: protecting human health and safety, protecting water quality and the environment from hazardous materials, coordinating with and support drinking water and wastewater utilities, environmental laboratories, agencies, partners, and stakeholders, providing public information and outreach, and investigating impairments to water and drinking water quality related to emergencies.

Sarah has previously worked as an environmental laboratory analyst both for the California private sector and the State of Oklahoma specializing in drinking water quality, emergency response, public health and safety, and environmental protection. She has over 20 years of experience in environmental and natural sciences and holds a BS in Botany from Humboldt State University.