



## Florida Society of Environmental Analysts 2024 Spring Conference May 22-24, 2024

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### Day 1 - Wednesday May 22, 2024 Workshops

7:30am Registration Opens

10:00am – 6:30pm Exhibitor area open

12:00 – 1:00pm Lunch (provided)

Foyer

Foyer, Siesta Key Room, Longboat Key Room

Watercolours Restaurant or Outdoor patio

### Wednesday Morning Session 8:00am – 12:00pm (Break 10:00-10:30am)

#### ***Workshop 1 – Back to Basics ~0.40 CEUs – MeiBeth & Michael Shepherd, Shepherd Technical Services (Belleair)***

Both new and old laboratory staff will benefit from this workshop which goes over the use and care of general lab equipment and covers some good laboratory practices. Time is spent reviewing the names and uses of laboratory equipment including pipettes and balances. SDS, PPE, basic calculations, rounding, and significant figures are also covered. Come remember things you have forgotten, or learn them!

#### ***Workshop 2 – Regulations 101 ~0.40 CEUs – Valerie Slaven, Pace Analytical (Redington)***

Learn what regulations apply to what samples, where to find the regulations, what they contain and what they mean. Learn how to determine, document and approve modifications if they are allowed and fit for use. Demonstrate your current knowledge and new knowledge learned in the session through interactive activities.

### **Lunch 12:00-1:00pm – Provided by FSEA**

### Wednesday Afternoon Session 1:00pm – 5:00pm (Break 3:00-3:30pm)

#### ***Workshop 3 – Basics and Troubleshooting of Discrete Analyzers ~0.4 CEUs – Johann Hinck and Joey Redovich, SEAL Analytical (Belleair)***

This workshop is designed to be applicable to users of all discrete analyzer types. Discussed will be the history of discrete analysis technology, basics of operation, the functionality of each component of the instrument, and understanding the importance of each component's role. For successful troubleshooting we need to ensure that the instrument's mechanics are working smoothly and that each chemical reaction is occurring properly. To address these topics, we will discuss the procedures of a typical maintenance routine as well as overview chemistry troubleshooting for ammonia, TKN, ortho-Phosphate, Total Phosphorus, and Nitrate+Nitrite.

#### ***Workshop 4 – The Auditors are Coming ~0.40 CEUs – Silky Labie, ELCAT (Redington)***

When the lab hears those word, what do they do? This session will review what should and should not happen throughout the entire process: your expectations, the auditor's expectation, and how to react in certain situations.

### **5:00-6:30pm Reception in Exhibit Area with Hors d'oeuvres and Door Prizes**

## Day 2 - Thursday May 23, 2024 Technical Sessions in the Main Ballroom - ~0.75 CEUs

7:45am Registration Opens	Foyer
7:30am – 8:30am Continental Breakfast	Longboat Key Room
8:00am – 3:15pm Exhibitor area open	Foyer, Siesta Key Room, Longboat Key Room
12:00 – 1:15pm Lunch (provided)	Watercolours Restaurant
7:00-9:00pm Scholarship Fundraiser & Networking	Longboat Key Room

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**8:15 – 8:20am** *Opening Remarks – Robin Cook, FSEA President*

**8:20 – 9:30am** *Peer Session – Moderator – Nick Evans, JEA and FSEA Vice-President*

Bring your challenges to get feedback from your peers or bring your tips/tricks to share with others and give feedback. This informal session is a great way to ask your questions and share ideas in a collaborative environment.

**9:30 – 10:15am** *Auto Dilution for ICP-OES and ICP-MS – Abe Gutierrez, Agilent*

Demands on modern environmental laboratories require an increase in efficiency through automation. A new auto dilution capability for ICP-MS and ICP-OES will be presented. This new capability will improve automation by making calibration curves from a single stock solution, dilute samples prior to analysis (ex. reduce acid concentration) and automatically dilute and re-measure over-ranged samples. This will significantly reduce post-analysis rework, manual dilution errors of affected samples and risk of contamination. In this presentation we will discuss the dilution accuracy, precision and long-term stability of the auto dilution system, benefits, drawbacks and alternatives to auto dilution.

**10:15–11:00am** *BREAK in Exhibit Area – Foyer, Siesta Key Room, Longboat Key Room*

**11:00–11:45am** *Comprehensive Approach to PFAS Analysis – Frank Kero, Ph.D., Bruker*

Detection and identification of thousands of PFAS compounds at a very low concentrations are a serious analytical challenge. The complexity of environmental matrixes in which these pollutants are found, as well as abundance of isomeric and previously unreported PFAS structures can make this task even more difficult. To address these challenges, the combination of high-resolution mass spectrometry (HRMS) and high-resolution trapped ion mobility spectrometry (TIMS) allows reliable separation of isomeric PFAS compounds, while highly optimized methods of ionization in combination with collisional cross-section ion filtering provide high levels of sensitivity and accuracy of analysis even in a complex matrix. Hardware performance combined with advanced data processing software enables identification of unknown compounds and streamlines a difficult analytical challenge into a manageable workflow, while implementation of direct ionization in real time (DART) vastly speeds up routine targeted analysis workflows.

**11:45am-noon** *FSEA Business Meeting, Introduction of Student participants in our Mentor Program, Shining Star Award*

**12:00-1:15pm** *LUNCH provided*

**1:15-2:00pm** *QCL-Based Spectroscopy for Rapid Identification of Microplastics – Louis Tisinger, Ph.D., Agilent*

Through the past few decades of rapidly expanding use of plastics and lack of awareness of their long-term impact, microplastics have become a pervasive environmental pollutant, the extent to which is now being studied. As testing of water for the presence of microplastics is becoming more prevalent, it is being recognized that these analyses can be very complex, requiring significant expertise for the operation of intricate instrumentation and the implementation of complex workflows. This presentation will introduce a quantum cascade laser (QCL)-based analyzer that automates the entire microplastics analysis workflow, providing identification, statistical analysis, and physical property measurement, all with minimal interaction by the analyst. Details on the operation of the system, a description of the simple microplastics analysis workflow, and sample data will be presented.

## Day 2 - Thursday May 23, 2024 Technical Sessions in the Main Ballroom - ~0.75 CEUs (cont)

7:45am Registration Opens	Foyer
7:30am – 8:30am Continental Breakfast	Longboat Key Room
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### **2:00-2:45pm**    *The Key LIMS Capabilities You Need to Optimize Lab Operations and NELAP Compliance – Ken Ochi, Confidence*

Laboratory Information Management Systems (LIMS) have become an essential component for many environmental laboratories. Today's LIMS provides functionality beyond sample management and reporting. LIMS will also allow organizations to streamline processes, improve productivity, and reduce operational costs. And a LIMS can help ensure compliance with NELAP and ISO 17025 requirements. What You Will Learn During the Presentation - A review of LIMS functionality designed to ensure compliance with NELAP and ISO 17025 accreditation; LIMS integration with instrumentation and other enterprise software applications allows organizations to eliminate redundant data entry and facilitates prompt sharing of information; Mobile functionality allows technicians to log sample information in the field and eliminate paper by uploading results directly to the LIMS; and IoT technology is at the heart of many wireless environmental monitoring solutions that can collect temperature readings automatically as well as trigger an alert when readings fall outside preset limits.

### **2:45-3:15pm**    *BREAK in Exhibit Area – Foyer, Siesta Key Room, Longboat Key Room*

### **3:15-4:00pm**    *Our Water, Our Priority – Jada-Star Maines, Analytik Jena*

Access to clean and safe drinking water is one of the most important fundamentals of human livelihood, so it is important to conserve this resource and ensure its high quality. This presentation will focus on the solutions available from Analytik Jena for three important parameters: Total Organic Carbon (TOC), Total Bound Nitrogen (TNb), and Adsorbable Organic Halides (AOX); how they are determined and why they are important analyses for water quality. The basic principle of TOC and TN analysis is the oxidation of Carbon and Nitrogen to form their oxides, which are detected by specific detection techniques. The Analytik Jena solutions for TOC determination in high matrix samples like wastewater will be discussed. The term AOX stands for Adsorbable Organic Halides, where X represents Chloride, Bromide and Iodide. The method can be applied to different types of water. The Analytik Jena solution for AOX determination will be discussed in this presentation.

### **4:00-4:20pm**    *Regional Meet and Greet – break out into small groups by Region to meet your Regional Director and other region members, offer suggestions for topics you would like to see in your region.*

### **4:20-5:05pm**    *FDOH Updates – Vanessa Soto-Contreras and/or Dr. Carl Kircher*

### **5:05-5:15pm**    *Door Prize Drawings*

### **7:30-9:30pm**    *Fredrick C. Bothe Scholarship for Environmental Studies Fundraiser and Networking- Longboat Key Room Join us for a fun evening of Lab Olympics! Grab a team of 4 or join one when you arrive for an evening of challenges, puzzles, lab events, team building and more!*

## Day 3 - Friday May 24, 2024 Field Workshop and Regulatory Sessions

7:30am Registration Opens	Foyer
7:30 – 8:15am Continental Breakfast	Foyer
10:30-11:00am Break	Foyer

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### Friday Field Workshop 8:00-11:00am ~0.30CEUs

#### *Workshop 5 – Enhancing Industrial Pretreatment Wastewater Sampling: Strategies, Standards and Insights ~0.30CEUs – Vance Reiman, JEA (Siesta Key Room)*

Acquiring representative samples from industrial pretreatment sites presents significant challenges. However, by adhering to FDEP SOPs, making use of your internal documents, and collaborating closely with your internal IP department, these obstacles can be effectively overcome. This workshop aims to facilitate an interactive session, engaging participants with common issues encountered during the collection of industrial pretreatment wastewater samples. Key topics include refined methods for collecting representative samples in accordance with FDEP SOP requirements, emphasizing the importance of rigorous internal SOPs and controlled documents to ensure high-quality results, and enhancing preparedness for audits. Furthermore, this workshop will offer insights from IP coordinators, sharing their concerns and advice to further assist collectors in acquiring representative samples effectively.

### Friday Regulatory Sessions and Forum 8:00am – 1:00pm ~0.50 CEUs

#### *8:00-8:45am How to Get the Most Out of Your Internal Audit – Lauren Webb, A2LA*

This presentation will provide strategies and insights aimed at optimizing the internal audit process. Internal Audits are a critical part of an organization's accreditation that offer an opportunity to enhance efficiency, strengthen compliance, evaluate risks, and improve overall organizational performance. This presentation will review: The Basics of Internal Audits; Compliance to the applicable standards; Steps of an Internal Audit; Effective Auditing Processes; Root Cause Analysis Techniques; Improvements/Corrective Actions implemented from the Internal Audit; Tips and Tricks. Learner Outcomes: 1. How to effectively conduct internal audits through the implementation of an internal audit plan and procedure, as well as the techniques used to conduct the internal audit. 2. How to utilize your audit as a tool to implement improvements and identify risks. 3. How to conduct effective Root Cause Analysis and the different techniques to determine how to implement appropriate corrective actions.

#### *8:45-9:30am Revisions to the TNI Standards – Paul Junio, TNI Consensus Standards Development Committee Chair and Pace Analytical*

#### *9:30-10:30am TNI Chemistry Committee Updates – Michelle Wade, TNI Chemistry Committee Chair and Pace Analytical*

TNI Chemistry Expert Committee proposed revised wording. We've been tackling all the fun chemistry topics (MDLs, DOCs, Calibrations) and think we might have language that could work.

#### *10:30-11:00am BREAK in Foyer*

#### *11:00-11:45am Updates from FDEP – TBD, FDEP*

#### *11:45am-1:00pm Regulatory Forum*

This session will allow attendees to submit questions in advance for our panel to answer. Typical questions include those related to laboratory accreditation, standards, regulatory interpretations and data issues. **Please e-mail your questions to [secretary@fsea.net](mailto:secretary@fsea.net) by noon on Thursday May 23rd so our panel has time to review the questions and prepare their answers.** If time allows, questions may be asked from the floor.

**Panel members(tentative):**

**Kristen Sapp/Sarah Noble - FDEP**

**Robin Cook (moderator) – Microbiology Expert, TNI Microbiology Committee Member**

**Paul Junio – TNI Consensus Standards Development Committee Chair**

**Michelle Wade -TNI Chemistry Expert Committee Chair**

**Vanessa Soto-Contreras/Dr. Carl Kircher – FDOH**