PROGRAM BOOK

SETAC NORTH AMERICA 43RD ANNUAL MEETING

13–17 NOVEMBER 2022 | PITTSBURGH, PA, USA

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Welcome to Pittsburgh

On behalf of SETAC, we are thrilled to welcome you to the SETAC North America 43rd Annual Meeting in Pittsburgh, Pennsylvania. This year's meeting is unique in that it marks the first in-person annual meeting in three years for SETAC North America and our first hybrid meeting.

In designing the meeting, we fully embraced the theme of the meeting, "Bridging Innovation and Sustainability." Pittsburgh, the city of bridges (446 to be exact) is a living example of an iconic industrial city with a long history of pollution that is undergoing a massive revitalization. Pittsburgh was one of the first cities in the U.S. to formally integrate the United Nation's Sustainable Development Goals into its city plans and policies. The convention center itself is a pioneer in sustainability and holds a Leadership in Energy and Environmental Design® (LEED) Platinum certification. Our favorite features are the rooftop garden and the recirculating water system, and we encourage you to take time to learn more about them. We also considered sustainability in our decisions while planning the meeting, acknowledging that the decisions organizers and participants make regarding an in-person meeting can have a major impact. To lower the meeting footprint, we opted for sustainable choices whenever possible, for example, we cut down on printed materials, the size of the program book, and are encouraging attendees to use the app instead; chose reusable, recycled or recyclable materials where possible; eliminated custom carpeting in the exhibit hall; and are offering more plant-based catering.

In designing the hybrid meeting format, we reflected on what meeting participants appreciated most during the virtual meetings and what they missed from in-person conferences. We focused on making the meeting more accessible and inclusive by addressing health and safety; accessibility services (mobility, auditory, visual); 2SLGBTQIA+ community support; virtual participation; childcare; food options and dietary restrictions. We are looking forward to seeing and learning about the amazing science our participants will share during the meeting in virtual presentations, innovative poster designs and, finally again, in-person talks, which we will stream live and record. We also planned many events that allow for engagement, collaboration and fun. We hope you find many things to enjoy about the meeting!

Tamar Schlekat
SETAC North America
Executive Director

Lisa Ortego
SETAC North America
President

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APP

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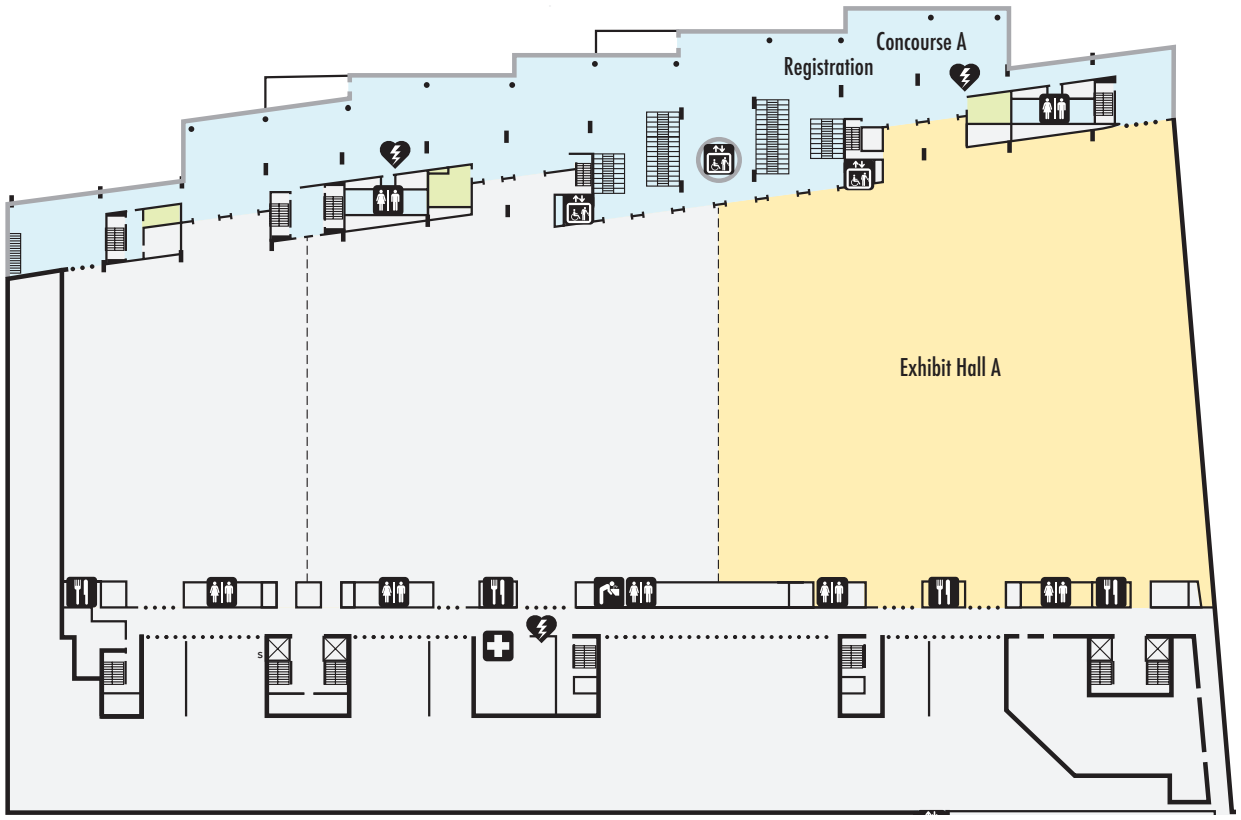
David L. Lawrence Convention Center

1000 Fort Duquesne Blvd, Pittsburgh, PA 15222

For easy access to the SETAC meeting, use the East Lobby entrance on Level One of the convention center.



LEVEL TWO

(registration, exhibit hall)

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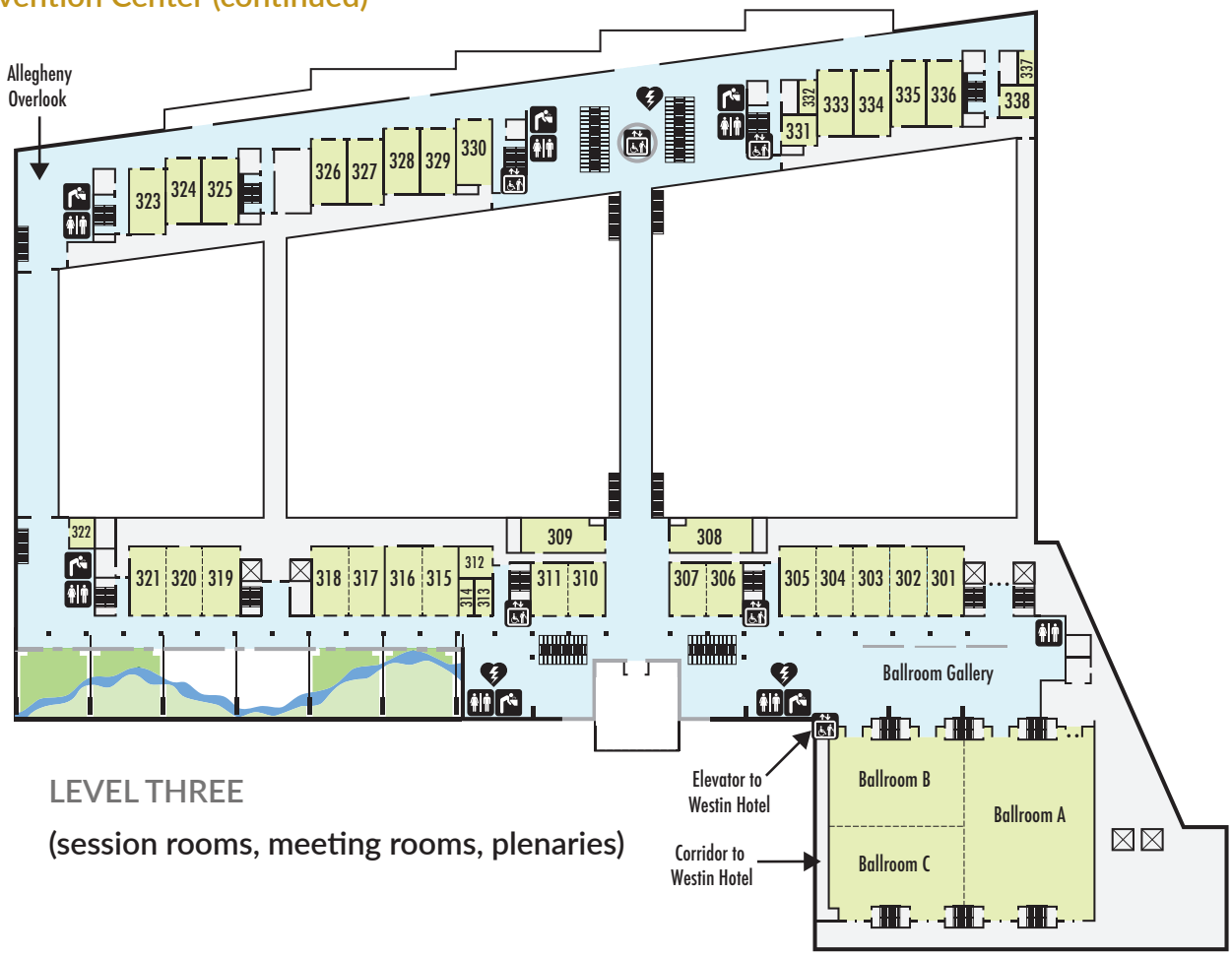
Convention Center (continued)



LEVEL THREE

(session rooms, meeting rooms, plenaries)

LEVEL FOUR

(session rooms)

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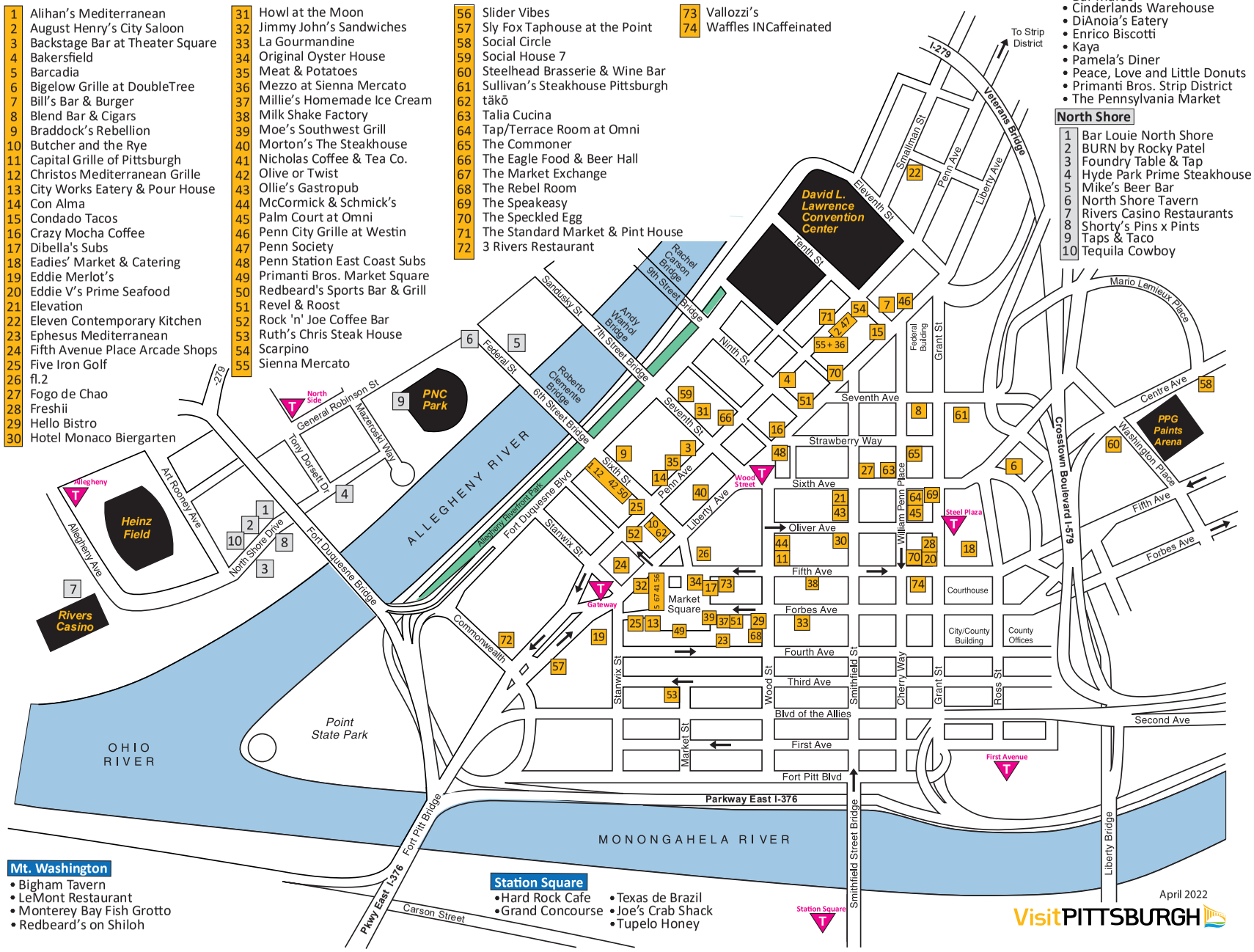
1. Alihan's Mediterranean
2. August Henry's City Saloon
3. Backstage Bar at Theater Square
4. Bakersfield
5. Barcadia
6. Bigelow Grille at DoubleTree
7. Bill's Bar & Burger
8. Blend Bar & Cigars
9. Braddock's Rebellion
10. Butcher and the Rye
11. Capital Grille of Pittsburgh
12. Christos Mediterranean Grille
13. City Works Eatery & Pour House
14. Con Alma
15. Condado Tacos
16. Crazy Mocha Coffee
17. Dibella's Subs
18. Eadies' Market & Catering
19. Eddie Merlot's
20. Eddie V's Prime Seafood
21. Elevation
22. Eleven Contemporary Kitchen
23. Ephesus Mediterranean
24. Fifth Avenue Place Arcade Shops
25. Five Iron Golf
26. fl.2
27. Fogo de Chao
28. Freshii
29. Hello Bistro
30. Hotel Monaco Biergarten
31. Howl at the Moon
32. Jimmy John's Sandwiches
33. La Gourmandine
34. Original Oyster House
35. Meat & Potatoes
36. Mezzo at Sienna Mercato
37. Millie's Homemade Ice Cream
38. Milk Shake Factory
39. Moe's Southwest Grill
40. Morton's The Steakhouse
41. Nicholas Coffee & Tea Co.
42. Olive or Twist
43. Ollie's Gastropub
44. McCormick & Schmick's
45. Palm Court at Omni
46. Penn City Grille at Westin
47. Penn Society
48. Penn Station East Coast Subs
49. Primanti Bros. Market Square
50. Redbeard's Sports Bar & Grill
51. Revel & Roost
52. Rock 'n' Joe Coffee Bar
53. Ruth's Chris Steak House
54. Scarpino
55. Sienna Mercato
56. Slider Vibes
57. Sly Fox Taphouse at the Point
58. Social Circle
59. Social House 7
60. Steelhead Brasserie & Wine Bar
61. Sullivan's Steakhouse Pittsburgh
62. täkō
63. Talia Cucina
64. Tap/Terrace Room at Omni
65. The Commoner
66. The Eagle Food & Beer Hall
67. The Market Exchange
68. The Rebel Room
69. The Speakeasy
70. The Speckled Egg
71. The Standard Market & Pint House
72. 3 Rivers Restaurant
73. Vallozzi's
74. Waffles INCaffeinated

Strip District
- Bar Marco
- Cinderlands Warehouse
- DiAnoia's Eatery
- Enrico Biscotti
- Kaya
- Pamela's Diner
- Peace, Love and Little Donuts
- Primanti Bros. Strip District
- The Pennsylvania Market

North Shore
1. Bar Louie North Shore
2. BURN by Rocky Patel
3. Foundry Table & Tap
4. Hyde Park Prime Steakhouse
5. Mike's Beer Bar
6. North Shore Tavern
7. Rivers Casino Restaurants
8. Shorty's Pins x Pints
9. Taps & Taco
10. Tequila Cowboy

Mt. Washington
- Bigham Tavern
- LeMont Restaurant
- Monterey Bay Fish Grotto
- Redbeard's on Shiloh

Station Square
- Hard Rock Cafe
- Grand Concourse
- Texas de Brazil
- Joe's Crab Shack
- Tupelo Honey



April 2022

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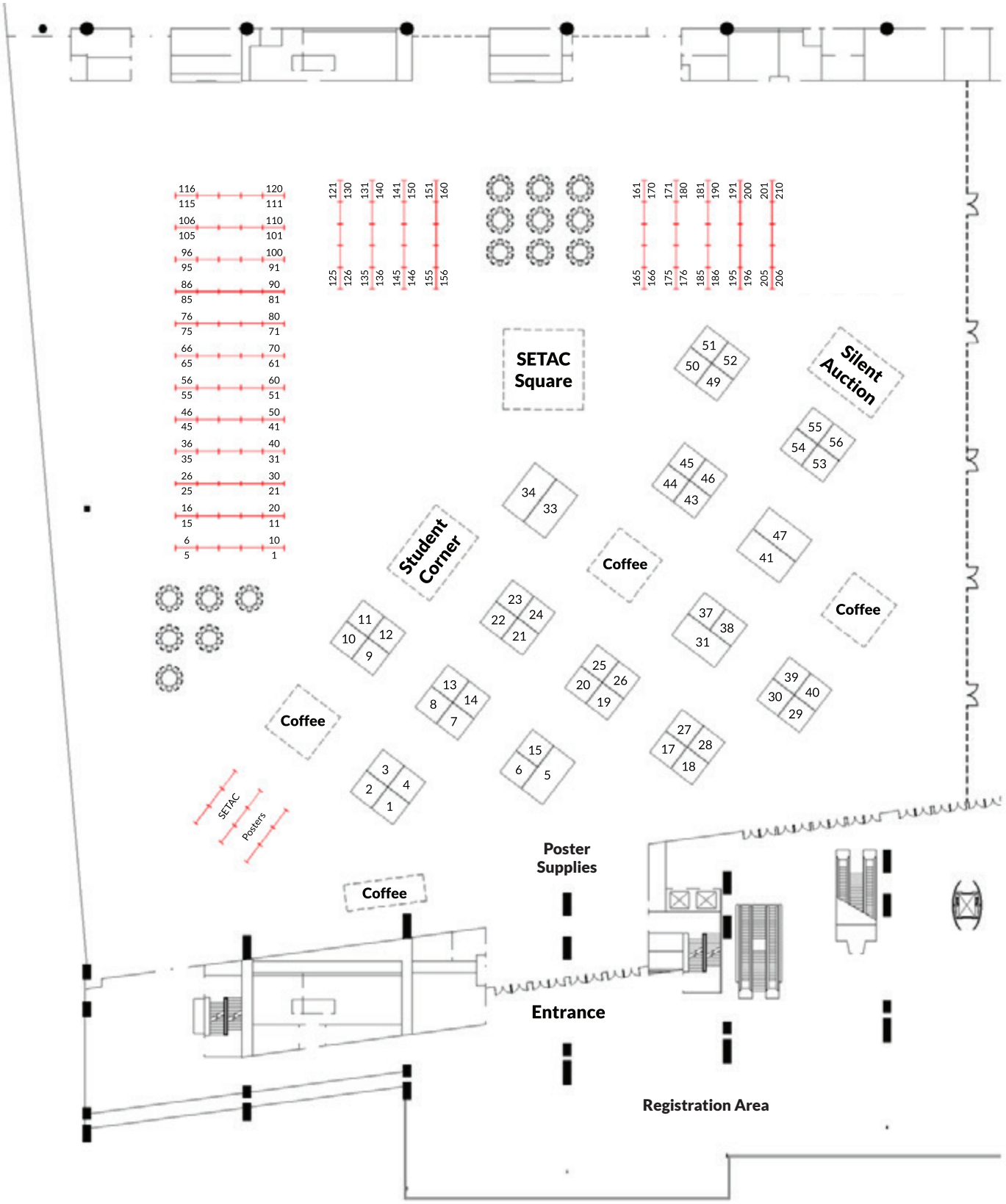
Exhibitors


SETAC Square
Silent Auction
Student Corner
Coffee
Coffee
Coffee
Coffee
Coffee
Poster Supplies
Entrance
Registration Area
SETAC
Posters

Exhibitors

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28	Labcorp
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BOOTH	EXHIBITOR
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46	Waterborne Environmental
17	Waters Corporation
12	Wellington Laboratories

Scientific Program

Tracks and Sessions

Scientific Program Organization

The scientific program is organized by tracks and sessions. Within each session, there are sub-sessions organized by talks (T), posters (P) and virtual-only presentations (V).

Tracks

1. Environmental Toxicology and Stress Response
2. Aquatic Toxicology, Ecology and Stress Response
3. Wildlife Toxicology, Ecology and Stress Response
4. Chemistry and Exposure Assessment
5. Environmental Risk Assessment
6. Engineering, Remediation and Restoration
7. Policy, Management and Communication
8. Systems Approaches

Abstract Book

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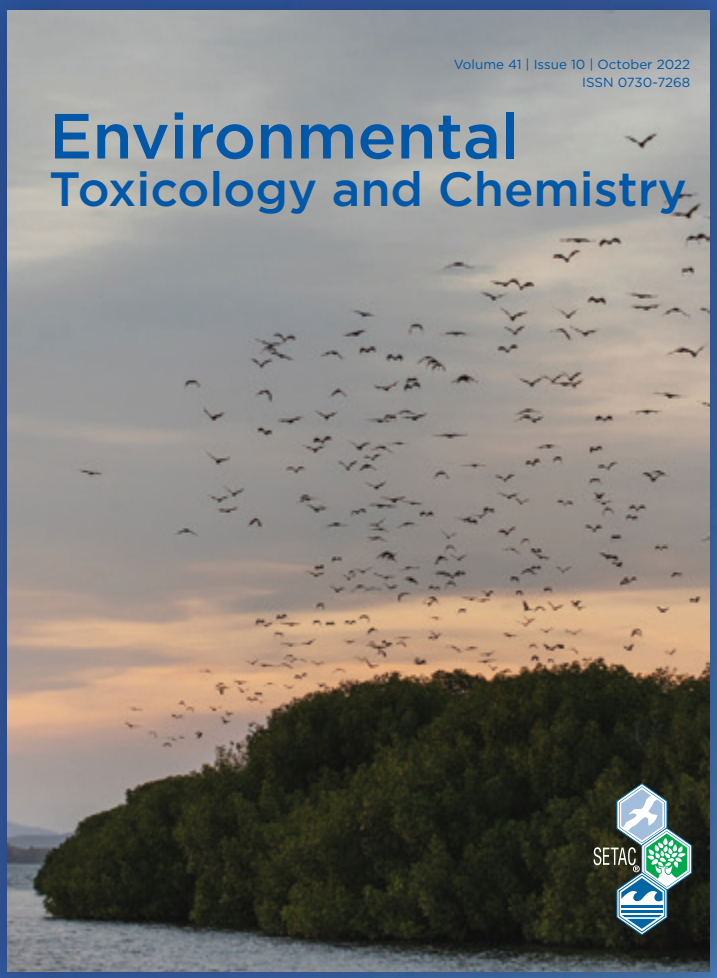

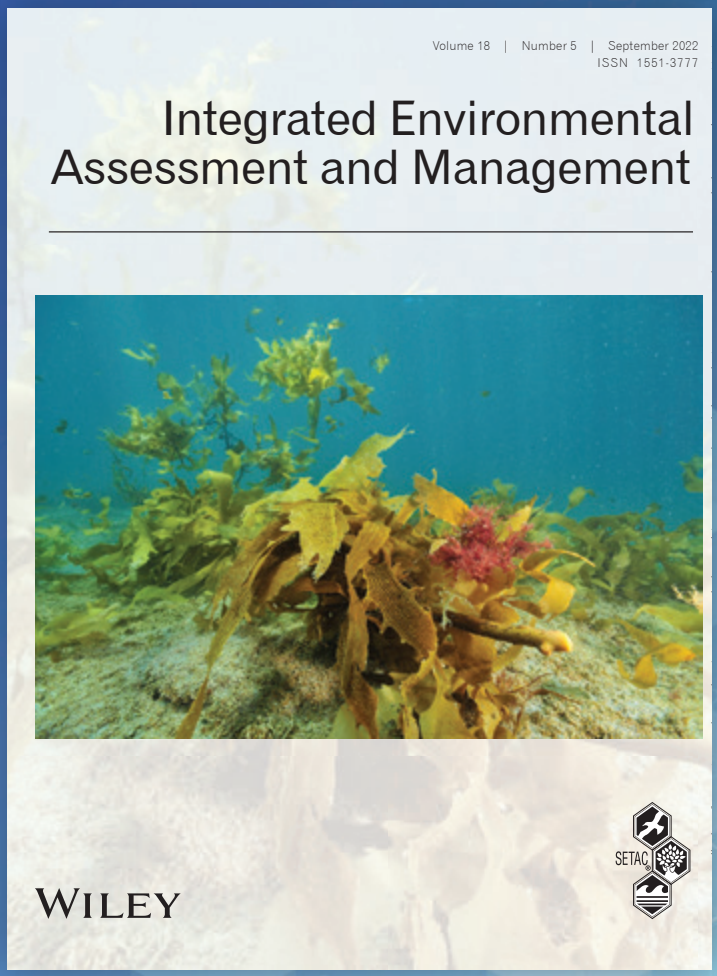

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Sunday Events

DAILY SCHEDULE		
7:00–20:30	Registration	Concourse A
7:30–21:30	Coats and Luggage Check	Concourse A
8:00–17:00	Professional Training Courses	see list below
8:30–12:00	Mini-Workshop: How to Become Employed in Environmental Toxicology and Chemistry	315
9:00–16:00	SETAC North America Board of Directors Meeting	330
12:00–13:00	Lunch Break (on your own)	
13:00–16:30	Mini-Workshop: Transitioning Careers and Building Your Digital Footprint	315
13:00–17:00	Mini-Workshop: Tips for Making Your Research Group an Inclusive and Diverse Environment	321
16:30–17:30	Meeting Guide Program Meet and Greet	317/318
17:30–18:30	Opening Ceremony	Ballroom A
18:30–21:00	Opening Reception	Exhibit Hall A

Professional Training Courses

FULL-DAY COURSES | 8:00–17:00		
PT02	Introduction to Sample Collection, Sequencing, and Analysis Methods for Microbial Community Research	316
PT04	Statistical Issues in the Design and Analysis of Ecotox Experiments	319

MORNING HALF-DAY COURSES | 8:00–12:00		
PT06	Chemical Risk Assessments: From Theory to Practice	320

AFTERNOON HALF-DAY COURSES | 13:00–17:00		
PT08	Down-the-Drain Disposal: Environmental Exposure and Risk Assessment for Formulated Consumer Products	303
PT09	Writing Your Science for the Public and How to Share it	320

Monday Events

DAILY SCHEDULE			
7:00–17:30	Registration	Concourse A	
7:00–18:30	Coat and Luggage Check	Concourse A	
8:00–9:00	Morning Poster Sessions and Networking	Exhibit Hall A	
8:00–18:00	Exhibits and Silent Auction	Exhibit Hall A	
9:00–9:45	Daily Plenary: Joylette Portlock, Sustainable Pittsburgh	Ballroom A	
10:00–12:40	Morning Platform Sessions	see p. 18	
12:30–13:00	Mid South SETAC Regional Chapter	316	
12:40–14:00	Lunch (on your own)		
12:45–13:45	Bayer Sponsored Seminar	306/307	
12:45–13:45	Thermo Fisher Sponsored Seminar	310/311	
12:45–13:45	Sediment Interest Group (SEDIG)	406	
13:00–14:00	Exposure Modeling Interest Group	315	
13:30–14:30	Endowment Fund Board of Trustees and Donors	330	
14:00–16:40	Afternoon Platform Sessions	see p. 20	
16:40–18:00	Afternoon Poster Sessions and Networking	Exhibit Hall A	
17:00–18:00	Topical Discussion: Plants Interest Group	401/402	
17:00–18:00	Topical Discussion: Panel Discussion – The Historical Environmental Justice Legacy From the Houston Riots to the Justice40 Initiative	406	
17:00–18:00	Contributing Authors for a Book on Multiple Stressors	309	
17:00–18:00	Information Session: Global Certification Program for Environmental Risk Assessors by IBERA	306/307	
17:00–18:00	Animal Alternatives Interest Group	316	
17:30–18:30	Peer-Review Training	310/311	
17:30–18:30	Immunotoxicology Interest Group	330	
17:30–19:30	Metals Interest Group	319/320	
18:00–19:00	Global Soils Interest Group	315	
18:00–20:00	Student/Mentor Dinner	Ballroom C	

Event will be live streamed – sponsored by the Endowment Fund.

Plenary Speaker

Joylette Portlock | Sustainable Pittsburgh

9:00–9:45 | Ballroom A

Joylette Portlock is the Executive Director of Sustainable Pittsburgh, a nonprofit working to empower decision-making that builds a fundamentally equitable, resilient, healthy, and prosperous region. Sustainable Pittsburgh regularly works with hundreds of partners in the region — including local governments, nonprofits, and the business community — to ensure a thriving region where stakeholders are connected, sustainability knowledge is shared and applied, and all people can succeed. Her work focuses on building community around sustainability topics, with a particular interest in making important scientific, technical, or complex information accessible and useful. In 2022, Portlock was appointed as a member of the Environmental Justice Advisory Board (EJAB) for the Pennsylvania Department of Environmental Protection. She serves in many other roles in the community, including as an advisory board member of the Black Environmental Collective. She holds a bachelor's degree in biology with a minor in anthropology from MIT and a Ph.D. in genetics from Stanford University. Portlock has lived and worked in the Pittsburgh region since 2007.

Networking Events

Student/Mentor Dinner

18:00–20:00 | Ballroom C | Students $10, Mentors $30

After the afternoon poster session on Monday, plan to attend the Student/Mentor Dinner. Do not miss this opportunity to mingle and dine with a variety of SETAC members. Your participation will strengthen your networks within SETAC and provide a valuable opportunity to discuss scientific topics and career experiences with mentors.

Sponsored Seminars

Join these informative events to learn about the latest products and technologies, interact with experts and ask questions.

ForwardFarms – What is the Path to a More Sustainable Future?

12:45–13:45 | 306/307

New Advancements in Preparing Solid and Semi-Solid Samples for POPs Analysis

12:45–13:45 | 310/311

Monday Sessions

Morning Talks (T)

	10:00–10:15	10:20–10:35	10:40–10:55	11:00–11:15
301/302	**Advancements in Aquatic and Wildlife Immunotoxicology: Innovative Approaches to Identifying Adverse Outcomes** | M. Sellin Jeffries, C. Smith, L. Thornton Hampton, L. Iwanowicz			
	1.02.T-01 Detection and Tracking of Inflammatory Constituents in Environmental Water Samples Using Immune Cell Lines | **N. Hussain**	**1.02.T-02** Using Microfluidic Chip Technology to Enhance Immunotoxicity Testing | **M. Rodgers**	**1.02.T-03** Effects of Glyphosate and Perfluorooctanesulfonic Acid (PFOS) on the Immune System of the Florida Manatee (Trichechus manatus latirostris) | **M. De Maria**	**1.02.T-04** Development of a New Infection Model for Fathead Minnows, an Emerging Immunotoxicity Model Organism | **M. Sellin Jeffries**
304/305	**In the Neighborhood and Out to Sea: Shedding Liht on Tire Wear Microplastics** | K. Moran, S. Brander, B. Beckingham, J. McIntyre			
	4.13.T-01 How Much Tire Rubber Do Vehicles Shed? California USA Estimates and Their Implications | **K. Moran**	**4.13.T-02** Abundance and Distribution of Tire and Road Wear Particles in the Seine River, France | **T. Barber**	**4.13.T-03** Tire-Derived Contaminants in San Francisco Bay | **E. Miller**	**4.13.T-04** Analysis of tire-related chemicals in fish fluids using liquid-chromatography couple with tandem mass spectrometer | **D. da Silva**
306/307	**Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices** | A. Ye, N. Dennis, W. Hunter			
	4.04A.T-01 A Novel EI Source Optimized for Use with Hydrogen Carrier Gas in GC/MS and GC/MS/MS for Environmental Analyses | **A. McQuay**	**4.04A.T-02** Unregulated Organic Chemicals in Biosolids: Prioritization, Fate and Risk Evaluation for Land Applications | **N. Dennis**	**4.04A.T-03** Concentrations of Quaternary Ammonium Compounds in Wastewater Treatment Plant Effluents during the COVID-19 Pandemic | **M. Gross**	**4.04A.T-04** Determination of Synthetic Musk Compounds in Fish Fillets from Urban Streams and Rivers in the United States Using Gas Chromatography and Mass Spectrometry | **L. Osemwengie**
310/311	**Transformation of Environmental Contaminants: Reaction Mechanisms and Product Identification** | C. McDonough, S. Joudan, J. Challis, R. Sullivan			
	4.18.T-01 Hydrothermal degradation of three pharmaceuticals and detection of their transformation products | **P. Oesterle**	**4.18.T-02** Jet Plasma Treatment of Poly- and Perfluoroalkyl Substances (PFASs) | **M. Chen**	**4.18.T-03** Concentration and photo-oxidative remediation of 6:2 fluorotelomer carboxylic acid in aqueous aerosol droplets | **R. Weatherholt**	**4.18.T-04** Metabolic markers of AFFF polyfluorinated compound transformation inhibition to microbial biodegradation of aromatic hydrocarbons and chlorinated solvents | **C. Olivares**
Ballroom A	**Continuing Discussions on Incorporating Climate Change Model Predictions into Ecological Risk Assessments** | R. Stahl, K. Brix, J. Moe, W. Landis			
	5.06.T-01 Concept for the 2022 SETAC Pellston Workshop on Integrating Climate Change Predictions into Ecological Risk Assessment | **R. Stahl**	**5.06.T-02** The Integration of Climate Change into the Problem Formulation Stage of Ecological Risk Assessments and Future Implications | **W. Landis**	**5.06.T-03** Integrating Global Climate Change into Ecological Effects Assessment and Risk Characterization: Outcomes from a SETAC Pellston Workshop | **K. Brix**	**5.06.T-04** Integration of Climate Model Projections and Pesticide Application Scenarios for Probabilistic Risk Assessment with a Bayesian Network Approach | **J. Moe**
Ballroom B	**Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage** | C. Mitchelmore, C. Menzie			
	5.09.T-01 Introduction to the Report by the National Academies Committee on Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage | **E. Twigg**	**5.09.T-02** Physical-Chemical Properties, Sources, and Fate of UV filters in Aquatic Environments | **C. Higgins**	**5.09.T-03** Exposure Analysis of UV filters in the Aquatic Environment and in Biota | **C. Menzie**	**5.09.T-04** Toxicity of Organic UV Filters in Aquatic Ecosystems | **C. Mitchelmore**
401/402	**Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future** | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak			
	1.01A.T-01 Control Performance of Amphibian Metamorphosis Assays with Xenopus laevis | **R. Puglisi**	**1.01A.T-02** Estimating Transcriptomic Points-of-departure (tPODs) in Embryonic Rainbow Trout Exposed to Benzo[a]pyrene | **A. Alcaraz**	**1.01A.T-03** Innovative Approach to Acute Fish Toxicity Testing: Adaptation of Available In Vitro Methodologies | **T. Lunsman**	**1.01A.T-04** Does Age Really Matter? Examining Age-Specific Proteomic and Behavioral Responses of Zebrafish (Danio rerio) to a Model Toxicant | **A. Henke**
406	**Contaminated Sediment Toxicity, Risk Assessment and Management, Remediation, Restoration, Climate Change Resiliency** | B. Brooks, C. Asher, C. Peterson, M. Novak			
	6.02A.T-01 Integrating Restoration into Remedial Design for a Tidal Wetland | **B. Johnson**	**6.02A.T-02** Implementing a Resilient Wetland Remediation Project Considering Elevated Climate Activity | **N. Hastings**	**6.02A.T-03** Ecological risk assessment of heavy metals in sediment of Chicago Waterway: Chicago, Calumet, and Des Plaines River | **C. McCoy**	**6.02A.T-04** Evaluation of Relevant Exposure Pathways in a Unique Environmental Setting within a Large Dynamic River System | **J. Peterson**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Morning Talks (T)

11:20–11:35	11:40–11:55	12:00–12:15	12:20–12:35	
Advancements in Aquatic and Wildlife Immunotoxicology: Innovative Approaches to Identifying Adverse Outcomes | M. Sellin Jeffries, C. Smith, L. Thornton Hampton, L. Iwanowicz				301/302
1.02.T-05 Comparing the Respiratory Burst In Vivo, In Vitro, and Ex Vivo After Exposure to Per- and Polyfluoroalkyl Substances | **D. Phelps**	**1.02.T-06** Effects of the Legacy Contaminant ,1-dichloro-2,2-bis(p-chlorophenyl) ethylene (p,p-DDE) on Host Molecular Pathways Stimulated by Viruses in Fathead Minnows | **T. Sabo-Attwood**	**1.02.T-07** Using Genomic Applications to Understand Wild Smallmouth Bass Immune Function in Response to Exposure to Environmental Stressors | **C. Smith**	**1.02.T-08** Discussion	
In the Neighborhood and Out to Sea: Shedding Liht on Tire Wear Microplastics | K. Moran, S. Brander, B. Beckingham, J. McIntyre				304/305
4.13.T-05 Chronic Toxicity of Micro and Nano Tire Particles to Daphnia magna | **B. Cunningham**	**4.13.T-06** Fitness relevant impacts of tire particles and microfibers both alone and in mixture on euryhaline fish and invertebrates | **S. Brander**	**4.13.T-07** The Role of Stormwater Detention Ponds in the Transport of Tire Wear Particles to the Coastal Waters of South Carolina | **S. Bley**	**4.13.T-08** Can Permeable Pavements Mitigate Environmental Emissions of Tire Wear Particles and Tire-Associated Contaminants? | **C. Mitchell**	
Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices | A. Ye, N. Dennis, W. Hunter				306/307
4.04A.T-05 Targeted Chemical Analysis of sediments and water reveals site-specific contaminants of concern at Tijuana River Estuary | **F. McLamb**	**4.04A.T-06** Analytical Methods for Assessing Exposure to Flourine-Free Firefighting Foams: Implications for Determining Tissue-Specific Toxicity Reference Values | **F. Hossain**	**4.04A.T-07** Overcoming the Analytical Challenge of Cationic Polar Pesticides | **C. Fisher**	**4.04A.T-08** Do organic dietary interventions offer significant ameliorative benefits for human exposure to emerging pesticides? (Laying the emphasis on neonicotinoids) | **C. Nimako**	
Transformation of Environmental Contaminants: Reaction Mechanisms and Product Identification | C. McDonough, S. Joudan, J. Challis, R. Sullivan				310/311
4.18.T-05 Abiotic RNA Hydrolysis in the Environment: Implications for the Environmental Fate of Emerging RNA Interference Biopesticides | **K. Parker**	**4.18.T-06** Abiotic RNA Hydrolysis in the Environment: Implications for the Environmental Fate of Emerging RNA Interference Biopesticides | **K. Parker**	**4.18.T-07** Physico-Chemical Properties and Environmental Fate Predictions of Dienogest and Its Transformation Products | **J. Parnis**	**4.18.T-08** Impact of Reactive Oxygen Species Scavenging on the Intermediate Production of Anthracene and Anthraquinone in Fresh vs Saltwater Environments | **S. St. Romain**	
Continuing Discussions on Incorporating Climate Change Model Predictions into Ecological Risk Assessments | R. Stahl, K. Brix, J. Moe, W. Landis				Ballroom A
5.06.T-05 Managing the Environmental Impacts of Chemicals in a Changing Climate | **R. Stahl**	**5.06.T-06** Incorporating Climate Changes Scenarios To Understand Future Water Stress And Modeling Its Impact On Consumer Product Chemical Exposure To The Environment | **R. Vamshi**	**5.06.T-07** Effects of the UV Filter BP3 in the Yellow clam Amarilladesma mactroides under a Predicted Global Warming Scenario | **C. Martins**	**5.06.T-08** Increased Ecological Risk Posed by Pesticides Discharged from WWTPs During Drought Conditions | **J. Rice-Boayue**	
Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage | C. Mitchelmore, C. Menzie				Ballroom B
5.09.T-05 Toxicity of the Inorganic UV Filters Zinc Oxide and Titanium Dioxide in Aquatic Ecosystems | **R. Klaper**	**5.09.T-06** Implications of Potential Changes in Sunscreen Usage on Public Health | **K. Glanz**	**5.09.T-07** Discussion of the Report by the National Academies Committee on Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage 1 of 2	**5.09.T-08** Discussion of the Report by the National Academies Committee on Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage 2 of 2	
Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak				401/402
1.01A.T-05 Evaluating Correlations of ToxCast and ECOTOX Data Through Toxicity Benchmark Derivation | **C. Schaupp**	**1.01A.T-06** Developing a New Approach to Assess Crop Protection Chemical Safety That Minimizes Reliance on Vertebrate Testing While Protecting the Environment | **D. Dreier**	**1.01A.T-07** Bioaccumulation Screening of Neutral Hydrophobic Organic Chemicals in Air-Breathing Organisms Using In Vitro Rat Liver S9 Biotransformation Assays | **Y. Lee**	**1.01A.T-08** Development and Characterization of a Double-Crested Cormorant Hepatic Cell Line for Chemical Screening | **T. Sharin**	
Contaminated Sediment Toxicity, Risk Assessment and Management, Remediation, Restoration, Climate Change Resiliency | B. Brooks, C. Asher, C. Peterson, M. Novak				406
6.02A.T-05 Evaluating Human Health Risks from Exposures to Impacted Sediment in Risk Assessments | **M. Abraham**	**6.02A.T-06** Weight of Evidence Identifying Lower Beaverdam Creek as a Current Source of Bioavailable PCBs in the Anacostia River, USA | **A. Pinkney**	**6.02A.T-07** Equivalence Testing and the Reverse Null Hypothesis: Assessing Progress Towards Cleanup Levels at Portland Harbor | **K. Vickstrom**	**6.02A.T-08** Poster Highlights 1 of 2 | **B. Brooks**	
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Monday Sessions

Afternoon Talks (T)

	14:00–14:15	14:20–14:35	14:40–14:55	15:00–15:15
301/302	**Latest Advances in Metal Bioavailability and Toxicity to Aquatic Organisms** | A. Cremazy, S. Le Faucheur			
	2.09.T-01 Discussion	**2.09.T-02** Low Levels of Metals in Mixture with Chelating Pesticides Exert Renal Toxicity in Zebrafish, Early-life Through Adulthood, and How Heat Waves Interact with This Toxicity | **I. Merutka**	**2.09.T-03** Assessing the Vulnerability of Northern Salmonid Species to Combined Trace Metal Contamination and High Temperature Stressors | **M. Martyniuk**	**2.09.T-04** Effects of Nickel Exposure on Aquatic Invertebrates: An Arctic Perspective | **C. Stewart**
304/305	**Field Studies for Reducing Uncertainty in Contaminant Exposure and Effects Assessments for Wildlife** | T. Bean, A. Bonisoli Alquati, M. King, M. Eng			
	3.02.T-01 Combining field and laboratory approaches to improve relevance of effects assessments for wildlife | **M. Eng**	**3.02.T-02** Frontiers in Quantifying Wildlife Behavioural Responses to Chemical Pollution | **M. Bertram**	**3.02.T-03** Non-Destructive Methods to Assess Pesticide Exposure in Free-Living Bats | **N. Sandoval Herrera**	**3.02.T-04** Effects Of Developmental Exposure To Chlorpyrifos On Hippocampal Cell Proliferation In A Migratory Bird | **S. Moore**
306/307	**Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices** | A. Ye, N. Dennis, W. Hunter			
	4.04B.T-01 Concentrations Of Chemicals Of Emerging Concern Are Mediated By Seasonal Hydrodynamics In An Offshore Marine Environment | **A. Robuck**	**4.04B.T-02** Temporal and Spatial trends of Perfluoroalkyl Acids in Seawater in Arctic Canada | **A. De Silva**	**4.04B.T-03** Identifying Advective Flow of Contaminants Across Sediment-Water Interface Using Polyethylene Passive Samplers | **A. Sparagna**	**4.04B.T-04** Assessment of Anticoagulant Rodenticides in Terrestrial and Aquatic Non-target Organisms – a Case Study of Switzerland | **C. Riegraf**
310/311	**Advances in Methodologies and Applications of Non-Targeted Analysis for PFAS** | N. Soares Quinete, C. McDonough, B. Place			
	4.02.T-01 Communicating Confidence of Per- and Polyfluoroalkyl Substance Identification via High Resolution Mass Spectrometry | **C. Higgins**	**4.02.T-02** Application of High-Field 21 Tesla FT-ICR MS in PFAS Discovery and Source Tracking | **N. Pica**	**4.02.T-03** Environmental Forensic investigation of Chemical Manufacturing and Use of PFAS by Nontargeted Analysis | **J. McCord**	**4.02.T-04** Hunting the missing fluorine: target, nontarget, and suspect screening of per-and polyfluoroalkyl substances (PFAS) in firefighting foams | **C. Glover**
Ballroom A	**Assessing Contaminant Effects in Ecosystems with Multiple Stressors** | D. Ostrach, L. Kapustka, C. Irvine			
	2.03A.T-01 Best Practices for Interpreting Bioassay Results from Environmental Samples | **B. Duncan**	**2.03A.T-02** Effects of Microplastics (LPDE, PLA) on Mysid Shrimp (Americamysis bahia) in combination with temperature: A physiological perspective | **F. Biefel**	**2.03A.T-03** What are the effects of suspended sediment on freshwater mussels? | **J. Steevens**	**2.03A.T-04** Assessing Benthic Invertebrate Community Response to Multiple Anthropogenic Stressors in the Presence of Habitat Variability: An Adaptive Management Perspective | **J. Ings**
Ballroom B	**Life at the Fenceline - State-of-the-Science Exposure Assessment for Communities Adjacent to Industrial Facilities** | P. DeLeo, W. Rish			
	4.15.T-01 Introductory Remarks	**4.15.T-02** Review of the Draft TSCA Screening Level Approach for Assessing Ambient Air and Water Exposures to Fenceline Communities Version 1.0 | **D. Schlenk**	**4.15.T-03** Evaluating Exposure and Risk in Fenceline Communities: The Uses and Limitations of Publicly Available Geographic Information System (GIS)-Based Tools | **A. Lewis**	**4.15.T-04** Improving Community Exposure Assessment Using Personal and Local Monitors | **L. Racz**
401/402	**Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future** | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak			
	1.01B.T-01 Evaluating the RTgill-W1 Cytotoxicity Assay Against Polymers | **K. Roush**	**1.01B.T-02** Can Tests with Fish Embryos or Shrimp Replace Larval Fish Tests? – An Initial Evaluation of Marine Alternatives | **D. Allen**	**1.01B.T-03** Evaluating Metabolomics as a New Approach Method (NAM) for Toxicity Testing and Environmental Monitoring: An Assessment of IVIVE in Zebrafish | **D. Ekman**	**1.01B.T-04** Sex-dimorphism in Hepatic Transcriptomic Responses of Embryonic Japanese Quail to Ethinylestradiol | **Y. Jeon**
406	**Contaminated Sediment Toxicity, Risk Assessment and Management, Remediation, Restoration, Climate Change Resiliency** | B. Brooks, C. Asher, C. Peterson, M. Novak			
	6.02B.T-01 Drain the Pond, Fix the Pond, Make Happy Turtles: Sediment Restoration at the Columbia Slough in Oregon | **E. Naylor**	**6.02B.T-02** The impact of biotransformation by benthic invertebrates for fate and bioaccumulation of sediment-associated hydrophobic organic contaminants | **H. Selck**	**6.02B.T-03** Characterizing Site-Specific Human Health and Ecological Risks from Potential Exposure to Constituents of Potential Concern in Fish and Crawfish Tissue from a Southern Louisiana River | **A. Miano**	**6.02B.T-04** Moving Towards a Chemical Activity-Based Risk Assessment of Sediments | **S. Abel**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Afternoon Talks (T)

15:20–15:35	15:40–15:55	16:00–16:15	16:20–16:35	
Latest Advances in Metal Bioavailability and Toxicity to Aquatic Organisms | A. Cremazy, S. Le Faucheur				
2.09.T-05 The Roles of Calcium and Salinity in Protecting against Physiological Symptoms of Waterborne Zinc Toxicity in the Euryhaline Killifish (Fundulus heteroclitus) | **C. Wood**	**2.09.T-06** Transcriptome Responses of Rainbow Trout and Chinook Salmon to Sub-Lethal Exposures to Zinc | **J. Reichman**	**2.09.T-07** Metabolomic Response of Biofilms Exposed to Cobalt in Short-Term Experiments | **S. Le Faucheur**	**2.09.T-08** Use of Microchemical Analysis of Gastropod Shells to Assess Metal Exposure in Rivers | **S. Le Faucheur**	301/302
Field Studies for Reducing Uncertainty in Contaminant Exposure and Effects Assessments for Wildlife | T. Bean, A. Bonisoli Alquati, M. King, M. Eng				
3.02.T-05 Characterizing possible relationships among chlorinated paraffins, ecological and endocrine measures in nestling peregrine falcons across the Canadian Great Lakes Basin | **K. Fernie**	**3.02.T-06** Pollution in The Coastal Wetlands of East Asia and The Decline in Migrating Shorebirds – Update on The COAST IMPACT Project | **V. Jaspers**	**3.02.T-07** Challenges in Interpreting Anticoagulant Rodenticide Exposure and Predicting Adverse Effects in Free-ranging Non-target Wildlife | **B. Rattner**	**3.02.T-08** Anticoagulant rodenticide toxicity in terrestrial raptors: estimating potential mortality and impact on populations in North America and beyond | **J. Elliott**	304/305
Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices | A. Ye, N. Dennis, W. Hunter				
4.04B.T-05 Gaseous and Soil POPs Along the Indus River Pakistan: Spatial Pattern and Air-Soil Exchange | **M. Sohail**	**4.04B.T-06** Analyzing the effect of the differences in PM2.5 Composition, Oxidative Potential, and Developmental Toxicity Collected Across Months at Locations Throughout Tennessee | **V. Aminone**	**4.04B.T-07** Discussion	**4.04B.T-08** Discussion	306/307
Advances in Methodologies and Applications of Non-Targeted Analysis for PFAS | N. Soares Quinete, C. McDonough, B. Place				
4.02.T-05 IR-MALDESI Imaging of Per and Polyfluoroalkyl Substances (PFAS) in Stabilized Soil Cores | **T. Guillette**	**4.02.T-06** Reconstructing Temporal PFAS Trends from a Sediment Core with Targeted and Nontargeted Analysis | **M. Cashman**	**4.02.T-07** Evaluations of in vivo and in vitro Dosimetry and Metabolic Biotransformation of the Hexafluoropropylene Oxide Homologue HFPO-TeA, an Emerging Per- and Polyfluoroalkyl Substance (PFAS) | **D. MacMillan**	**4.02.T-08** Non-Targeted mapping of PFAS in drinking using high-resolution mass spectrometry combined with retention time prediction | **Y. Feng**	310/311
Assessing Contaminant Effects in Ecosystems with Multiple Stressors | D. Ostrach, L. Kapustka, C. Irvine				
2.03A.T-05 Redevelopment and Improvement of the Floating Percentile Model in the R Statistical Environment for the Calculation of Site-Specific Sediment Quality Benchmarks | **C. Detering**	**2.03A.T-06** Multi-Tiered Assessment Discerning Anthropogenic From Natural Stressors: Improving Causality in Risk Assessments | **G. Burton**	**2.03A.T-07** Ecological consequences of neonicotinoid mixtures in U.S. streams | **T. Schmidt**	**2.03A.T-08** Patterns of Risk in the Upper San Francisco Estuary due to Contaminants, Pesticides, Water Quality Parameters and other Stressors | **W. Landis**	Ballroom A
Life at the Fenceline - State-of-the-Science Exposure Assessment for Communities Adjacent to Industrial Facilities | P. DeLeo, W. Rish				
4.15.T-05 Contaminated Sites and Indigenous Peoples in Canada and the USA- A Scoping Review | **K. Chong**	**4.15.T-06** Target Organ Toxicity Using Histopathological and Biochemical Changes in a Rat Model Following Oral Exposure to Contaminated Groundwater from an Industrial Site | **B. Boamah**	**4.15.T-07** Estimating the Health Risk Associated with Metal Exposure at Agbogbloshie E-Waste Recycling Site and the Surrounding Neighbourhood in Accra, Ghana | **M. Dodd**	**4.15.T-08** Risk Assessment of Berry Health in Alberta Oil Sands Region | **C. Yeung**	Ballroom B
Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak				
1.01B.T-05 Tiered Methods for Bioaccumulation Assessment to Reduce Animal Testing | **L. Toose**	**1.01B.T-06** Exploring Ways to Implement the 3Rs (Reduction, Replacement, Refinement) Principles in a Regulatory Context | **M. Lowit**	**1.01B.T-07** Using the zebrafish embryo assay to evaluate the developmental toxicity of PFAS used in the photolithography industry | **Y. Cao**	**1.01B.T-08** Using the RTgill-W1 Cell Line to Investigate Cytotoxic and Molecular Effects of Sediment Extracts from the Agbogbloshie Electronic-Waste Site | **K. Mittal**	401/402
Contaminated Sediment Toxicity, Risk Assessment and Management, Remediation, Restoration, Climate Change Resiliency | B. Brooks, C. Asher, C. Peterson, M. Novak				
6.02B.T-05 Developing Hydrocarbon PRGs Using Passive Sampling, Porewater, and Bulk Sediment | **D. Cooke**	**6.02B.T-06** Determining the Leaching Potential of Dredged Sediments From the Bunker Hill Superfund Site | **E. Naylor**	**6.02B.T-07** TIGSED: A Modeling Approach for Assessing Source Control Sufficiency | **N. Rose**	**6.02B.T-08** Poster Highlights 2 of 2 | **B. Brooks**	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Poster Schedule

Setup: 7:00–8:00 (see p. 10 for map of posters)
Take down: 18:00–18:15

Presenters are expected to attend their poster during most of the break and the poster sessions.

Morning Poster Session: 8:00–9:00
Lunch Break: 12:40–14:00
Afternoon Poster Session: 16:40–18:00

Late-Breaking Science Posters

SETAC accepts late-breaking science posters; however, they are submitted after our print deadline. A list of the accepted posters can be found at the poster supplies desk in Exhibit Hall A. Poster IDs for these late submissions start with P-Mo179 on Monday.

Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak

1.01.P-Mo001 Incorporating Ecologically Relevant Behaviors, Age at Exposure, and Two Species in Assessing the Toxicity of Thiamethoxam in Fish | **T. King-Heiden**

1.01.P-Mo002 Investigation of possible cardio- and neuro-toxic effects incited by parabens to Daphnia magna | **K. Eghan**

1.01.P-Mo003 Marine Effluent Toxicity Testing: Evaluation of Alternative Testing Methods for Assessing Metal Toxicity | **D. Allen**

1.01.P-Mo004 Utilizing High-Throughput Screening to Rank and Prioritize Thyroid-Active Chemicals | **S. Eytcheson**

1.01.P-Mo005 Comparative Cytotoxicity of Seven Per- and Polyfluoroalkyl Substances (PFAS) in Six Human Cell Lines | **M. Solan**

1.01.P-Mo006 Zebrafish Sperm Cryopreservation: An essential practice for improving space and resources in a zebrafish facility | **A. Muriana**

1.01.P-Mo007 Use of Primary Rainbow Trout Hepatocytes to Determine In Vitro Intrinsic Clearance for Bioaccumulation Assessment in Fish | **D. Runge**

1.01.P-Mo008 Physiological and Transcriptomic Effects of Hexafluoropropylene Oxide Dimer Acid in Caenorhabditis elegans During Development | **Z. Feng**

1.01.P-Mo010 Using a human immune cell-based bioindicator system to examine the effects of raw and treated OSPW | **S. Paul**

1.01.P-Mo011 Designing a Physiologically Based Toxicokinetic (PBTK) Model for Fish Species in Arctic Environments | **G. Langlois**

1.01.P-Mo012 Addressing Ionization Improves Performance of In Silico Models for Predicting the Bioconcentration Factor (BCF) | **G. Devineni**

1.01.P-Mo013 Predicting Fish Acute Toxicity Using a Bayesian Weight of Evidence Approach | **M. Embry**

1.01.P-Mo014 Application of Biomimetic Extraction to Measure Toxicity Reduction in Oil Sands Process-Affected Water After Wetland Treatment | **J. Brueggeman**

1.01.P-Mo015 Omics Data in Regulatory Toxicology: An Opportunity for Collaboration between Regulatory Risk Assessors and Researchers | **J. Corrales**

1.01.P-Mo016 Comparison of In Vitro to In Vivo Data Generated in Bioaccumulation Studies | **E. Danby**

1.01.P-Mo017 Anti-obesity activities of natural dietary products (cannabidiol, indole-3-carbinol and trans-resveratrol) in the human liver cell line hepaRG and human adipocytes | **S. Senthilkumar**

1.01.P-Mo018 Reduced Transcriptomics to Characterize the Ecotoxicity of 17a-Ethinylestradiol in Amphibian, Bird and Fish Embryos: An EcoToxChip Case Study | **M. Hecker**

Advancements in Aquatic and Wildlife Immunotoxicology: Innovative Approaches to Identifying Adverse Outcomes | M. Sellin Jeffries, C. Smith, L. Thornton Hampton, L. Iwanowicz

1.02.P-Mo019 How Do Per- And Polyfluoroalkyl Substances (PFAS) Affect Macrophage Function? | **A. Connors**

1.02.P-Mo020 Disease-Like Stress Response in Oyster Cardiomyocyte Primary Cell Culture Due to the Phototoxic Effects of PAHs | **N. Gan**

The Microbiome: An Emerging Tool for Predictive Ecotoxicology | J. Bisesi, C. Martyniuk, K. Thompson, G. Monticelli, E. Hartmann

1.10.P-Mo021 Evaluating metagenomic analyses for undercharacterized environments: what's needed to light up the "dark matter"? | **K. Thompson**

1.10.P-Mo023 Multi-omics approach for correlation analysis between pathogenic symptom , pathogen, and metabolome of Neopyropia tenera | **H. Bae**

1.10.P-Mo024 Effects of Erythromycin on Juvenile Rainbow Trout Microbiome and Fitness | **P. Ankley**

1.10.P-Mo025 Effects of Cotton Farming on Prokaryotic Microbiota in an Abundant Passerine Host | **S. Drovetski**

1.10.P-Mo026 Zooplankton and Associated Microbiome Response to Simulated Oil Spill and Remediation Efforts | **P. Ankley**

1.10.P-Mo027 Antibiotic Resistance Pattern in Hydrocarbon-Degrading Consortium from Crude Oil-Polluted Soil Using Shotgun Sequencing | **P. Chikere**

1.10.P-Mo028 Microbial Communities on the Skin and in the Gut of the Gulf Killifish (Fundulus grandis) Exposed to Differing Levels of Polycyclic Aromatic Hydrocarbons | **A. Jacquez**

1.10.P-Mo030 Florfenicol in salmon diet: microbiome and fish gut changes | **G. Monticelli**

Advances in the Ecotoxicology of Reef-building Corals | C. Mitchelmore, D. Renegar

2.01.P-Mo031 Effects of Sedimentation on Three Hawaiian Coral Species under Laboratory Conditions | **J. Wilkens**

2.01.P-Mo032 Towards the development of standard toxicity test protocols for corals | **G. Gonsior**

2.01.P-Mo033 Investigating Sublethal Impacts of Karenia brevis on Acropora cervicornis | **K. Costa**

2.01.P-Mo034 Evidence Base to Assess the Relationship Between Water Quality Stressors and Coral Reef Endpoints, in the Context of Interactions with Climate Effects | **R. Kashuba**

2.01.P-Mo035 Developing Standard Toxicity Assays in the Scleractinian Coral Acropora cervicornis | **C. Mitchelmore**

Assessing Contaminant Effects in Ecosystems with Multiple Stressors | D. Ostrach, L. Kapustka, C. Irvine

2.03.P-Mo036 A History of Ancestral Bisphenol A Exposure Can Be A Confounding Factor for the Second Hit by Environmental Levels of Perfluorooctane Sulfonic Acid | **S. Coe**

2.03.P-Mo037 Quantification of heavy metals in soils and food crops within the vicinity of an Integrated Agro Industry and the associated ecological and potential human health risks | **N. Ekere**

2.03.P-Mo038 Assessing Ceriodaphnia dubia and Chironomus dilutus bioassays of the Middle White River subwatersheds, Arkansas, USA | **R. DeRoin**

2.03.P-Mo039 Transcriptomic Effects of Wastewater Treatment Plant Discharge to the Brain of in situ Exposed Juvenile Atlantic Cod (Gadus morhua) in Norway | **J. Magnuson**

2.03.P-Mo040 Whole-ecosystem Characterization of Metal Exposure in a Natural Tundra Wetland Receiving Wastewater | **B. McPhedran**

2.03.P-Mo041 Nutrient Activity in Headwaters of the Buffalo River | **P. Dyer**

2.03.P-Mo042 Factors affecting photo-induced thin oil sheen toxicity in a model early life stage (ELS) fish (Danio rerio) | **R. Leads**

2.03.P-Mo043 Pharmaceutical Cocktails in Urban Streams Create a Highly Dynamic Exposome | **M. Fork**

2.03.P-Mo045 Multi-Stressor Effects of Temperature, Salinity, and Ultraviolet Light on PFOS Toxicity in Larval Estuarine Organisms | **K. Chung**

2.03.P-Mo046 An Approach to Define Baseline Ambient Concentrations of Per-and Poly-fluoroalkyl Substances (PFAS) in Relation to Land Uses | **P. Sardina**

2.03.P-Mo047 The influence of annual variability on interpretation of whole organism characteristics in Trout-perch (Percopsis omiscomaycus) to inform design of long term monitoring programs | **S. Marshall**

2.03.P-Mo048 Combined Effects of Cadmium and Microplastics on the Freshwater Leech, Nephelopsis obscura | **L. Zink**

2.03.P-Mo049 Cumulative effects of chemical mixtures and temperature on Daphnia magna | **S. Steigerwald**

2.03.P-Mo050 In Vitro Mixture Toxicity to Endocrine Disrupting Chemical Combinations Used in Household Chemical Products | **I. Lee**

2.03.P-Mo051 Effects of Nutrients on Mercury Bioaccumulation at the Base of the Coastal Food Web | **A. Agrawal**

2.03.P-Mo052 Biomarker Reponses in the Muscle of Chrysichthys Nigrodigitatus Caught From Trace Metals and PAHS Polluted Rivers in Lagos State, Southwest Nigeria | **O. Ogunbanwo**

2.03.P-Mo053 Evaluating Sensitivity and Variability of the Floating Percentile Model for Sediment Quality Benchmark Development | **B. Church**

2.03.P-Mo055 Investigating Chemicals of Emerging Concern in Aquatic Ecosystems of Ecologically Diverse King County, Washington: Towards More Strategic Study Design | **J. White**

2.03.P-Mo057 Multi-Region Assessment of Chemical Mixture Exposures and Predicted Cumulative Effects in USA Wadeable Urban/Agriculture-Gradient Streams | **P. Bradley**

2.03.P-Mo058 Development of Insecticide Resistance in Hyalella Azteca | **N. Gamble**

2.03.P-Mo059 Prioritizing Organic Contaminants and Locations of Ecological Concern using Sediment from Lower Rio Grande Valley Resacas | **S. Nash**

2.03.P-Mo060 Influence of Salinity on the Bioconcentration of Six Aquatic Pollutants | **S. St. Romain**

Detection, Toxicity and Environmental Risk of UV Filters in Aquatic Ecosystems | C. Mitchelmore, I. Davies

2.06.P-Mo061 Sunscreen Chemical Concentrations in Marine Waters of the Virgin Islands National Park Pre- and Post-Ban | **T. Bargar**

2.06.P-Mo062 Can short-term data accurately represent long-term environmental exposures? Investigating multigenerational adaptation of Daphnia magna to organic sunscreen ultraviolet filters | **A. Boyd**

2.06.P-Mo063 Realistic Sunscreen Exposure and the Consumer Usage Data Gap: A Novel Online Survey Approach Designed to Measure Consumer Application Thickness | **A. Carrao**

2.06.P-Mo064 Release and Transformation of ZnO NPs used in Surface Coatings from Pressure Treated Lumber | **J. Clar**

2.06.P-Mo065 Sensitive and robust quantification of 15 common UV sunscreen filters | **C. Butt**

2.06.P-Mo066 Spatial and temporal investigation of concentrations of organic UV filters in seawater from the Florida Keys, USA | **C. Mitchelmore**

2.06.P-Mo067 Right-Sizing UV Filter Exposure Estimates – A Critical Need | **N. Maples-Reynolds**

2.06.P-Mo068 Sunscreen Formulation is a Crucial Factor for Modeling Rinse-off of Ultraviolet Filters in Seawater | **J. Saxe**

2.06.P-Mo069 Adjusting Sampling Strategies to Account for Environmental Partitioning of UV Filters | **S. Landeweer**

2.06.P-Mo070 Toxicity of the UV filter octocrylene to the scleractinian coral Acropora cervicornis | **C. Mitchelmore**

2.06.P-Mo071 Nephrotoxic potentials of major organic UV filters (AVB, BP-3, OC, OMC) in zebrafish of different life stages | **B. Kwon**

Latest Advances in Metal Bioavailability and Toxicity to Aquatic Organisms | A. Cremazy, S. Le Faucheur

2.09.P-Mo072 Effects of Heavy Metals in Soil and Water Samples from Abattoirs on the Environment | **C. Adeniji**

2.09.P-Mo074 Effects of Taxa and Body Size on Mercury Contamination of Riparian Spiders: Implications for the Use of Spiders as Sentinels | **M. Chumchal**

2.09.P-Mo075 Effect of Rare Earth Elements Nd, Pr and Y, Individually and in Mixtures to Daphnia magna | **C. Do**

2.09.P-Mo076 Risks of Gadolinium in Urbanized Aquatic Environments, Is There a Concern? | **J. Memmel**

2.09.P-Mo077 Understanding Elemental Profiles of Elizabeth River, VA in Environmental Samples | **S. Murphy**

Field Studies for Reducing Uncertainty in Contaminant Exposure and Effects Assessments for Wildlife | T. Bean, A. Bonisoli Alquati, M. King, M. Eng

3.02.P-Mo078 Heavy metal body burden in three species of ducks sampled from south-eastern mainland Australia | **D. Nzabanita**

3.02.P-Mo079 Of Whales and Men: A Multi-Year Study of Metals in Whales from the Gulf of Maine | **J. Wise**

3.02.P-Mo080 Using a qPCR Array to Measure Hepatic mRNA Expression in Tandem With Contaminant Biomonitoring to Assess Potential Effects in Seabird Embryos | **M. King**

3.02.P-Mo081 Development of a novel in situ bioassay system for assessing oil spill toxicity in aquatic organisms | **R. Leads**

3.02.P-Mo082 Associations between Organic Contaminants and Vitamins A and E in the Plasma of Great Lakes Pre-fledgling Double-Crested Cormorants | **K. Grasman**

3.02.P-Mo083 Neural Correlates of Spatial Behavior in Relation to Contaminant Concentrations in Free-Ranging Gulls | **A. Lippold**

3.02.P-Mo084 Associations between Organic Contaminants and Thiamine in the Blood of Pre-Fledging Great Lakes Double-Crested Cormorants | **K. Grasman**

3.02.P-Mo085 Pesticides Detected in Honey Bee Hive Pollen in North-Central Oklahoma and Potential Effects on Hive Health | **C. Klase**

Advances in Methodologies and Applications of Non-Targeted Analysis for PFAS | N. Soares Quinete, C. McDonough, B. Place

4.02.P-Mo088 Non-Targeted Analysis of Per- and Polyfluoroalkyl Substances Found in AFFF Impacted Surface and Groundwater Measured by Passive Samplers | **R. Hershberger**

4.02.P-Mo089 Development of an Open-Source Mass Spectral Database for the Identification of Per- and Polyfluoroalkyl Substances | **B. Place**

4.02.P-Mo090 Per/Polyfluoroalkyl Substances (PFASs) in White Shark Serum and Muscle Using HRMS Screening Techniques | **J. Marciano**

4.02.P-Mo091 Use of electron activated dissociation (EAD) on the ZenoTOF 7600 system to elucidate PFAS structures | **C. Butt**

4.02.P-Mo092 Increasing confidence of resolving unknown isomers of per-and polyfluoroalkyl substances by using DFT and COSMO-RS to model retention factors derived from LC-HRMS | **J. Antle**

4.02.P-Mo093 Comparison of Acquisition Modes for Targeted & Non-Targeted analysis of PFAS by LC-HRMS | **S. Haddad**

4.02.P-Mo094 Per- and Polyfluorinated Alkyl Compound (PFAS) Analysis in Cosmetics Using High Resolution Accurate Mass Spectrometry | **C. Buttl**

Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices | A. Ye, N. Dennis, W. Hunter

4.04.P-Mo096 Stereospermum acuminatissimum and its efficiency in the treatment of certain cancer and infectious diseases | **P. Leutcha**

4.04.P-Mo097 Changes in Fine Particulate Matter Composition During Preparation for Toxicity Testing | **C. Roper**

4.04.P-Mo098 Fate and Transport of Nanopesticides in Field Scale Agricultural Applications | **W. Rud**

4.04.P-Mo099 A Liquid Chromatography – Mass Spectrometry (LC-MS) assay for rapid separation and sensitive detection of seven active pharmaceutical ingredients in aqueous matrices | **O. Olatunji**

4.04.P-Mo100 Organochlorine Pesticide Residues in Drinking Groundwater from Areas Around Agricultural Farms in Southern Nigeria: Occurrence, Levels, and Human Health Risk | **I. Tongo**

4.04.P-Mo101 Direct and Indirect Effects of Chronic Venlafaxine Exposure on a Freshwater Ecosystem | **H. Jovanovic**

4.04.P-Mo102 Evaluating the reusability of Tenax in Estimates of Bioaccessibility through Single-point Extractions | **S. Nutile**

4.04.P-Mo103 An Environmentally-Friendly Contraceptive Pill? The Estetrol-Based Pill as a Good Candidate | **S. Baekelandt**

4.04.P-Mo104 The Use of Silicone Bands as a Passive Sampler for the Detection of Organic Contaminants in Coastal Waters | **B. Shaddrix**

4.04.P-Mo105 Development and validation of a modified QuEChERS method for extracting polychlorinated biphenyls and organochlorine pesticides from marine mammal blubber | **A. Pedersen**

4.04.P-Mo106 Some like it hot – Warmer Water Temperatures Improve Sea Lamprey's (Petromyzon marinus) Survival to Lampricide Exposures | **D. Mitrovic**

4.04.P-Mo107 D. Pulgarin-Zapata*, J.S. Bumagat, L.M. Bragg, P. Marjan, K. R. Munkittrick, M.R. Servos, V. Arnold, N. Ruecker, and M. J. Arlos | **D. Pulgarin Zapata**

4.04.P-Mo108 Development of an Enantiospecific Analytical Method for the Detection and Quantification of Chiral Pharmaceuticals in Wastewater-impacted Systems | **S. Jamal**

4.04.P-Mo109 Residual Analysis of Persistent Organic Pesticides onto Marine Sediments from Cartagena Bay (Colombia) | **B. Jaramillo-Colorado**

4.04.P-Mo111 Strategies and Challenges for Conducting Fish Nature of the Residue Studies | **E. Danby**

4.04.P-Mo112 Extraction of Nitrite and Nitrate from Swine Tissues following Oral Administration of Sodium Nitrite | **G. Sanders**

4.04.P-Mo113 Identification of Pesticides in Vernal Pools Using Suspect Screening Methods to Improve Exposure Assessment of Listed Species | **A. Brennan**

4.04.P-Mo114 Chlorinated Paraffins: Environmental Occurrence of Chlorinated Paraffins in Major Components of the Environment – Water, Wastewater, Solids, and Tissue | **M. Woudneh**

In the Neighborhood and Out to Sea: Shedding Light on Tire Wear Microplastics | K. Moran, S. Brander, B. Beckingham, J. McIntyre

4.13.P-Mo115 The Influence of Environmental Factors on the Toxicity to Americamysis bahia from Tire Wear Particle Leachate | **A. Reed**

4.13.P-Mo116 Determining the Leaching Potential and Chemical Profiles of Tire Wear Particles in Aquatic Conditions | **M. Stack**

4.13.P-Mo117 Analysis of emerging automotive contaminants in environmental samples | **M. Noestheden**

4.13.P-Mo118 Atmospheric Deposition of Microplastics and Tire Wear Particles in Salt Marsh Habitats: Relationship to Meteorological Factors | **M. Ballentine**

4.13.P-Mo119 Capture of Tire Road Wear Particles in Manufactured Treatment Devices, a Stormwater Pollution Best Management Practice | **K. Paterson**

4.13.P-Mo121 Short-Term field measurement of Tire-Like particles as passive samplers for Polycyclic Aromatic Hydrocarbons in a South Texas Bay system | **N. Lascelles**

4.13.P-Mo122 Chronic Effects of Microplastic and Microrubber Exposure on Grass Shrimp (Palaemon pugio) | **S. Bley**

4.13.P-Mo123 Comparative Toxicity of Micro and Nano-Scale Tire, Crumb Rubber and Recycled Rubber Particles to Zebrafish (Danio rerio) | **B. Harper**

4.13.P-Mo124 Spatial Modelling of Airborne Microplastics Adsorption and Transport Characterisation on Heavy Metals in Coastal Environments | **P. Odika**

Life at the Fenceline - State-of-the-Science Exposure Assessment for Communities Adjacent to Industrial Facilities | P. DeLeo, W. Rish

4.15.P-Mo126 An advanced fugacity model by incorporating computational fluid dynamics to predict indoor behavior of an insecticide for aerosol spray | **S. Tanaka**

4.15.P-Mo127 Tiered Screening Level Assessment Protocol and Sensitivity Analysis for Rapid Risk Prioritization of Potential Emissions to Ambient Air in Fenceline Communities | **R. Young**

4.15.P-Mo129 Assessment of Particle Counts in both Indoor and Outdoor Environments in Allegheny County, PA | **A. Alobireed**

4.15.P-Mo130 The PFAS Chicken and Egg Dilemma: A Probabilistic Analysis of PFAS Exposure and Risk via Consumption of Home-Produced Poultry and Eggs | **J. Wilhelm**

4.15.P-Mo131 PFAS in Home-Grown Produce: Methods for Food Intake Modelling and Risk Assessment | **F. Becker**

Passive Sampling Methods for Assessing Bioavailability and Toxicity of Insoluble Substances | J. McGrath, S. Kane Driscoll

4.17.P-Mo133 Application of in situ diffusive gradients in thin-films technique in the laboratory and the field to investigate desorption kinetics of psychoactive drugs in sandy sediment | **X. Ji**

4.17.P-Mo134 Comparing Equilibrium Concentrations of Polychlorinated Biphenyls based on Passive Sampling and Bioaccumulation in Water Column Deployments | **R. Burgess**

4.17.P-Mo135 Optimization of Equilibrium Passive Sampling for Short-Term Surface Water Measurements | **O. Ghosh**

4.17.P-Mo136 Interlaboratory study of polymeric samplers for ex situ measurement of freely dissolved hydrophobic organic compounds in sediment porewater | **G. Lotufo**

4.17.P-Mo137 Evaluating the Effectiveness of Select Biomimetic Passive Sampling Methods for Estimating the Toxicity of Petroleum Contamination in Soils | **S. Koster**

4.17.P-Mo138 Sediment Biodegradation: An Alternative Testing Method to OECD 308 | **K. McFarlin**

Transformation of Environmental Contaminants: Reaction Mechanisms and Product Identification | C. McDonough, S. Joudan, J. Challis, R. Sullivan

4.18.P-Mo139 Ozonation of phenol in the presence of biochar and carbonaceous materials: The effect of surface functional groups and graphitic structure on the formation of reactive oxygen species | **S. Oh**

4.18.P-Mo140 Interactions of RNA Biopesticides and Organic Matter in Environmental Systems | **A. Chatterjee**

4.18.P-Mo141 Production of Dichloroacetonitrile from Derivatives of Isoxaflutole Herbicide during Water Treatment | **J. Rogers**

4.18.P-Mo142 Photodegradation of Double-Stranded RNA in Solution and on Surfaces: Mechanisms for Fast Degradation of RNA Interference Biopesticides on Surfaces | **K. Ho**

4.18.P-Mo143 COSMOtherm Estimates of Organophosphate Ester Oxidation Product Physico-Chemical Properties | **J. Parnis**

4.18.P-Mo144 The Effect of Flame Retardants on Toxics Emitted from Foam Combustion | **R. Weatherholt**

4.18.P-Mo145 Hepatic Biotransformation of N-(1,3-Dimethylbutyl)-N′-Phenyl-P-Phenylenediamine-Quinone (6PPD-Q) in Rainbow Trout, an Acutely Sensitive Species | **D. Montgomery**

Benefits and Obstacles in Using Mechanistic Effect Models for Chemical Risk Assessments | C. Accolla, V. Forbes, M. Vaugeois, S. Raimondo

5.03.P-Mo146 Realism, Conservatism, and Tiered Ecological Risk Assessment | **M. Etterson**

5.03.P-Mo147 Understanding and Overcoming Factors Influencing the Uptake of New Approach Methodologies by Ecological Risk Assessors | **A. Wray**

5.03.P-Mo148 Mechanistic effect models: A brief history to highlight benefits and obstacles in using them for chemical risk assessment | **C. Accolla**

5.03.P-Mo149 Accounting for temperature-dependent toxicity in mechanistic effect models: the case study of Chironomus riparius exposed to thiamethoxam | **M. Vaugeois**

5.03.P-Mo150 A New Software Tool for Promoting Standardization of Conceptual Diagrams for Mechanistic Effect Models | **V. Forbes**

5.03.P-Mo151 The Application of Population Models, Quantitative Adverse Outcomes, and similar tools in Ecological Risk Assessment | **W. Landis**

5.03.P-Mo152 Scenario Development for Bee Risk Assessment and Health Modelling | **C. Holmes**

5.03.P-Mo153 Expanding the Scope of Bioavailability Modeling: Application with Aquatic Fluoride | **S. Parker**

Continuing Discussions on Incorporating Climate Change Model Predictions into Ecological Risk Assessments | R. Stahl, K. Brix, J. Moe, W. Landis

5.06.P-Mo154 Integrating Expertise on Climate Modeling and Environmental Risk Assessment: A SETAC Pellston Workshop in the Oslo Fjord | **J. Moe**

Environmental Impact of Currently Marketed Sunscreens and Potential Human Impacts of Changes in Sunscreen Usage | C. Mitchelmore, C. Menzie

5.09.P-Mo155 Thyroid Hormone Disruption Potentials of Major Organic UV Filters of Octisalate, Homosalate, and Diethylamino Hydrobenzoyl Hexyl Benzoate in Zebrafish (Danio rerio) and Rat Pituitary (GH3) Cells | **A. Jo**

Environmental Risk Assessment | C. Ng, S. Lynn, A. Samel

5.20.P-Mo156 Polystyrene Micro/nanoplastic Concentration, Exposure Duration, Size, and Surface Functionalization Effects on the Uptake and Viability of Hepatic Cells | **W. Shelver**

5.20.P-Mo157 Application of U.S. EPA's Web-based Interspecies Correlation Estimation (Web-ICE) under the Toxic Substances Control Act (TSCA) | **K. Koehrn**

5.20.P-Mo158 Arsenic species distribution in three commercially canned seafood samples | **S. Bhattacharjee**

5.20.P-Mo159 The Ecological Protective Concentration Level (PCL) Database - an Online Tool for Streamlining Ecological Risk Assessments in Texas, USA | **B. Yates**

5.20.P-Mo160 Development of a chronic OTNE Species Sensitivity Distribution | **K. Connors**

5.20.P-Mo162 Assessing the biodegradation and environmental risk from antibiotics in surface waters | **J. Tell**

5.20.P-Mo163 Towards the development of fragrance specific ecological Threshold of Toxicological concern (ecoTTC) | **K. Connors**

5.20.P-Mo164 Quantitative weight-of-evidence approach for bioaccumulation assessment of volatile methylsiloxanes in aquatic and terrestrial species using the Bioaccumulation Assessment Tool | **J. Kim**

5.20.P-Mo165 Evaluation of Microfurnace Pyrolysis-GC-MS Method Refinements for Reliable Quantification of Tire and Road Wear Particles (TRWP) in Environmental Matrices | **S. More**

5.20.P-Mo166 Biosolids chemical risk assessment | **D. Tobias**

Contaminated Sediment Toxicity, Risk Assessment and Management, Remediation, Restoration, Climate Change Resiliency | B. Brooks, C. Asher, C. Peterson, M. Novak

6.02.P-Mo167 Evaluating toxicity of sediments from the Little Calumet River, Indiana | **N. Kemble**

6.02.P-Mo168 Mobility, Behavior and Partitioning of Per- and Polyfluoroalkyl Substances in Resuspended Sediments | **M. Morales-McDevitt**

6.02.P-Mo169 The Presence, Distribution, and Concentration of Trace Metals in Surface Waters and Sediments Collected Near a Virginia Coal Ash Repository | **E. Tyler**

6.02.P-Mo170 Validation of a Novel Test System for Exposure Assessment With Benthic Invertebrates and Chemical Activity as a Dose Metric | **S. Abel**

6.02.P-Mo171 Spatial Analysis of Dam Sediment and Metal Contamination in the Northern Nashua River Basin | **J. Lanier**

6.02.P-Mo172 Target Lipid Model and Empirical Koc Values to Predict PCB Sediment Toxicity to Invertebrates: Model Development & Aqueous Toxicity Data | **P. Fuchsman**

6.02.P-Mo173 Target Lipid Model and Empirical Koc Values to Predict PCB Sediment Toxicity to Invertebrates: Spiked Sediment & Case Study Data | **K. Fetters**

6.02.P-Mo174 A Framework for Evaluating Legacy Sediment Quality Behind Dams to Prioritize Proactive Sediment Assessment and Management | **G. Long**

Defining Environmental Justice in Context of Impact and Outcomes | L. Royer, S. Apitz

7.02.P-Mo175 Engagement to determine the key issues and obstacles to stakeholder and community uptake of an urban geothermal resource | **M. Bloor**

Methods, Measures and Models for Characterizing Restoration Effectiveness | D. Sullivan, T. Newcomer-Johnson, C. Kotalik

8.03.P-Mo176 Hydro-Geological Conceptual Site Model Refinement Using a Groundwater-Surface Water Interface (GSI) Trident Probe | **J. Guerrero**

8.03.P-Mo177 Ecological Effects of Iron in Non-restored Streams and Regenerative Stream-water Conveyance Systems | **M. Gaesser**

8.03.P-Mo178 Characterizing Grassland Management Practices for Ecological Health Investigations Using Remote Sensing Methods | **J. LaRoe**

Virtual-Only Presentations

To view virtual-only presentations, visit the meeting platform or download the SETAC Pittsburgh app at pittsburgh.setac.org.

Adopting Alternative Approaches to Animal Testing for Ecotoxicity Assessments: Approaches and Avenues for the Future | T. Norberg-King, M. Embry, A. Lillicrap, M. Novak

1.01.V-01 Transcriptomic Dose-Response Analysis in Zebrafish Embryos to Estimate Estrogenicity and Long Term Aquatic Toxicity of Bisphenol A and Two of its Replacement Compounds | **P. Nguyen**

1.01.V-02 Technical Framework for High Quality New Approach Methodologies (NAMs) | **E. Petersen**

1.01.V-03 Zebrafish Models as an Integrated Approach to Testing and Assessment (IATA) to Maximize Human and Environmental Health Protection While Reducing Animal Testing in Chemical Risk Assessment (CRA) | **R. Moore**

1.01.V-04 Locomotor Ability and Brain Gene Expression in Drosophila melanogaster Exhibit Non-monotonic Dose-Response to HFPO-DA | **J. Vu**

Advancements in Aquatic and Wildlife Immunotoxicology: Innovative Approaches to Identifying Adverse Outcomes | M. Sellin Jeffries, C. Smith, L. Thornton Hampton, L. Iwanowicz

1.02.V-01 Contaminant Exposure and Gene Transcription in Baltic and Greenlandic Ringed Seal Tissues | **J. Boyi**

1.02.V-02 MicroRNAs As Biomarkers of Pollutant-Induced Immunomodulation in White-Tailed Eagles | **A. Brand**

The Microbiome: An Emerging Tool for Predictive Ecotoxicology | J. Bisesi, C. Martyniuk, K. Thompson, G. Monticelli, E. Hartmann

1.10.V-01 Impact of Disinfectants on Pseudomonas aeruginosa and Staphylococcus aureus Dual Species Biofilms | **R. Melton**

1.10.V-02 Crude oil hydrocarbon induced soil microbiome shift in polluted soils | **C. Okafor**

Assessing Contaminant Effects in Ecosystems with Multiple Stressors | D. Ostrach, L. Kapustka, C. Irvine

2.03.V-02 Interpopulation variation in nitrite tolerance in the eastern mosquitofish (Gambusia holbrooki) | **O. Cano-Rocabayera**

Detection, Toxicity and Environmental Risk of UV Filters in Aquatic Ecosystems | C. Mitchelmore, I. Davies

2.06.V-01 Spatial Distribution and Partitioning of UV Absorbents in the Surface Water of the St. Lawrence River and Estuary in Canada | **A. Ben Chaaben**

2.06.V-02 Developing Standard Ecotoxicity Tests on Scleractinian Corals for Ultraviolet (UV) filters and Related Chemicals | **V. Di Mauro**

2.06.V-03 Trophodynamics of Industrial Antioxidants, UV Absorbents and Polyhalogenated Carbazoles in the Food Web of the Endangered St. Lawrence Estuary Beluga Population | **A. Trinquet**

2.06.V-04 The UV-filter 3-Benzophenone Does Not Cause Oxidative Stress in Octopus maya (Voss y Solís-Ramírez, 1966) During Embryonic Development | **G. Ortiz**

Latest Advances in Metal Bioavailability and Toxicity to Aquatic Organisms | A. Cremazy, S. Le Faucheur

2.09.V-01 Investigating toxicity of low concentrations of nickel in rainbow trout by examining proteomic profiles of skin mucus and blood plasma | **D. Simmons**

Field Studies for Reducing Uncertainty in Contaminant Exposure and Effects Assessments for Wildlife | T. Bean, A. Bonisoli Alquati, M. King, M. Eng

3.02.V-01 The Effects of Ditch Management in Agroecosystems on Embryonic and Tadpole Survival, Growth and Development of Northern Leopard Frogs (Lithobates pipiens) | **S. Robinson**

3.02.V-02 Assessment of the impact of agricultural activities in freshwater snails from Ramsar Wetland | **O. Cruz-Santiago**

Advances in Methodologies and Applications of Non-Targeted Analysis for PFAS | N. Soares Quinete, C. McDonough, B. Place

4.02.V-01 Non-targeted Analysis (NTA) for the Screening of Per- and Polyfluoroalkyl Substances in Drinking and Surface Water Samples from South Florida Environments | **X. Li**

Analysis of Pharmaceuticals, Pesticides and Other Chemicals in Environmental Matrices | A. Ye, N. Dennis, W. Hunter

4.04.V-01 Passive sampling strategy for monitoring very persistent and very mobile substances | **Y. Jeong**

4.04.V-02 The Advantages of Using Passive Sampling in Monitoring Veterinary Pharmaceuticals | **N. Rakonjac**

4.04.V-03 Impacts of wastewater effl uents and seasonal trends of emerging contaminant in water and sediments of two cold-region rivers | **A. Cardenas**

4.04.V-04 Removal of Pharmaceuticals from Source Separated Urine Using Locally Manufactured Biochars | **P. Kairigo**

In the Neighborhood and Out to Sea: Shedding Light on Tire Wear Microplastics | K. Moran, S. Brander, B. Beckingham, J. McIntyre

4.13.V-01 6PPD-quinone (N1-(4-Methylpentan-2-yl)-N4-phenylbenzene-1,4-diamine-quinone) toxicity to coho salmon under varied water quality conditions | **G. Foster**

4.13.V-02 Investigating Tire Tread Particle Toxicity to Fish Using Rainbow Trout Cell Lines | **W. Dudefoi**

4.13.V-03 Searching for Safer Tire Anti-Degradants | **C. Manahan**

4.13.V-04 Chemical Composition of Road Pavement Particles and Tire Wear Particles - The Same or Not the Same? | **S. Wagner**

Transformation of Environmental Contaminants: Reaction Mechanisms and Product Identification | C. McDonough, S. Joudan, J. Challis, R. Sullivan

4.18.V-01 Removal and Mineralization of Nitrotriazolone in Contrasting Freshwater Sediment Systems Using 13C and 15N Stable Isotope Tracers | **T. Ariyarathna**

Benefits and Obstacles in Using Mechanistic Effect Models for Chemical Risk Assessments | C. Accolla, V. Forbes, M. Vaugeois, S. Raimondo

5.03.V-01 An overview of modelling approaches for ecological risk assessment of pesticides | **S. Charles**

5.03.V-02 Taking full advantage of modelling to better assess environmental risk due to xenobiotics | **S. Charles**

5.03.V-03 Improvements in toxicokinetic-toxicodynamic predictions of survival accounting for both time and concentration dependency – Towards innovative PBTKTD models | **S. Charles**

Mentoring Program

Propel your career and join the SETAC mentoring program!

Get Involved in Three Easy Steps:

1. Identify yourself as a mentor on your SETAC profile, or search the membership directory to find a mentor
2. Report to SETAC when you've found a match
3. Follow the framework outlined in the handbook

setac.org/mentoring

Tuesday Events

DAILY SCHEDULE			
7:00–17:30	SETAC Help Desk and Registration	Concourse A	
7:00–18:30	Coat and Luggage Check	Concourse A	
7:15–until	Fun Run and Walk	Westin Lobby	
8:00–9:00	Morning Poster Sessions and Networking	Exhibit Hall A	
8:00–18:00	Exhibits and Silent Auction	Exhibit Hall A	
8:30–9:30	ASTM E50.47 Subcommittee on Biological Effects and Environmental Fate	330	
9:00–9:45	Daily Plenary: Todd Bridges, U.S. Army Corps of Engineers	Ballroom A	
10:00–12:40	Morning Platform Sessions	see p. 30	
11:30–13:00	Pittsburgh City Tour (preregistration required)	Meet at Registration	
12:30–14:00	Women in SETAC: Aurora Sharrard (preregistration required)	317/318	
12:40–14:00	Lunch (on your own)		
12:45–13:45	SCIEX Sponsored Seminar	306/307	
13:00–14:00	Regional Chapters Committee	321	
13:00–14:00	SETAC North America Science Committee	330	
14:00–16:40	Afternoon Platform Sessions	see p. 32	
15:00–16:00	Ecotoxicology of Amphibians and Reptiles Interest Group	330	
16:40–18:00	Afternoon Poster Sessions and Networking	Exhibit Hall A	
17:00–18:00	Topical Discussion: Microplastics – Nanoplastics, Life Cycle Analysis and Environmental Risk Assessment	406	
17:00–18:00	Wildlife Toxicology Interest Group	306/307	
17:00–18:00	Aquatic Toxicity Testing Interest Group	316	
17:30–18:30	Exploring Career Choices (preregistration required)	315	
17:30–18:30	Chemistry Interest Group	330	
17:30–18:30	SETAC Journals Editorial Meeting	329	
17:30–19:00	Metals Ecotoxicity Species Sensitivity Group	309	
17:30–19:30	Gender and Equity Allyship in the Workplace (preregistration required)	317/318	
18:15–20:00	Early Career Social (preregistration required)	Penn Brewery	
18:30–21:00	Beer Nirvana	Helltown Brewing	

The Silent Auction ends today at 17:30 during the Afternoon Poster Session.

FUN RUN AND WALK

7:15–UNTIL | MEET AT THE WESTIN LOBBY | ***JOIN FOR FREE!***

Event will be live streamed – sponsored by the Endowment Fund.

Plenary Speaker

Todd Bridges | U.S. Army Corps of Engineers

9:00–9:45 | Ballroom A

Todd Bridges is the U.S. Army's Senior Research Scientist for Environmental Science. His research at the U.S. Army Engineer Research and Development Center focuses on: 1) the science and engineering of sustainable infrastructure development 2) risk and decision analysis methods applied to water resources infrastructure and environmental systems, and 3) assessment and management of sediment and environmental contaminants. Bridges is the National Lead for the Engineering With Nature® Program. He has served on the editorial boards for the journals of Integrated Environmental Assessment and Management, Environmental Toxicology and Chemistry, and Dredging Engineering. Bridges is an Adjunct Assistant Professor with the College of Engineering at the University of Georgia. Over the last 30 years, Bridges has published more than 60 journal articles, book chapters, books and numerous technical reports. He received his B.A. (1985) and M.A. (1988) in Biology/Zoology from California State University, Fresno, and his Ph.D. (1992) in Biological Oceanography at North Carolina State University. Bridges received the Government Service Award from SETAC in 2009. In 2021, Bridges received a Presidential Rank Award from President Biden.

Networking Events

Women in SETAC | Aurora Sharrard, University of Pittsburgh

Equity for Women in Science Is a Critical Component of Holistic Sustainability in STEM Innovations and Progress

12:30–14:00 | 317/318 | Students $40, Professionals $60, Lunch Included

Aurora Sharrard is the Executive Director of Sustainability at the University of Pittsburgh, leading Pitt's Office of Sustainability, cross-departmental sustainability staff, and university-wide sustainability strategy, activities, policies, collaborations and partnerships. The Pitt Sustainability Plan guides these efforts with 61 sustainability goals at the intersection of equity, environment and economics. Building on past progress and successes, Sharrard and her colleagues work daily across the spectrum of sustainability, including pursing carbon neutrality by 2037 as part of the Pitt Climate Action Plan, incorporating sustainability into the curriculum, providing access and opportunity to all, transparently communicating progress, and embedding a culture of sustainability into the University of Pittsburgh so that it's a sustainability leader in every scale, from campus to international.

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Early Career Social

18:15–20:00 | Penn Brewery | Students $10, Professionals $20

If you identify as early career, join us to make new connections while enjoying some light snacks and beverages at Penn Brewery (under 21's welcome), which is a 30-minute walk or a 4-minute Uber from the convention center. There will be some optional activities to break the ice and help you meet and chat with new people.

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SCIEX

SCIEX Sponsored Lunch and Learn Seminar: PFAS at Parts-per-Quadrillion – How We Got There and Where We Go From Here

12:45–13:45 | 306/307

Tuesday Sessions

Morning Talks (T)

	10:00–10:15	10:20–10:35	10:40–10:55	11:00–11:15
301/302	**Quantifying the Fate and Effects of Metals: Balancing Complexity with Practicality** | K. Rader, R. Carbonaro, A. Ryan			
	2.11.T-01 Seasonality of insect-mediated Hg flux out of human-made ponds | **M. Hannappel**	**2.11.T-02** Plastic's Role in Mercury Transport Throughout the Matagorda Bay System | **J. Conkle**	**2.11.T-03** The Coupled Trophic Transfer of Selenium and Mercury in a Large River | **R. Flamenco**	**2.11.T-04** Discussion 1 of 2
304/305	**Ecotoxicology and Risk Assessment of Reptiles and Amphibians** | C. Godard, P. Henry			
	1.04.T-01 Relationship Between Serum Thyroid Hormone Metabolites and Gene Expression Biomarkers in the Back Skin During Rana [Lithobates] catesbeiana Tadpole Metamorphosis | **C. Helbing**	**1.04.T-02** Development of a native amphibian toxicology model in an outdoor system | **S. Windle**	**1.04.T-03** Effects of per-/polyfluoroalkyl substances (PFAS) on the hematology and immune response of Northern watersnakes (Nerodia sipedon) | **D. Haskins**	**1.04.T-04** Evaluation of anticoagulant rodenticides, warfarin and diphacinone sensitivity in sea turtles | **S. Nakayama**
306/307	**Bridging the Gap: Teaching Environmental Toxicology and Chemistry in a Dynamic Educational System** | S. Nutile, A. Simpson, C. Singleman, A. Harwood			
	7.01.T-01 The role of community-based learning in teaching about industrial ecology and sustainability in the context of engineering education A case study from the field | **A. Hicks**	**7.01.T-02** Challenging Students in Critical Thinking with Applied Final Exams | **S. Nutile**	**7.01.T-03** Increasing "Learning by Doing" Does Not Mean They Will Do It: Lessons in Project- Based Learning | **A. Harwood**	**7.01.T-04** Discussion
310/311	**Fluorine-Free Replacements: A Real World Vignette For Avoiding Regrettable Substitutions** | L. Holden, A. East, J. Suski, C. Salice			
	5.10.T-01 Introductory Remarks	**5.10.T-02** Testing Biodegradability of Aqueous Film Forming Foam Formulations in an Aerobic Environment | **M. Modiri Gharehveran**	**5.10.T-03** Acute and Chronic Toxicity of Candidate Fluorine-Free AFFF Replacement Formulations to Five Marine Species | **E. Wirth**	**5.10.T-04** Acute and Chronic Toxicity of Candidate Fluorine-Free AFFF Replacement Formulations to Five Freshwater Species | **D. Moore**
Ballroom A	**Assessing Contaminant Effects in Ecosystems with Multiple Stressors** | D. Ostrach, L. Kapustka, C. Irvine			
	2.03B.T-01 Beyond the Roads: Assessing land use factors that influence road runoff toxicity | **J. Spromberg**	**2.03B.T-02** Multigenerational toxicity of pyrethroids at two salinities in the model estuarine fish, Inland Silverside (Menidia beryllina) | **S. Hutton**	**2.03B.T-03** Potential Health Effects of Contaminant Mixtures from Point and Nonpoint Sources on Fish and Frogs in the New Jersey Pinelands | **S. Breitmeyer**	**2.03B.T-04** Detecting the Heterogeneous Distribution of Contaminant Risk in an Urban Watershed: Pairing Targeted Analysis and Ecotox Assays | **J. Behrens**
Ballroom B	**The Cascading Benefits of Green Infrastructure: Chemistry, Ecology and Well-being** | K. Gray, C. Ng			
	6.05.T-01 Disturbance Regimes of Stream Metabolism Can be Altered by Green Infrastructure | **D. Costello**	**6.05.T-02** Green is the New Grey: Determining the relationships between the biodiversity, soil quality and water balance in urban rain gardens | **H. Lewis**	**6.05.T-03** Advancing Nature-Based Solutions by Integrating Engineering With Nature® (EWN®) Principles with Landscape Architecture Practices | **B. Suedel**	**6.05.T-04** Discussion
401/402	**Chemicals in Domestic and Industrial Wastewaters: Occurrence, Fate and Use as Tracers** | B. Chandramouli, S. Gewurtz, R. Vidic			
	4.07.T-01 Investigation of PFAS in Wastewater Matrices to Inform Management | **M. Mendez**	**4.07.T-02** Investigating the Enantiospecific Behaviour of Chiral Anti-depressants in Wastewater and Surface Water in Grand River, Ontario, Canada | **S. Jamal**	**4.07.T-03** Increased Brine Salt Concentrations in Pennsylvania Groundwater Indicate Potential Wastewater Impacts During Unconventional Oil & Gas Development | **S. Shaheen**	**4.07.T-04** Water recovery and reuse from unconventional produced waters using membrane distillation | **R. Vidic**
406	**Data and Methods to Support Cumulative Risk and Impact Assessments** | L. Racz, W. Rish, A. Verwiel			
	5.07.T-01 A Vision for Research on Cumulative Impacts at the U.S. Environmental Protection Agency | **H. Frey**	**5.07.T-02** Using NHANES Data to Quantify the Magnitude of Allostatic Load in Relation to Existing Risk Assessment Uncertainty/Variability Factors | **W. Klaren**	**5.07.T-03** How many chemicals typically drive the risk in real environmental mixtures in aquatic environments? | **I. Rodea-Palomares**	**5.07.T-04** Exposure to the green environment is associated with improved biomarker-based indices of health and aging in adults | **A. Egorov**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Morning Talks (T)

11:20–11:35	11:40–11:55	12:00–12:15	12:20–12:35	
Quantifying the Fate and Effects of Metals: Balancing Complexity with Practicality | K. Rader, R. Carbonaro, A. Ryan				
2.11.T-05 Measuring In-Situ Surface Water Methylmercury Concentrations Using a Novel Equilibrium-Based Passive Sampler | **J. Damond**	**2.11.T-06** Re-Thinking the Kinetics of Metals in Sediment Passive Samplers Using Reverse Tracers | **F. Risacher**	**2.11.T-07** Unravelling Iron (III) Bioavailability in Freshwater Samples – Methods and Performance | **E. Balsamo Crespo**	**2.11.T-08** Discussion 2 of 2	301/302
Ecotoxicology and Risk Assessment of Reptiles and Amphibians | C. Godard, P. Henry				
1.04.T-05 Acute and Chronic Effect of Current-use Fungicides on Survival, Growth, and Development of Wetland-breeding Amphibian Larvae | **A. Hopkins**	**1.04.T-06** Dirtier and Sicker: Site- and Individual-Level Contamination Affects Infection Prevalence of an Emerging Infectious Disease of Amphibians | **K. Smalling**	**1.04.T-07** Subacute effects of microcystin on larval and embryonic Rana clamitans hatch success, growth, and survival | **B. Friday**	**1.04.T-08** Discussion on climate change and ecotoxicology for herpetofauna	304/305
Bridging the Gap: Teaching Environmental Toxicology and Chemistry in a Dynamic Educational System | S. Nutile, A. Simpson, C. Singleman, A. Harwood				
7.01.T-05 Estuarine Toxicology: The Tijuana River Estuary Research as a Teaching Model to Promote Community Science Literacy and Student Engagement in Local and International Environmental Issues | **M. Dong**	**7.01.T-06** Empowering Students as Community-Scientists to Investigate Questions in Environmental Toxicology | **T. Cary**	**7.01.T-07** Teaching Mathematical Models with Interactive Software Tools | **I. Moran**	**7.01.T-08** Panel Discussion	306/307
Fluorine-Free Replacements: A Real World Vignette For Avoiding Regrettable Substitutions | L. Holden, A. East, J. Suski, C. Salice				
5.10.T-05 Chronic Reproductive Toxicity of Fluorine-Free Firefighting Foams to Northern Bobwhite Quail (Colinus virginianus) | **F. Hossain**	**5.10.T-06** Toxicity Assessment of Alternative Aqueous Film Forming Foams | **A. East**	**5.10.T-07** Discussion	**5.10.T-08** Fit-For-Purpose Performance: Evaluating Alternatives to Aqueous Film Forming Foam (AFFF) | **M. Roy**	310/311
Assessing Contaminant Effects in Ecosystems with Multiple Stressors | D. Ostrach, L. Kapustka, C. Irvine				
2.03B.T-05 Development of a national-scale model to predict environmental mercury risk using dragonfly larvae as biosentinels | **C. Kotalik**	**2.03B.T-06** Effects of Lifetime Hypoxia Exposure on Mercury Uptake Using the Elemental Composition of Fish Otoliths, Eye Lenses, and Muscle Tissues | **H. Miraly**	**2.03B.T-07** Multistressor Interactions in Clarias gariepinus: Concurrent Phenanthrene Exposure and Mycobacterium marinum Infection | **O. Ogunbanwo**	**2.03B.T-08** Multiple stressor effects on freshwater invertebrate communities: does warming enhance pharmaceutical active compound toxicity at the community level? | **C. Duchet**	Ballroom A
The Cascading Benefits of Green Infrastructure: Chemistry, Ecology and Well-being | K. Gray, C. Ng				
6.05.T-05 Use of Sensing-Based Soil Moisture Balances to Track Real-time Performance of a Green Roof | **Z. Dong**	**6.05.T-06** Physics-informed Neural Networks to Analyze the Performance of Green Infrastructures | **M. Elkhadrawi**	**6.05.T-07** An Integrated Approach to Flood Mitigation: Landscape Analysis, Stormwater Modeling, and Green Infrastructure Design in Markham, IL | **C. McGarvey**	**6.05.T-08** Hydrological Tools That Expose the Benefits of Green Stormwater Infrastructure for a Non-technical Audience | **P. Haas**	Ballroom B
Chemicals in Domestic and Industrial Wastewaters: Occurrence, Fate and Use as Tracers | B. Chandramouli, S. Gewurtz, R. Vidic				
4.07.T-05 Uncovering Behavior Patterns of Trace Organic Contaminants in Nitrogen Removing Biofilters Using High Resolution Mass Spectrometry | **R. Smolinski**	**4.07.T-06** Evaluating the Effects of Antibiotics on the Biological Transformation of Nitrogen and Pharmaceutical and Personal Care Products Removal From Onsite Wastewater in Nitrifying Sand Columns | **P. Clyde**	**4.07.T-07** Evaluating Paraben Transformation Product Release in Wastewater Treatment and Changes in Paraben and Paraben Transformation Product Concentrations at Sites Downstream of Wastewater Treatment | **M. Penrose**	**4.07.T-08** Evaluation of Innovative/Alternative Septic Systems for the Removal of Contaminants of Emerging Concern | **S. Glassmeyer**	401/402
Data and Methods to Support Cumulative Risk and Impact Assessments | L. Racz, W. Rish, A. Verwiel				
5.07.T-05 Research on Chemical and Non-Chemical Stressors to Further Understand How Cumulative Impact Assessments Can Improve Children's Health | **N. Tulve**	**5.07.T-06** Visualization and Analysis of Cumulative Risks Related to Resilience from Climate Change-induced Flooding in the Great Lakes Watershed | **J. Ashby**	**5.07.T-07** Improving Cumulative Risk Assessment in Fenceline Communities: A Case Study in Southeast Pennsylvania | **A. Chiger**	**5.07.T-08** Methods for Cumulative Impact and Risk: A Community Case Study Revisited | **M. Fox**	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Tuesday Sessions

Afternoon Talks (T)

	14:00–14:15	14:20–14:35	14:40–14:55	15:00–15:15
301/302	**Freshwater Salinization: Causes, Effects and Working Towards Solutions** | P. Gillis, D. Soucek, C. Wood, B. Kefford			
	2.08.T-01 The Salinization of Coastal Rivers from Sea Level Rise: Implications for Freshwater Mussels | **W. Cope**	**2.08.T-02** The Influence of Water Hardness on the Salt-Sensitivity Of Early Life Stage Freshwater Mussels | **P. Gillis**	**2.08.T-03** Interactions of Major Ions and Dissolved Organic Carbon on the Electrical Responses of the Fish Gill: A Study Using Model Compounds | **C. Morris**	**2.08.T-04** Impacts of Salinity on Pesticide Toxicity in Fish | **D. Schlenk**
304/305	**Non-invasive Techniques to Biomonitor Exposure and/or Effects From Anthropogenic Pollutants in Wildlife** | B. Hernout, K. Fremlin, V. Jaspers, A. Zaccaroni			
	3.03.T-01 Associations Between Organohalogen Contaminants and Thyroid Hormones in Skin of the Endangered St. Lawrence Estuary Beluga | **V. Jolicoeur**	**3.03.T-02** Using seabird eggs to monitor spatial and temporal trends of legacy POPs in the Northeast Pacific, 1968 to 2019 | **R. Kesic**	**3.03.T-03** Monitoring Flame Retardants in Air from the Back of a Gull: The Landfill Effect | **J. Verreault**	**3.03.T-04** Heavy Metal Body Burdens and their Interaction With Metabolites in the Pacific Black Duck (Anas Superciliosa) in Victoria, Australia | **D. Nugegoda**
306/307	**Innovative Analytical Approaches for Understanding Environmental Contaminants of Emerging Concern** | T. Guillette, C. McDonough, J. McCord, J. Bangma			
	4.14.T-01 Combining Analytical Techniques for the Measurement of Per- and Polyfluoroalkyl Substances (PFAS) in Plastic Products | **H. Whitehead**	**4.14.T-02** Analysis of Plastic Additive Leaching Kinetics Using High Performance Liquid Chromatography with Quantitative Time-of-Flight Mass Spectrometry | **E. Fries**	**4.14.T-03** Novel Approaches to Elucidate Self-assembly Behaviors of a Cationic Polyfluoroalkyl Substance on Clays | **B. Yan**	**4.14.T-04** Understanding Fate and Distribution of Antimicrobial Compounds and Antimicrobial Resistance Genes in Wastewater Treatment | **C. Head**
310/311	**Airborne and Volatile Per- and Polyfluoroalkyl Substances: Measurements and Recent Developments** | A. Rodowa, J. Reiner, C. Young			
	4.03.T-01 Volatility of PFAS: Evaluation with New Measurements of Hexadecane/Air Partition Coefficients for 65 Neutral PFAS | **S. Endo**	**4.03.T-02** Chemical ionization mass spectrometry for online gas and aerosol-phase per- and polyfluoroalkyl substances (PFAS) analysis using iodide reagent ion | **R. Sullivan**	**4.03.T-03** Volatile Per- and Polyfluoroalkyl Substances in Air: Developing Methods for Targeted Analysis and Discovery of Non-Target Species | **N. Shafer**	**4.03.T-04** Analysis of trace-level volatile and emerging PFAS derived from Biosolids using GC Quadrupole Time of Flight HRMS | **S. Haddad**
Ballroom A	**Bayesian Networks in Environmental Risk Assessment and Management** | W. Landis, M. Cains, J. Carriger, J. Moe			
	5.02.T-01 1. To Explore Strange New Worlds, the future of Bayesian networks, Risk Assessment and Adaptive Management | **W. Landis**	**5.02.T-02** A Probabilistic Ecological Community Analysis for Coral Reef Systems in Puerto Rico | **J. Carriger**	**5.02.T-03** An Ecological Risk Assessment for Microplastics in the San Francisco Bay Using the Bayesian Network Relative Risk Model | **E. Sharpe**	**5.02.T-04** Prediction of pesticide effects on aquatic communities in a rice field by using a Bayesian network approach - A southern European case study | **S. Mentzel**
Ballroom B	**From Legacy Pollutants to Chemicals of Emerging Concern: The Great Lakes as Case Study** | M. Venier, H. Hung, B. Crimmins, B. Ulrich			
	4.11.T-01 Epigenetic and Transcriptomic Changes Resulting from Long-term Exposure to Contaminant Mixture Associated with Agricultural Land Use | **M. See**	**4.11.T-02** Legacy and Emerging Contaminants in North American Herring Gull (Larus argentatus) Serum from the Laurentian Great Lakes | **S. Brady**	**4.11.T-03** Temporal Trends of Legacy and Current-use Halogenated Flame Retardants in Air, Precipitation, Herring Gull Eggs and Lake Trout in Lake Ontario | **H. Hung**	**4.11.T-04** Are you sure you want to eat that? Investigating Polychlorinated Biphenyl Concentrations in Lake Erie Fishes | **O. Hodgson**
401/402	**Advancing Aquatic Toxicity Test Methods: Considerations for Culturing, Testing and Data Analysis Test Methods** | T. Norberg-King, N. Love, K. Satbhai, M. Bowersox			
	2.02.T-01 Multigenerational Effects of Benzotriazole in Daphnia Magna at Molecular and Physiological Levels | **H. Im**	**2.02.T-02** Historical Test Variability for the Ceriodaphnia dubia Chronic Method: The California Experience | **D. Greenstein**	**2.02.T-03** Assessment of Interlaboratory and Seasonality Impacts of Culturing Ceriodaphnia dubia with Light Emitting Diode (LED) Lights | **R. Cooper**	**2.02.T-04** Comparing the Toxicant Responses and Culturing Characteristics of Long-Term Laboratory-Reared and Field Populations of Ceriodaphnia dubia | **V. Lydy**
406	**Soil Contaminants: Fate, Bioavailability, Environmental Toxicology in Ecological and Human Health Risk Assessment** | M. Simini, B. Brooks			
	5.17.T-01 Application of Springtails and Oribatid Mites as Bioindicators of Petroleum Hydrocarbon Soil Toxicity | **P. Roy**	**5.17.T-02** Linking Reproductive Toxicity to Gene Expression in a Soil Invertebrate, Folsomia candida, Exposed to Petroleum Hydrocarbons | **A. Pang**	**5.17.T-03** Discussion	**5.17.T-04** Development of Site-Specific Soil to Earthworm Bioaccumulation Model for Polychlorinaded Biophenyls | **H. McChesney**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Afternoon Talks (T)

15:20–15:35	15:40–15:55	16:00–16:15	16:20–16:35	
Freshwater Salinization: Causes, Effects and Working Towards Solutions | P. Gillis, D. Soucek, C. Wood, B. Kefford				
2.08.T-05 Discussion	**2.08.T-06** Addressing Salinization in Urban Streams Through Site-Specific Thresholds for Total Dissolved Solids Developed Using Toxicity Tests on Standard and Field-collected Species | **R. Brent**	**2.08.T-07** Phytoremediation of Saline Soil Using Native Canadian Halophytes | **L. Nawroth**	**2.08.T-08** Discussion	301/302
Non-invasive Techniques to Biomonitor Exposure and/or Effects From Anthropogenic Pollutants in Wildlife | B. Hernout, K. Fremlin, V. Jaspers, A. Zaccaroni				
3.03.T-05 Development of a site-specific non-invasive biomonitoring tool for determining source attribution and estimating bioaccessible Pb in Tundra Swans at the Bunker Hill Superfund Site | **T. Luxton**	**3.03.T-06** Trace Elements in Shark Blood: Can Blood Be Used for Non-lethal Biomonitoring? | **J. Smith**	**3.03.T-07** Decentralizing ecosystem toxicology to evaluate mercury burden across neotropical biota in the Peruvian Amazon | **C. Moore**	**3.03.T-08** Poster Highlights | **B. Hernout**	304/305
Innovative Analytical Approaches for Understanding Environmental Contaminants of Emerging Concern | T. Guillette, C. McDonough, J. McCord, J. Bangma				
4.14.T-05 The Permeability of RTgill-W1 Cell Membranes to Per- and Polyfluoroalkyl Substances: A Case Study for Linking Toxicokinetics with Toxicodynamics | **R. Warner**	**4.14.T-06** Passive Sampler for the Time-Integrative Measurement of Per- and Polyfluoroalkyl Substances in Water | **P. Edmiston**	**4.14.T-07** Integrated monitoring of emerging pollutants in the aquatic environment: the combined use of passive sampling and electrochemical sensing technique | **P. Mokaba**	**4.14.T-08** Poster Highlights | **T. Guillette**	306/307
Airborne and Volatile Per- and Polyfluoroalkyl Substances: Measurements and Recent Developments | A. Rodowa, J. Reiner, C. Young				
4.03.T-05 High Time Resolution Ambient Measurements of Gas- and Particle-Phase Perfluorocarboxylic Acids (PFCAs): Implications for Sources and Fate | **C. Young**	**4.03.T-06** Analysis of PFAS Compounds in Indoor Air using Thermal Desorption GC-MS in Retrospective: Frustrations, Successes, and Three Years of Progress | **K. Thaxton**	**4.03.T-07** Clearing the Air on Per- and Polyfluoroalkyl Substances (PFAS) in AC Filters | **J. Bowden**	**4.03.T-08** Source-Receptor Relationships for Atmospheric PFAS Determined Using a 3-D Atmospheric Chemical Transport Model and Spatially Resolved US Emissions | **J. Sun**	310/311
Bayesian Networks in Environmental Risk Assessment and Management | W. Landis, M. Cains, J. Carriger, J. Moe				
5.02.T-05 Bayesian Network Human Health Risk Assessment of Per- and Poly-Fluorinated Substances (PFAS) via Fish Consumption at Multiple Waterbodies in Texas | **E. Lawrence**	**5.02.T-06** Identifying and testing adaptive management options to increase river catchment resilience using a Bayesian Network | **K. Adams**	**5.02.T-07** A Bayesian Network Approach to Weight-of-Evidence Assessment: Calibration of Weights by Machine Learning | **J. Moe**	**5.02.T-08** Lessons Learned and Recommendations for Using Bayesian Networks in Environmental Risk Assessments | **W. Landis**	Ballroom A
From Legacy Pollutants to Chemicals of Emerging Concern: The Great Lakes as Case Study | M. Venier, H. Hung, B. Crimmins, B. Ulrich				
4.11.T-05 Quantifying Hazards to Fish from Emerging Contaminant Exposures: A Great Lakes Basin Regional Assessment | **D. Gefell**	**4.11.T-06** Impact of Environmental and Engineered Processes on Per- and Polyfluoroalkyl Substance Fingerprints from an Aqueous Film Forming Foam Manufacturer near Lake Michigan | **S. Balgooyen**	**4.11.T-07** Per- and polyfluoroalkyl substances (PFAS) in precipitation and lake water in the Great Lakes basin | **C. Xia**	**4.11.T-08** Discussion	Ballroom B
Advancing Aquatic Toxicity Test Methods: Considerations for Culturing, Testing and Data Analysis Test Methods | T. Norberg-King, N. Love, K. Satbhai, M. Bowersox				
2.02.T-05 Novel Approaches Isolate Contaminant Effects in Complex Mixtures Enabled by 3D Printing of Nature Inspired Designs | **A. Kennedy**	**2.02.T-06** Application of passive sampling and bioassays for assessment of the removal efficiency for bioavailable organic contaminants in wastewater treatment plants | **R. Mlaba**	**2.02.T-07** Merging Alternative Toxicity Methods and Passive Sampling Towards Improved Stormwater Assessment | **N. Hayman**	**2.02.T-08** Interpreting the Toxicity of Physically and Chemically Dispersed Oil: A Case Study with American Lobster Larvae (Homarus americanus) | **B. de Jourdan**	401/402
Soil Contaminants: Fate, Bioavailability, Environmental Toxicology in Ecological and Human Health Risk Assessment | M. Simini, B. Brooks				
5.17.T-05 Determining the Bioavailability and Leaching Potential of Arsenic in Wildfire Ash and Debris | **E. Naylor**	**5.17.T-06** Oklahoma City Playground Soil Contamination: An Environmental Justice Issue? | **S. Hileman**	**5.17.T-07** Discussion 1 of 2	**5.17.T-08** Discussion 2 of 2	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Poster Schedule

Setup: 7:00–8:00 (see p. 10 for map of posters)
Take down: 18:00–18:15

Presenters are expected to attend their poster during most of the break and the poster sessions.

Morning Poster Session: 8:00–9:00
Lunch Break: 12:40–14:00
Afternoon Poster Session: 16:40–18:00

Late-Breaking Science Posters

SETAC accepts late-breaking science posters; however, they are submitted after our print deadline. A list of the accepted posters can be found at the poster supplies desk in Exhibit Hall A. Poster IDs for these late submissions start with P-Tu188 on Tuesday.

Ecotoxicology and Risk Assessment of Reptiles and Amphibians | C. Godard, P. Henry

1.04.P-Tu001 The Quantum of Polycyclic Aromatic Hydrocarbon in Amphibian (frog) and Sediment in Igbekebo Area of Ondo State, Nigeria | **T. Ediagbonya**

1.04.P-Tu003 Rural vs Urban Amphibians: Assessing Abundance, Body Condition, and Dietary Toxicant Exposure | **A. Conner**

1.04.P-Tu004 Assessing Methylmercury Exposure of Plethodontid Salamanders in New York State | **J. Tennant**

1.04.P-Tu005 Detecting the Emerging Contaminant Methamphetamine in Apex predator Alligator mississippiensis | **T. Cox**

1.04.P-Tu006 Validation of an Appropriate Healthy Diet for Xenopus Laevis Used in Endocrine Studies | **E. Danby**

1.04.P-Tu007 Effects of Perfluoroalkyl Substances (PFAS) On Amphibian Body Condition: Is Altered Lipid Metabolism the Driver? | **A. Bushong**

Environmental Toxicology and Stress Response | C. Ng, S. Lynn, A. Samel

1.11.P-Tu008 Ternary layered double hydroxide/3-amino1H-1,2,4-triazole for high-efficiency removal of Cupper metal ions. Experimental, possible mechanism, sustainable use of waste and safety study | **K. Abdou**

1.11.P-Tu009 Evaluation of sensitivity of a federally endangered mussel (Tennessee Bean, Venustaconcha trabalis) to selected chemical contaminants | **N. Wang**

1.11.P-Tu010 Respiratory and Cardiovascular Effects Following in vivo Exposure to Respirable Gunshot Residue | **S. Smith**

1.11.P-Tu011 Determining the Distribution of Elements and Oxidative Potential across Fine Particulate Matter (PM2.5) Filters | **A. Sidwell**

1.11.P-Tu013 Diet Effects Egg Laying, Biomass, and Stable Isotope Values in Tetragnathid Spiders: Use of a Novel Laboratory Technique | **S. Kerr**

1.11.P-Tu014 Metabolic Profiling of Daphnia Magna Exposure to Phthalates Using Targeted Liquid Chromatography Tandem Mass Spectrometry | **E. Oliveira Pereira**

1.11.P-Tu015 Does Venlafaxine Alter Metabolism of Zebrafish via Mitochondrial microRNAs? | **K. Robichaud**

1.11.P-Tu016 Genetic Signatures of Selection for Resistance to Lead Exposure in the Turkey Vulture (Cathartes aura) Genome | **A. Koedel**

1.11.P-Tu017 Early developmental exposure to △9-tetrahydrocannabinol causes persistent multigenerational hyperactivity and altered brain mitochondrial function in zebrafish | **Z. Pandelides**

1.11.P-Tu018 Effects of 17-ethinylestradiol (EE2) on Gonadal Development and Gene Expression in Larval Mummichog (Fundulus heteroclitus) | **C. Sing-Judge**

1.11.P-Tu019 Ancestral BPA Exposure Led to Follicular Atresia and Metabolic Diseases in the 5th Generation Grandchildren | **S. Chakraborty**

1.11.P-Tu020 Transcriptional Alterations Induced by Potassium Perchlorate Exposure in the Adult Medaka Testis | **B. Reh**

1.11.P-Tu021 The Florida Red Tide Toxin Induces a Massive Shift in the Redox Proteome of Lymphoblast Cells Which Can Be Reversed With the Acrolein Scavenger Mesna | **K. Rein**

1.11.P-Tu022 Synthesis of mercaptan-base drugs and pharmacological evaluation against brevetoxin toxicity on voltage gated sodium channel and thioredoxin system | **M. Tabares Beltran**

1.11.P-Tu023 An Integrated Systems-Level Model of Zearalenone Toxicity in Fish Embryos Based on NMR Metabolic Profiling | **M. Annunziato**

1.11.P-Tu024 Using Zebrafish Behavior To Reveal Gene-Environment Interactions Underlying Population Susceptibility Differences In Response To Environmental Chemical Stressors | **P. Thunga**

1.11.P-Tu025 Investigating the Impacts of Irbesartan on Human and Zebrafish PPARγvia In vitro Bioassay Testing and In vivo Zebrafish Models | **N. Madani**

1.11.P-Tu026 Transgenerational Effects of Benzotriazole in Daphnia Magna at Molecular and Physiological Level | **H. Im**

1.11.P-Tu027 Redox status of blood tissue associated with the ingestion of arsenic from groundwater and methylation efficiency in populations of the Colombian Caribbean | **F. Gonzalez**

1.11.P-Tu028 Multigenerational Effects of Benzotriazole in Daphnia Magna at Molecular and Physiological Level | **H. Im**

1.11.P-Tu029 Sub-chronic ozone exposure disrupts IL-10 production, results in persistent inflammation in Scnn1b-Tg+ mice lung | **T. Vo**

1.11.P-Tu030 Seasonal Variation in Quagga Mussel Cellular Biomarkers and DNA Damage in the Great Lakes: Implications for Bivalve Environmental Biomonitoring | **N. Fuller**

1.11.P-Tu031 Determining the Role of Fungicides in the Development of Antibiotic Resistant Bacteria | **N. Wieber**

1.11.P-Tu032 Investigation of Toxicity of Selected Fluorinated Pharmaceuticals via In Vitro Bioluminescence Assay Using Allivibrio fisheri | **J. Choe**

1.11.P-Tu033 Zebrafish High-Throughput Assay for the Evaluation of Pesticide-Specific Mitochondrial Toxicity, Survival and Deformity Outcomes | **M. Chernick**

1.11.P-Tu034 Developmental effects of in ovo exposure to six polycyclic aromatic hydrocarbons in chick embryos | **Y. Pagan-Agosto**

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4.16.V-01 Why Are Terpenes in Air an Environmental Concern and How to Accurately Measure Them | **P. Laplante**

4.16.V-02 Non-target and Suspect Screening of Bioaccumulative Organohalogen Compounds in Marine Fish From Seto Inland Sea, Japan | **A. Goto**

Bayesian Networks in Environmental Risk Assessment and Management | W. Landis, M. Cains, J. Carriger, J. Moe

5.02.V-01 Bayesian Models to Calculate the Traditional Median Effective Concentration (EC50) of Diclofenac on Green Algae | **Y. Puerta**

Fluorine-Free Replacements: A Real World Vignette For Avoiding Regrettable Substitutions | L. Holden, A. East, J. Suski, C. Salice

5.10.V-01 Per- and Polyfluoroalkyl Substances (PFAS) Replacements: Case Study and Demonstration of Sustainability Analysis with Uncertainty | **M. Bruckner**

Engineering, Remediation and Restoration | C. Ng, S. Lynn, A. Samel

6.06.V-01 Effect of Land Management on Soil Microbial Activity and Greenhouse Gas Emissions in Floodplains | **J. Ansari**

6.06.V-02 Efficiency Assessment of Ferrates to Remove As and/or Mn from Synthetic Neutral Mine Water | **R. Safira**

6.06.V-03 Biotechnological potentials of hydrocarbonoclastic bacteria isolated from long-term crude oil impacted sites | **E. Abang**

Bridging the Gap: Teaching Environmental Toxicology and Chemistry in a Dynamic Educational System | S. Nutile, A. Simpson, C. Singleman, A. Harwood

7.01.V-01 Designing comics as a way to learn environmental toxicology | **P. Ramírez Romero**

Leveraging Sustainability Initiatives to Provide FIFRA/ESA Mitigation Responses | B. McGaughey, E. Arnold, T. Blickley

7.04.V-01 Exploring How Voluntary Efforts to Reduce the Effects of Pesticides on Listed Species Fit into Endangered Species Act Section 7 Consultations | **J. Thompson**

Material Flows in the Circular Economy: Environmental Impacts and Sustainability Implications | A. Hicks

8.02.V-01 Life Cycle Assessment of Wastewater Treatment in Refinery with focus on Desalting Process | **F. Kouacou**

See you next year!

SETAC®

LOUISVILLE

SETAC North America 44th Annual Meeting

12–16 November 2023

Louisville, KY, USA

louisville.setac.org

Wednesday Events

DAILY SCHEDULE			
7:00–17:30	SETAC Help Desk and Registration	Concourse A	
7:00–18:30	Coat and Luggage Check	Concourse A	
8:00–9:00	Morning Poster Sessions and Networking	Exhibit Hall A	
8:00–18:00	Last Day to Visit Exhibitors	Exhibit Hall A	
9:00–9:45	Daily Plenary: Matt Mehalik, Breathe Collaborative	Ballroom A	
10:00–12:40	Morning Platform Sessions	see p. 44	
12:30–14:00	Student Noontime Seminar: Robin Eng (preregistration required)	317/318	
12:40–14:00	Lunch (on your own)		
12:45–13:45	Thermo Fisher Sponsored Seminar	310/311	
12:45–13:45	Interest Group Summit	309	
13:00–14:00	Careers Committee	330	
14:00–16:40	Afternoon Platform Sessions	see p. 46	
16:00–17:00	Ozark-Prairie Regional Chapter	330	
16:40–18:00	Afternoon Poster Sessions and Networking	Exhibit Hall A	
17:00–18:00	Topical Discussion: Ecotoxicology of Amphibians and Reptiles – State of the Science and Emerging Issues	401/402	
17:00–18:00	Topical Discussion: Rachel Carson Legacy	406	
17:00–18:00	SETAC General Assembly and Meet the Leadership	Ballroom A	
17:30–18:30	Wildlife Workshop Steering Committee	330	
17:30–18:30	Framing the Narrative of Your Research Article	315	
17:30–18:30	Freshwater Salinization Interest Group	309	
17:30–19:00	Implementing Approaches to Account for Metal Bioavailability in Freshwaters: Current Status and Future	310/311	
17:30–19:30	Benchmarking and Publication for Non-Targeted Analysis Social	316	
17:30–19:30	Gathering of Empowered Minds Social (preregistration required)	319/320	
18:00–20:00	Student Trivia (preregistration required)	317/318	

 Event will be live streamed – sponsored by the Endowment Fund.

Plenary Speaker

Matt Mehalik | Breathe Collaborative

9:00–9:45 | Ballroom A

Mehalik is Executive Director of the Breathe Collaborative and its communication platform, the Breathe Project, beginning in September 2016. From 2007–2016, he served as Program Director of Sustainable Pittsburgh where he created Pittsburgh's sustainable business network, Champions for Sustainability, and its performance programs and networks. Mehalik has been teaching sustainability and environmental policy at Heinz College, Carnegie Mellon University, since 2008. He has published multiple peer-reviewed articles in sustainability, design and education and has co-authored "Ethical and Environmental Challenges to Engineering" with Michael E. Gorman and Patricia Werhane. Mehalik's Ph.D. is in Systems Engineering from the University of Virginia. For the past 20 years, Mehalik has dedicated himself to creating and managing networks that transform systems for a sustainable, just, fair and hopeful future. He serves on the boards of Phipps Conservatory and Pine Richland School District.

Networking Events

Student Noontime Seminar | Robin Eng, Pittsburgh Parks Conservancy

Sponsored by

COLGATE-PALMOLIVE

Growing From Uncertainty: Finding Value and Making Moves

12:30–14:00 | 317/318 | Free, Lunch Included, Preregistration Required

Robin Eng is an early career professional working as the Ecological Project Manager for the Pittsburgh Parks Conservancy. While she has always known she wanted a career that would benefit the environment, she didn't always know what that would look like. Her career path reflects this uncertainty. Since graduating college in 2013, she has held numerous positions spanning four workforce sectors and five environmental vocations. While these jobs have varied in their relevance and relation to her career objectives, she has grown to recognize and value the skills, lessons and perspectives she obtained from each opportunity. Most of all, she's learned how complex the ecological and environmental landscapes really are. In her talk, Eng will discuss the challenges she's faced and the opportunities she's seized. While she is still quite familiar with uncertainty, she hopes to share some of the insights she's gained from an evolving career and diversity of experience.

SETAC General Assembly and Meet the Leadership

17:00–18:00 | Ballroom A

Learn about the society's achievements in 2022 and plans for 2023. After the general assembly, get to know the SETAC leadership during a casual meet and greet. Please note, only the general assembly will be live streamed and recorded.

Sponsored Seminars

Join these informative events to learn about the latest products and technologies, interact with experts and ask questions.

ThermoFisher SCIENTIFIC

Sample Preparation Solutions for PFAS Analysis in Environmental Samples

12:45–13:45 | 310/311

Wednesday Sessions

Morning Talks (T)

	10:00–10:15	10:20–10:35	10:40–10:55	11:00–11:15
301/302	**To Eat, or Not to Eat? The Guts of PFAS-Related Fish Advisories** | E. Pulster, C. McCarthy, C. Carignan, J. Petali			
	7.10.T-01 Introductory Remarks	**7.10.T-02** Per- and Polyfluoroalkyl Substance and Precursor Bioaccumulation in Freshwater Recreational Fish: Implications for Fish Advisories | **H. Pickard**	**7.10.T-03** Understanding Analytical Interferences in Targeted Per- and Polyfluorinated Alkyl Substances Methods: A Case Study in Shellfish | **J. Bangma**	**7.10.T-04** Assessing PFAS in a large urbanized estuary and the potential human health implications | **E. Pulster**
304/305	**The Other Bees: Approaches for the Pesticide Risk Assessment of Non-Apis Bees and Other Insect Pollinator Species** | A. Schmolke, S. Hinarejos, N. Galic			
	5.18.T-01 Assessing the Exposure of Wild Pollinators to Pesticides Along an Agricultural Gradient Using Silicone Bands and Tissue Residues | **M. Hladik**	**5.18.T-02** How can an automatic flight activity monitor contribute to our understanding of risk for pollinators? | **S. Knaebe**	**5.18.T-03** The fate of two radiolabeled compounds within a bumble bee microcolony | **D. Schmehl**	**5.18.T-04** Examining Soil as an Exposure Pathway in Nesting Female Solitary Bees | **C. Fortuin**
306/307	**Understanding the Ecological Effects of Nanoplastics in Aquatic Environments** | K. Ho, S. Kane Driscoll, R. Burgess			
	2.13.T-01 Discussion	**2.13.T-02** Assessing Effects of Nano- and Microplastics in Aquatic Environments | **R. Zepp**	**2.13.T-03** Differences in the Uptake and Accumulation of Nanoplastics Between Oral and Waterborne Exposures Using Larval Zebrafish (Danio rerio) | **J. Pitt**	**2.13.T-04** Effects of Micro- and Nano-Scale Plastic Exposures in Blue Mussels, Mytilus edulis | **B. Khan**
310/311	**Environmental Forensics** | N. Rose, G. Johnson			
	4.08.T-01 Environmental Forensics: Lessons Learned and Approaches Toward Robust Data Analysis | **Y. Wang**	**4.08.T-02** A Weight of Evidence Approach to Filling Data Gaps in Forensic Analyses for Contaminant Source Identification | **E. Warlow**	**4.08.T-03** Sources of Polychlorinated Dibenzo-p-Dioxins and -Furans (PCDD/Fs) to the New York/New Jersey Harbor | **L. Rodenburg**	**4.08.T-04** Atmospheric Measurements of Volatile Methyl Siloxanes in New York City | **C. Brunet**
Ballroom A	**Risk Communication: Strategies for Cross Communication Among Different Science Disciplines With Risk Issues** | S. Sager, R. Zajac-Fay, M. Beal, J. Clarkson			
	7.06.T-01 Sensationalized News and Emerging Contaminants: A Cautionary Tale from PFAS Applied to Microplastics | **R. Zajac-Fay**	**7.06.T-02** Identifying and Understanding Residents' Risk Perceptions of Harmful Algal Blooms in Lake Wateree, South Carolina | **M. Carson**	**7.06.T-03** From Novice to Natural: Training Employees in Pesticide Risk Communication | **A. Cross**	**7.06.T-04** Implementation of Risk Communication Best Practices at EPA: A Case Study on Engagement | **M. Beal**
Ballroom B	**In silico NAMs: Recent Developments and Regulatory Applications** | M. Embry, K. Fay, P. Thomas, G. Hodges			
	5.11.T-01 Comparisons of Biodegradation and Aquatic Toxicity Machine Learning Models | **S. Ekins**	**5.11.T-02** Modeling Freshwater Mussels to Assess Risks to Threatened and Endangered Species | **M. Vaugeois**	**5.11.T-03** Modeling pesticide effects on multiple threatened and endangered Cyprinid fish species to support decision making | **C. Accolla**	**5.11.T-04** A Framework for Evaluating the Need for Ecotoxicity Testing | **P. DeLeo**
401/402	**Fate and Effects of Chemicals from Stormwater Runoff** | K. Rader, J. McIntyre, K. Schiff			
	2.07.T-01 Developing Novel Indicators of Sewage Collection Systems for Source Tracking During Storm Events | **K. Schiff**	**2.07.T-02** The State of the Practice for Industrial Stormwater Pollutant Source Identification and Control | **S. Isaac**	**2.07.T-03** Exposures and Potential Ecological Effects of Chemical Mixtures in Unregulated Stormwater | **K. Smalling**	**2.07.T-04** The Effects of Dissolved Organic Carbon (DOC) on Metal (loid) Dynamics in Stormwater Bioretention Bed | **A. Al-Amin**
406	**Assessing and Measuring Effectiveness of Remediation of Contaminated Sediment** | M. Mills, D. Walters, A. Pelka			
	6.01.T-01 Spatial and Temporal Assessment of Biological Effects in Colonial Waterbirds at Contaminated Great Lakes Sites including Areas of Concern | **K. Grasman**	**6.01.T-02** Successful Use of Tree Swallows to Assess Remedy Effectiveness at Great Lakes Areas of Concern (AOCs) for Bioaccumulative and Non-bioaccumulative Contaminants | **C. Custer**	**6.01.T-03** Discussion	**6.01.T-04** In-Situ Lead Remediation in an Acidic Pine Barrens Wetland | **M. Noerpel**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Morning Talks (T)

11:20–11:35	11:40–11:55	12:00–12:15	12:20–12:35	
To Eat, or Not to Eat? The Guts of PFAS-Related Fish Advisories | E. Pulster, C. McCarthy, C. Carignan, J. Petali				
7.10.T-05 Why and How We Should Sample Biota at PFAS-Contaminated Sites in Support of Human and Ecological Risk Assessments | **C. Salice**	**7.10.T-06** Accumulation of PFAS in stocked brook trout in Maine, USA | **T. Danielson**	**7.10.T-07** Seafood as a source of per- and polyfluoroalkyl substance exposure among residents of New Hampshire | **M. Romano**	**7.10.T-08** Best practices for human health risk assessment associated with PFOS in fish | **E. ReateguiZirena**	301/302
The Other Bees: Approaches for the Pesticide Risk Assessment of Non-Apis Bees and Other Insect Pollinator Species | A. Schmolke, S. Hinarejos, N. Galic				
5.18.T-05 Transfer of Pesticides from Solitary Bee Nesting Materials into Provisions: Laboratory Determination of Pesticide Rate Constants and Novel Distribution Ratios | **C. Luu**	**5.18.T-06** Use of caterpillars and adult butterflies for assessing toxicity and ecological risk of insecticides | **T. Hoang**	**5.18.T-07** Differential sensitivity and synergy in adult and larvae Lepidoptera | **C. Badder**	**5.18.T-08** SolBeePop: Assessing Risks of Pesticide Exposures to Populations of Solitary Bees in Agricultural Landscapes, a Modeling Approach | **A. Schmolke**	304/305
Understanding the Ecological Effects of Nanoplastics in Aquatic Environments | K. Ho, S. Kane Driscoll, R. Burgess				
2.13.T-05 Effects of Polystyrene Nanoplastic on Benthic Microbial Communities | **M. Giroux**	**2.13.T-06** Sorption and Quantification of PAHs in the Lavaca Bay using Environmentally Weathered Microplastics | **O. Fadare**	**2.13.T-07** The effects of nanoplastics on polycyclic aromatic hydrocarbon uptake in rainbow trout | **Y. Zhang**	**2.13.T-08** Key Challenges and Limitations to Characterizing and Quantifying Environmental and Human Health Risks to Micro- and Nanoplastic Particles: Reference Materials Urgently Required | **T. Gouin**	306/307
Environmental Forensics | N. Rose, G. Johnson				
4.08.T-05 Reconstructing Trends of Per- and Polyfluoroalkyl Substances (PFAS) Release and Deposition from Sediment Cores from an Urban Estuary | **M. Cantwell**	**4.08.T-06** Assessment of Polychlorinated Biphenyl Emissions from the Portland Harbor Superfund Site into the Atmosphere | **A. Slade**	**4.08.T-07** Source apportionment of Polychlorinated biphenyls (PCBs) in sediment using different receptor models: A case study on Portland Harbor Superfund Site, Oregon, USA | **M. Dereviankin**	**4.08.T-08** Is PCA for statistical fingerprinting still relevant in the age of machine learning? | **M. Bock**	310/311
Risk Communication: Strategies for Cross Communication Among Different Science Disciplines With Risk Issues | S. Sager, R. Zajac-Fay, M. Beal, J. Clarkson				
7.06.T-05 Risk Communication to Reduce the Public Health Burden of Wildland Fire Smoke | **M. Hano**	**7.06.T-06** Science Communication through social media campaigns and open virtual events | **C. Singleman**	**7.06.T-07** Public Participation and Lessons Learned from a Successful Residential Remediation | **A. Goldberg Day**	**7.06.T-08** Strategies for Cross Communication Among Different Science Disciplines – A Panel Discussion |	Ballroom A
In silico NAMs: Recent Developments and Regulatory Applications | M. Embry, K. Fay, P. Thomas, G. Hodges				
5.11.T-05 Exploring the Prospects for Applying NAMs for the Risk Assessment of PFAS | **J. Armitage**	**5.11.T-06** New Approach Methodologies for Modeling Mixtures Toxicity | **D. Hines**	**5.11.T-07** When Molecules Fall Apart: New Approach Methodologies for Chemicals That Dissociate | **J. Kneeland**	**5.11.T-08** In Silico Model-based Exploration of the Relative Importance of Pre- and Post-absorptive Biotransformation in Human Exposure and Toxicokinetic Modeling | **S. Wang**	Ballroom B
Fate and Effects of Chemicals from Stormwater Runoff | K. Rader, J. McIntyre, K. Schiff				
2.07.T-05 Vegetative Buffer Strips for Reducing Antibiotic Transport in Surface Runoff: Effects of Buffer Width and Vegetation | **A. Moody**	**2.07.T-06** Antiozonants: Adding 6PPD to the 6PPD-quinone Story | **M. Woudneh**	**2.07.T-07** Toxicity of 6PPD-quinone Among Estuarine Fishes During Development | **K. Ackerly**	**2.07.T-08** Understanding the Environmental Occurrence and Fate of the Tire Leachate Transformation Product 6PPD-Quinone | **R. Lane**	401/402
Assessing and Measuring Effectiveness of Remediation of Contaminated Sediment | M. Mills, D. Walters, A. Pelka				
6.01.T-05 Comparative Review of Passive Sampling to Conventional Metrics for Evaluating Sediment Remediation Efficacy | **J. Grundy**	**6.01.T-06** The effects of sorption kinetics of PCBs on powdered and granular activated carbon on in-situ sediment treatment and capping | **D. Reible**	**6.01.T-07** Assessing Effectiveness of Management Options in the Anacostia River by Linking PCB Fate and Transport with Bioaccumulation Model | **U. Ghosh**	**6.01.T-08** Sources of Polychlorinated Biphenyls to Upper Hudson River Fish and Dredging Effectiveness | **L. Rodenburg**	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Wednesday Sessions

Afternoon Talks (T)

	14:00–14:15	14:20–14:35	14:40–14:55	15:00–15:15
301/302	**Pelagic and Benthic Harmful Algal Blooms (HABs): The Detection, Fate, Effects, Monitoring and Management of Blooms** | D. Perkins, A. Wilson, K. Pokrzywinski, J. Smith			
	2.10.T-01 Strategies for Preventing, Managing, and Responding to Harmful Cyanobacterial Blooms | **B. Holcomb**	**2.10.T-02** Planktonic Growth Potential of Overwintering Cyanobacteria in Sediment from Freshwater Reservoirs Impacted by Harmful Algal Blooms | **A. Calomeni**	**2.10.T-03** Spatiotemporal Occurrence and Water Quality Hazards of Common Cyanobacterial Toxins in Warm-Monomictic Reservoirs Located Across a Pronounced Annual Rainfall Gradient | **K. Stroski**	**2.10.T-04** Harmful Cyanobacterial Aerosolization Dynamics in the Airshed of a Eutrophic Estuary | **H. Plaas**
304/305	**Wildlife Risk Assessment in the 21st Century: Integrating Emerging Science in Advancing Risk Assessment for Wildlife** | T. Bean, B. Sample, M. Johnson			
	3.05.T-01 Using Exposomics to Characterize Effects of Environmental Chemical Exposure in Wildlife | **M. Ottinger**	**3.05.T-02** Suggestions for Improving Risk Assessments for Terrestrial Wildlife: Outcome of a Workshop | **B. Sample**	**3.05.T-03** Key Challenges and Developments in Wildlife Risk Assessment Problem Formulation | **B. Sample**	**3.05.T-04** Entrenchment of risk assessment practices that thwart advancement | **L. Kapustka**
306/307	**Nanoparticle Biological Interactions and Their Responses** | O. Tsyusko, S. Loureiro, E. Petersen			
	1.07.T-01 Nanoscale sulfur uniquely suppresses fungal disease and increases biomass and yield of crop plants | **J. White**	**1.07.T-02** Tuning the Properties of Polymer Nanocarriers for Controlling Foliar Uptake, Translocation, and Biostimulation of Crop Plants | **G. Lowry**	**1.07.T-03** Assessing Nano-Induced Sub-Cellular Perturbations of Lithiated Cobalt Oxide Nanomaterials to the Green Algae Raphidocelis subcapitata | **E. Ostovich**	**1.07.T-04** Assessment of Multiple Stressors: Combined Effects From Exposure to Zinc-Oxide Nanoparticles and the Pathogen Klebsiella Pneumoniae in Caenorhabditis Elegans | **J. Cochran**
310/311	**Human Exposure to Organic Contaminants of Concern** | A. Salamova, E. Ulrich			
	4.12.T-01 Residential Exposure to Per- and Polyfluorinated Substances (PFAS) via Household Dust in Eight Impacted Communities | **J. Minucci**	**4.12.T-02** Pesticides Concentrations in Canadian Low-Income Homes | **S. Vaezafsh**	**4.12.T-03** Indoor and Personal PM2.5 Samples Differ in Chemical Composition and Alter Zebrafish Behavior Based on Primary Fuel Source | **S. Victoria**	**4.12.T-04** Composition of Per- and Polyfluoroalkyl Substances (PFAS) in House Dust from United States Homes | **N. DeLuca**
Ballroom A	**PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects** | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray			
	3.04A.T-01 PFAS and related compounds in terrestrial and aquatic wildlife: A brief overview of current understanding of PFAS sources, cycling, and wildlife exposures and effects | **C. Murphy**	**3.04A.T-02** Target and non-target analysis of per- and polyfluoroalkyl substances (PFAS) in surface water following an industrial fire of unknown chemical stockpiles | **J. Marchiandi**	**3.04A.T-03** Impact of Sediment Organic Carbon on Per- and Polyfluoroalkyl Substances Bioaccumulation in Freshwater Macroinvertebrates | **X. Yun**	**3.04A.T-04** Assessing potential perfluoroalkyl substances (PFAS) trophic transfer to crickets (Acheta domesticus) | **K. McDermett**
Ballroom B	**Approaches for Incorporating Complex Data Streams into Risk Assessments** | S. Vliet, R. Sayre			
	5.01.T-01 Introductory Remarks	**5.01.T-02** Advancing Endangered Species Act Consultations – Use of an Automated, Computational Pipeline to Extract Points of Departure from Public Data Sources | **M. Hazemi**	**5.01.T-03** The ECOTOXicology Knowledgebase Literature Search, Identification and Extraction Protocols: Evolving for Efficiency and Interoperability | **D. Hoff**	**5.01.T-04** Improving prediction of hydrocarbon biodegradation in aquatic, soil, & sediment systems using system parameterization & machine learning | **A. Rodman**
401/402	**Role of Scientific Societies: Gate Keepers of Current Scientific Norms or Platforms for Presentation of Diverse Ideas?** | P. Guiney, T. Canfield, W. Goodfellow			
	7.07.T-01 Science Under Attack: Why We Should All Care About Censorship In Science | **P. Guiney**	**7.07.T-02** The critically important role of scientific societies: perspectives from academia to government service to chemical industry scientist | **L. McConnell**	**7.07.T-03** The Pitfalls of Fighting Manufactured Doubt | **A. Leopold**	**7.07.T-04** The Demon-Haunted World, The War on Science, Bending Science and the attack on scientific inquiry from the outside and within | **W. Landis**
406	**Conventional and Unconventional Oil in the Environment: Characterization, Environmental Pathways, Toxicity and Treatment** | S. Brar, R. Martel, M. Cledon			
	6.03.T-01 How does Scale-up affect Enzymatic Biodegradation of Petroleum Hydrocarbons? | **S. Miri**	**6.03.T-02** Simulation of novel jellyfish type of process for bioremediation application | **S. Davoodi**	**6.03.T-03** Photocatalytic Degradation of Polycyclic Aromatic Hydrocarbons in Water by 3D printed TiO2 Composites | **A. McQueen**	**6.03.T-04** AEOs Fractionation Reveals that Acute Toxicity is Mainly Due to Naphthenic Acids | **J. Gutierrez-Villagomez**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Afternoon Talks (T)

15:20–15:35	15:40–15:55	16:00–16:15	16:20–16:35	
Pelagic and Benthic Harmful Algal Blooms (HABs): The Detection, Fate, Effects, Monitoring and Management of Blooms | D. Perkins, A. Wilson, K. Pokrzywinski, J. Smith				
2.10.T-05 Occurrence of Harmful Algal Blooms (HABs) in Urban Environments | **H. Mash**	**2.10.T-06** Investigating Effects of Developmental Domoic Acid Exposure on Neuroimmune Cells in Larval Zebrafish (Danio rerio) | **A. Hidayat**	**2.10.T-07** Comparative Understanding of the Developmental Neurotoxic Effects of Chiral Cyanotoxin Anatoxin-a in Two Common Fish Models | **L. Lovin**	**2.10.T-08** Assessing the Effects of Lyngbya wollei Toxins on the Adult Fathead Minnow (Pimephales promelas) | **M. Carson**	**301/302**
Wildlife Risk Assessment in the 21st Century: Integrating Emerging Science in Advancing Risk Assessment for Wildlife | T. Bean, B. Sample, M. Johnson				
3.05.T-05 Revision of the EFSA Guidance Document on Birds and Mammals: Industry view | **T. Bean**	**3.05.T-06** Use of Population Modeling in Wildlife Risk Assessments | **C. Meyer**	**3.05.T-07** Development and application of a generic avian physiologically-based kinetic (PBK) model for three bird species | **A. Bone**	**3.05.T-08** Geospatial Risk Assessment Using High-Throughput Screening Assays To Quantify Potential Adverse Effects From Exposure To Chemical Mixtures | **K. Eccles**	**304/305**
Nanoparticle Biological Interactions and Their Responses | O. Tsyusko, S. Loureiro, E. Petersen				
1.07.T-05 Discussion	**1.07.T-06** Toxicokinetics and Bioaccumulation of Silver Sulfide Nanoparticles in Benthic Invertebrates in an Indoor Stream Mesocosm | **P. Silva**	**1.07.T-07** An Environmental Hazard Assessment of Nanoscale Exfoliated Graphene and Graphene Oxide: Impacts of Particle Preparation | **H. Brown**	**1.07.T-08** Establishing FAIR use of historical ecotoxicological data for nanomaterial governance | **A. Barrick**	**306/307**
Human Exposure to Organic Contaminants of Concern | A. Salamova, E. Ulrich				
4.12.T-05 Evaluation of Cosmetics in Commerce in Canada for Perfluoroalkyl Acids their Precursors | **A. De Silva**	**4.12.T-06** Uptake of Precursors and Legacy Per- and Polyfluoroalkyl Substances (PFASs) into Root, Shoot, and Fruit Crops from Aqueous Film-Forming Foam Impacted Water and Soil: Human Health Exposure Implications | **J. Brown**	**4.12.T-07** Consumer exposure to emerging chemicals in seafood based on customer choice, accessibility, and availability | **M. Bedi**	**4.12.T-08** Silicone Wristbands as Personal Passive Sampling Devices: Current Knowledge, Recommendations for Use, and Future Directions | **S. Samon**	**310/311**
PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray				
3.04A.T-05 Characterizing and Comparing Bioaccumulation of Complex PFAS Mixtures in Aquatic Food Webs Affected by Different PFAS-sources | **R. Flynn**	**3.04A.T-06** Assessing Exposure to PFAS from Different Sources Using a Model Species: the Tree Swallow | **C. Custer**	**3.04A.T-07** Spatiotemporal trends of PFAS in Herring Gulls in the Great Lakes | **M. Shuwal**	**3.04A.T-08** Investigation of Per- and Polyfluoroalkyl Substances (PFAS) in Surface Water, Sediment, and Aquatic Vegetation in Florida | **E. Griffin**	**Ballroom A**
Approaches for Incorporating Complex Data Streams into Risk Assessments | S. Vliet, R. Sayre				
5.01.T-05 The multi-sensor data system (MSDS): The strategy and execution of a user-friendly system that puts water quality data, from a variety of different manufacturers, in the hands of scientists | **A. Antonison**	**5.01.T-06** Integration of Regional Data and Modeling for Estrogenic Activity Risk Assessment in the Chesapeake Bay Watershed | **S. Gordon**	**5.01.T-07** Risk Characterization Questions & Discussion	**5.01.T-08** Panel Discussion	**Ballroom B**
Role of Scientific Societies: Gate Keepers of Current Scientific Norms or Platforms for Presentation of Diverse Ideas? | P. Guiney, T. Canfield, W. Goodfellow				
7.07.T-05 SETAC Should Provide a Forum Where Diverse Ideas are Welcomed and Scrutinized | **K. Coady**	**7.07.T-06** Your Censorship versus Mine; An Attempt to Falsify My Own Arguments Against Censorship | **C. Borgert**	**7.07.T-07** Panel Discussion 1 of 2: Role of Scientific Societies	**7.07.T-08** Panel Discussion 2 of 2: Role of Scientific Societies	**401/402**
Conventional and Unconventional Oil in the Environment: Characterization, Environmental Pathways, Toxicity and Treatment | S. Brar, R. Martel, M. Cledon				
6.03.T-05 Lethal and Sub-Lethal Effects of the Photo-Enhanced Toxicity of Diluted Bitumen, Crude Oil and UV Radiation on Hyalella azteca from the IISD-ELA Freshwater Oil Spill Remediation Study (FOReSt) | **S. Michaleski**	**6.03.T-06** Using Biological Responses to Monitor Freshwater Post-Spill Conditions over 3 years in Blacktail Creek, North Dakota, USA | **A. Farag**	**6.03.T-07** Characterizing the Geochemical Evolution and Aquatic Toxicity of a Diluted Bitumen Spilled Within Shallow Groundwater Systems | **S. Hepditch**	**6.03.T-08** Assessing the Efficacy of a Remediation Product for Degrading Polycyclic Aromatic Compounds (PACs) After Spills of Conventional Heavy Crude Oil into Freshwater | **B. Cooney**	**406**
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Poster Schedule

Setup: 7:00–8:00 (see p. 10 for map of posters)
Take down: 18:00–18:15

Presenters are expected to attend their poster during most of the break and the poster sessions.

Morning Poster Session: 8:00–9:00
Lunch Break: 12:40–14:00
Afternoon Poster Session: 16:40–18:00

Nanoparticle Biological Interactions and Their Responses | O. Tsyusko, S. Loureiro, E. Petersen

1.07.P-We001 Toxic Effects of Binary Mixtures of Metal Oxide Nanoparticles on the Bioluminescence Activity of Pm-lux Recombinant Strain | **I. Kong**

1.07.P-We002 Nanoparticle Surface Chemistry and Morphology Influence Mesophyll Protoplast Uptake and Fate | **B. Therrien**

1.07.P-We003 Short-Term Exposure to FC60, ZnO and TiO2 Nanoparticles Affects Antioxidant Responses in the Clam Ruditapes philippinarum | **D. Asnicar**

1.07.P-We004 Effect of anionic nanoclays (LDHs) to Daphnia magna: harmonizing methods to derive reproducible results | **S. Loureiro**

1.07.P-We005 Investigating the Impact of Nanoparticle Charge on Green Algae Using Functionalized Carbon Dots and Morphological Data | **E. McKeel**

Fate and Effects of Chemicals from Stormwater Runoff | K. Rader, J. McIntyre, K. Schiff

2.07.P-We006 Acute toxicity of 6PPD and its transformation products to larval mayflies (Neocloeon triangulifer) and juvenile freshwater mussels (Lampsilis siliquoidea) | **D. Soucek**

2.07.P-We007 Use of Combined Modeling Approach to Evaluate Transportation-Related Stormwater and its Potential Impacts to Sediment | **J. DeMars**

2.07.P-We008 Investigation into the fate of 6PPD and 6PPD-quinone in air and aquatic conditions | **R. Mumford**

2.07.P-We009 Effects of Low Dose Bifenthrin Exposure on Culex quinquefasciatus Pyrethroid Resistance | **N. Sy**

2.07.P-We012 Acute Toxicity of a Tire Rubber-Derived Chemicals, 6PPD-quinone and HMMM, to Various Life Stages of Atlantic Salmon (Salmo salar) | **D. Philibert**

2.07.P-We013 Mitigation Strategies for Tire Road Wear Particles at the Source and After Release into the Environment | **K. Gregory**

2.07.P-We014 Water Quality Analysis for Increased Endocrine Disrupting Chemicals (EDCs) Detection Accuracy and EDC Relationship to Mosquitofish Masculinization | **J. Garcia Acosta**

2.07.P-We015 Analysis of tire-related chemicals in fish using liquid-chromatography coupled with tandem mass spectrometry | **D. da Silva**

2.07.P-We016 Controlling Saturation to Improve PFAS Removal in Biochar-Amended Stormwater Bioretention Systems | **K. Hawkins**

Pelagic and Benthic Harmful Algal Blooms (HABs): The Detection, Fate, Effects, Monitoring and Management of Blooms | D. Perkins, A. Wilson, K. Pokrzywinski, J. Smith

2.10.P-We017 Development of a Microcystis aeruginosa culture method to produce sufficient amounts of microcystin to conduct multispecies acute and chronic toxicity tests | **J. Lazorchak**

2.10.P-We018 Immuno-Affinity Magnetic Beads For Cyanotoxin Extraction And Clean Of Biological Samples | **L. Ruth**

2.10.P-We019 Benthic Cyanobacterial Blooms in Stormwater Ponds | **A. Tatters**

2.10.P-We020 Toxic Benthic Cyanobacteria as an Emerging Ecological and Public Health Threat in Virginia | **S. Mohney**

2.10.P-We021 Ecological Toxicity of Cyanotoxins: Development of an Evidence Map using ECOTOXicology Knowledgebase Systematic Protocols | **J. Olker**

2.10.P-We022 Characterizing Benthic Cyanobacteria and Their Toxicity in the Finger Lakes of New York State | **A. Webster**

Understanding the Ecological Effects of Nanoplastics in Aquatic Environments | K. Ho, S. Kane Driscoll, R. Burgess

2.13.P-We023 Using Weighted-Averaging to Calibrate Stressor-Specific Genus Sensitivity Values for Assessing Causes of Stream Impairments | **M. Griffith**

2.13.P-We024 Synthesis and Characterization of Microsize Polyisobutylene and toxicological evaluation on the development of Zebrafish (Danio rerio) | **A. Anifowoshe**

2.13.P-We025 Microplastic Accumulation in Aquatic Organisms in Saigon-Dongnai Rivers: A Comparison of Hard Clam, Meretrix Lyrata, and Giant River Prawn, Macrobrachium Rosenbergii | **B. Trinh**

2.13.P-We026 Evaluation of Pyrolysis-Gas Chromatography/Mass Spectrometry Library Matching Programs for Micro- and Nanoplastic Analysis | **J. Gundersen**

2.13.P-We027 Detection of plastic debris and microplastics in sea turtles from Japanese coastal waters and estimation of their exposure risk | **H. Nakata**

2.13.P-We028 Acute and Chronic Toxicities of Polyethylene Microspheres on Aquatic Organisms Exposed to Plankenburg River Water Samples | **K. Apetogbor**

2.13.P-We029 Microplastics Occurrence and Ecological Risks in Wastewater Treatment Plant Effluent, Cape Town, South Africa | **O. Pereao**

2.13.P-We030 Occurrence and Toxicity Studies of Microplastics in Effluent Samples of a Wastewater Treatment Plant | **S. Mlonyeni**

2.13.P-We031 Screening and Prioritization of Nano- and Microplastic Particle Toxicity Studies for Evaluating Human Health Risks – Development and Application of a Toxicity Study Assessment Tool | **T. Gouin**

2.13.P-We032 Trimodal microscopy for better and faster microplastic identification IR + Raman + Fluorescence | **J. Anderson**

Aquatic Toxicology, Ecology and Stress Response | C. Ng, S. Lynn, A. Samel

2.14.P-We033 Suitable Dispersing Methods for Poorly Water-soluble Chemicals in Ready Biodegradability Test | **Y. Takano**

2.14.P-We034 Investigation of Joint Toxicity of Pharmaceuticals And Pesticides Mixtures toward Green Microalgae Pseudokirchneriella subcapitata; Additive Model Approach | **J. Papac**

2.14.P-We035 Characterizing Metabolic Activity of Fish Liver Microsomes Towards Fluoxetine in Four Fish Species using Michaelis-Menten Enzyme Kinetics | **M. Steiner**

2.14.P-We036 Conducting chronic sediment toxicity studies to reduce uncertainty for plant protection products | **A. Samel**

2.14.P-We037 Multi- and Trans-Generational Effects on Daphnia Magna of Chlorpyrifos Exposures | **S. Maggio**

2.14.P-We038 Monitoring of Sediment Chemical Contaminants Alongside Oyster Tissue Physiology and Gene Regulation Within the Coastal Carolinas | **A. Aquilina-Beck**

2.14.P-We039 Environmental Persistence and Toxicity of Weathered Wildland Fire-Retardants in Aquatic Mesocosms | **H. Puglis**

2.14.P-We040 The Effect of Wildland Fire-fighting Chemicals on the Reproductive Success of an Invertebrate | **M. Iacchetta**

2.14.P-We041 Applying EcoToxChips to Identify Potential Gene Expression Markers of Exposure to Glucocorticoid Receptor Agonists | **J. Collins**

2.14.P-We042 Toxicity of 10 PFAS Compounds to Five Standard Marine Species | **N. Hayman**

2.14.P-We043 Carbon and Nitrogen Isotope Changes in Various Life Stages of the Laboratory Mayfly (Neocloeon triangulifer) | **J. Landaverde**

2.14.P-We044 Seasonal Variation in Size, Stable Isotopes (Carbon & Nitrogen), and Fatty Acids in Tetragnathid Spiders | **J. Landaverde**

2.14.P-We045 Assessing the Efficacy of Contaminant of Emerging Concern Removal by Membrane Bioreactor in Wastewater Treatment Utilizing Fathead Minnow (Pimephales Promelas) Exposure | **C. Christen**

2.14.P-We046 Experimental Arena Size Influences Larval Zebrafish Photolocomotor Behaviors and Response Thresholds Following Exposure to the Neurostimulant Caffeine | **L. Lovin**

2.14.P-We047 Effect of N-Butyl Benzenesulfonamide (NBBS) and Triphenyl Phosphate (TPhP) on the Sperm Count of Echinogammarus marinus | **B. Green-Ojo**

2.14.P-We048 Evaluation of Toxicity of Contaminated Sediment in the Kanawha River, West Virginia, to Unionid Mussel (Fatmucket, Lampsilis siliquoidea) and Common Test Benthic Organism (Amphipod, Hyalella azteca) | **C. Ivey**

2.14.P-We049 Comparison of Two Toxicogenomic Analysis Tools, RNAseq and EcoToxChip, Using Fathead Minnows (Pimephales promelas) Exposed to Paroxetine | **M. Ellman**

2.14.P-We050 Fitness Effects of Metal Accumulation in Invasive Japanese Mysterysnails | **B. Johnston**

2.14.P-We051 Identifying Native Pennsylvania Aquatic Plants for use in Bioremediation of Metals | **N. Janes**

2.14.P-We052 Maternal Transfer of Metals in Invasive Mysterysnails | **J. Pengilly**

2.14.P-We053 Feeling a S-midge Depressed?: Intergenerational Effects of Selective Serotonin Reuptake Inhibitors (SSRIs) on Chironomus dilutus | **L. Beaty**

2.14.P-We054 Selection Preference of Hyalella azteca in Response to Environmental Contaminants | **M. Johns**

2.14.P-We055 Fate and Effects of Metformin on a Boreal Lake Ecosystem | **N. Blandford**

2.14.P-We056 The presence, distribution, and concentration of trace metals in the Potomac River near a Virginia coal ash repository | **E. Tyler**

2.14.P-We057 Oxidative Stress Response in Blue Mussel (Mytilus edulis) Exposed to Ciprofloxacin, Diclofenac, and Binary Mixtures | **J. Magnuson**

2.14.P-We058 High-Throughput Behavioral Effects of Multiple PFAS Chemicals in Larval Pimephales promelas | **J. Hoang**

2.14.P-We059 Critical Review and Recommendations to Improve the Quality and Reproducibility of the U.S. EPA Chronic Mysid Shrimp Testing Guideline: Update on a CropLife America and CropLife Europe Project | **M. Fleming**

2.14.P-We060 Assessing the Presence and Concentration of Trace Metals in Surface Waters, Aquatic Plants, and Fish Adjacent to a Virginia Coal Ash Repository | **C. Willmore**

2.14.P-We061 Selenium:Mercury Molar Ratios in Tissues from Young-of-the-Year and Juvenile Sharks in Texas Bays | **N. Pitman**

2.14.P-We062 Environmental Effects of Individual and Binary Mixtures of Widely Used Drugs and Pesticides in Salmon Aquaculture | **D. Asnicar**

2.14.P-We063 Mercury Bioaccumulation in Young-Of-The-Year and Juvenile Sharks in Texas Bays | **J. Rodriguez**

2.14.P-We064 Effects of Tetrabromobisphenol A (TBBPA) on Downstream Regulatory Element Antagonistic Modulator (DREAM)-regulated Transcription in Adult Zebrafish, Danio rerio | **K. Wong**

2.14.P-We065 Toxicity Effect of Heterogeneous Mixture of Crude Oil and Petroleum Products from Artisanal Refinery in Niger Delta Nigeria in Comparism with Single Blend | **M. Luke**

2.14.P-We066 Increased Popularity in Liquid Resin 3D Printing With Poor Understanding of Feedstock Hazard | **M. Ballentine**

2.14.P-We067 Assessing Gene and Protein Expression in Mucus of Fathead Minnows Exposed to Graded Nutrient Loadings in Contained Model Wetlands | **K. Robertson**

2.14.P-We068 Assessing the Effect of Aquaculture Waste on Aquatic Invertebrate Communities in Mesocosms Planted with Wild Rice | **L. Dickenson**

2.14.P-We069 Behavioral and Transcriptomic Effects of Paroxetine on the Fathead Minnow (Pimephales promales) | **M. Bell**

2.14.P-We070 Temperature Modulation of Acute Lethal Toxicity of Individual Polyaromatic Compounds to Marine Organisms | **C. Kennedy**

2.14.P-We071 Recovery of Benthic Macroinvertebrate Assemblages in Association With Upgrades to Wastewater Treatment Plants | **S. McLay**

2.14.P-We072 Global Occurrence and Hazards of Antipsychotic Pharmaceuticals in Influent Wastewater, Effluent Discharges and Surface Waters | **A. Wronski**

2.14.P-We073 Transgenerational effects of developmental exposure to imidicloprid in zebrafish | **J. Crago**

2.14.P-We074 Disentangling the Exogenous and Endogenous Factors Influencing Pesticide Susceptibility in Insects | **G. Oishi**

2.14.P-We075 Fluoxetine alters behavior and increases predation risk for an aquatic snail | **C. Goodchild**

2.14.P-We076 Halogenated PAHs can activate the AHR2 of fishes | **J. Doering**

2.14.P-We077 Polyisocyanate Prepolymers: Investigation of Structure-Property Relationships to Aquatic Exposure and Acute Aquatic Toxicity | **R. West**

2.14.P-We078 Examining the Impact of Pyrethroid Leaching From Insecticide Treated Net Fishing on Oxidative Stress Biomarkers in P. Promelas | **D. Love**

2.14.P-We079 Water quality and elemental distribution in Typha domingensis in Cienega of Tamasopo Natural Wetland, Mexico | **C. Arguelles**

2.14.P-We080 The Effects of Polyethylene Microbeads on Crayfish-Annelid Symbiosis | **C. Braswell**

2.14.P-We081 A Modernized Protocol to Assess the Aquatic Toxicity of Oil | **B. de Jourdan**

2.14.P-We082 The Impact of Final Brood Release on Terminal Dry Weight in Daphnia Life Cycle Studies | **S. Gallagher**

Bridging Ecotoxicology and Risk Assessment for Aquatic and Terrestrial Plants | J. Arnie, V. Sesin

3.01.P-We083 Impacts of Amendments to Promote Mine Revegetation: Response of Perennial Native Plants | **D. Olszyk**

3.01.P-We084 Examining the Use of Wetland Plants for Aquaculture Wastewater Effluent Remediation | **N. Blandford**

3.01.P-We085 Non-Target Terrestrial Plant Testing and Risk Assessments for Pesticides | **C. Habig**

3.01.P-We086 INHABIT for Broad-Scale Assessment of Invasive Terrestrial Vegetation Species | **J. LaRoe**

PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray

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3.04.P-We088 Bioaccumulation of Per- and Polyfluoroalkyl Substances in Delaware Bay Ecosystem | **S. Jones**

3.04.P-We090 Per-/polyfluoroalkyl substances (PFAS) in reptiles from Clark's Marsh Wildlife Area | **D. Haskins**

3.04.P-We091 Occurrence and Bioaccumulation Patterns of Per- and Polyfluoroalkyl Substances (PFAS) In the Marine Environment | **B. Khan**

3.04.P-We092 Per- and Polyfluoroalkyl Substances (PFAS) in Archived Marine Biota from Rhode Island, USA | **M. Hedgespeth**

3.04.P-We093 PFAS in Large Predator Salmonids from Lake Michigan (USA) | **D. Miranda**

3.04.P-We094 PFAS Bioaccumulation and Trophic Transfer in Linked Stream and Riparian Food | **K. Campbell**

3.04.P-We095 Assessment of Biomagnification Potential for Per/polyfluoroalkyl Substances in Terrestrial Food-webs Using Mammalian and Amphibian Models | **R. Kuperman**

3.04.P-We096 Biomagnification Potentials for a Suite of PFAS Compounds in a Soil-Plant-Mammal Model | **M. Simini**

3.04.P-We097 Assessment of per- and polyfluoroalkyl substances in two species of captive delphinids from United States | **L. Lemos**

3.04.P-We098 The Impact of Criteria Weighting on a Relative Risk Screening Assessment Framework for Per- And Polyfluoroalkyl Substances (PFAS) | **D. McCue**

3.04.P-We099 Elucidating PFAS Biomagnification: Case Study in the Finger Lakes, New York | **N. Razavi**

3.04.P-We100 Per- and Polyfluoroalkyl Substances (PFAS) in San Francisco Bay Waters | **M. Mendez**

3.04.P-We101 Fish Species Differences and Tissue Distribution of Per- and Polyfluoroalkyl Substances (PFAS) from Ashumet Pond, Cape Cod | **V. Blazer**

3.04.P-We102 Does agricultural biosolid application contaminate wetland ecosystems with per- and polyfluoroalkyl substances (PFAS)? | **T. Hoskins**

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4.12.P-We130 Understanding PFAS Interactions With Kidney Function in Health and Disease | **S. Niu**

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4.20.P-We137 The Role of Retrospective versus Prospective Environmental Risk Assessments | **F. Ramacciotti**

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4.20.P-We139 Saturate, Aromatic, Resin and Asphaltene (SARA) Analysis of Floating Oil Exposed to UV Light | **E. Pisarski**

4.20.P-We140 Development of field test to determine Zinc contamination | **E. Lee**

4.20.P-We141 What is "Background" for Wetland Habitats in Urban Areas? The Role of Equilibrium Partitioning | **B. Yates**

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4.20.P-We151 Wastewater, Fish Tissue and Biosolids - An Analytical Evaluation of EPA Draft Method 1633 | **M. Noestheden**

4.20.P-We152 Optimized Sample preparation and Sensitive Analysis for Per and Polyfluorinated Alkyl Substances (PFAS) in Whole Blood | **E. Parry**

4.20.P-We153 Determination of heavy metals in the cargo port of the bay of Cartagena, Colombia | **F. Sanchez**

4.20.P-We154 Batch Equilibrium Experiments Indicate Weak Temperature Dependence of Soil/Sediment-Water Sorption for Cyclic Volatile Methyl Siloxanes | **G. Kozerski**

4.20.P-We155 Major uncertainties in predictive assessment on fate and transport of volatile methyl-siloxanes | **J. Kim**

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5.12.P-We175 Wastewater Surveillance for COVID-19 Detection in Toronto and Halton Regions in Ontario, Canada | **I. Khan**

Opportunities for Incorporating Ecosystem Services Approaches Into the Clean-up and Reuse of Contaminated Sites | A. DeBofsky, S. Kim, T. Newcomer-Johnson, L. Sharpe

5.14.P-We176 Using a Decision-Tree Approach to Connect Ecosystem Services Tools and Frameworks to the Risk Assessment Process | **M. Harwell**

Assessing and Measuring Effectiveness of Remediation of Contaminated Sediment | M. Mills, D. Walters, A. Pelka

6.01.P-We177 Macroinvertebrate Bioassessment of Great Lakes Area of Concern (AOC) Sites: Choosing the Best Metrics and Analyses to Assess the Success of Remediation and Restoration Efforts | **R. Yeardley**

6.01.P-We178 Evaluation of in-situ sand capping as a second aid to alleviate the impact of phenol spill to the aquatic environment | **Y. Choi**

6.01.P-We179 Assessment of Dechlorination Rate and Enantioselectivity of Reductive Dehalogenase Exposed to Metals | **C. Sumner**

6.01.P-We180 Innovative Blending of Large Volume Dredged Materials to Reduce Pollutant Risk and Enable Sustainable Reuse | **U. Gosh**

6.01.P-We181 Riparian Spiders: Biosentinels of Polychlorinated Dibenzo-p-dioxin and Dibenzofuran Contaminated Sediment | **G. Beaubien**

6.01.P-We182 Characterizing Contaminated Sediments in Lower Maumee River, Maumee Area of Concern Ohio, in Order to Support Remedial Alternative Development for Removing Beneficial Use Impairments | **K. Keil**

Conventional and Unconventional Oil in the Environment: Characterization, Environmental Pathways, Toxicity and Treatment | S. Brar, R. Martel, M. Cledon

6.03.P-We183 Light Gas Analysis – From Concerns to Solutions | **R. Vitale**

6.03.P-We184 Characterising the geochemical evolution of a diluted bitumen spill within the saturated zone | **S. Hepditch**

6.03.P-We185 Connecting gut microbiome changes with disease in fish exposed to oil | **G. Monticelli**

6.03.P-We186 Assessing the Effects of Ultraviolet Light on the Toxicity of Individual Aromatic Compounds and Crude Oils to Two Life Stages of Atlantic Cod (Gadus morhua) | **D. Philibert**

6.03.P-We187 Recommendations for Improving the Reporting and Communication of Scientific Findings: An Example with Oil Toxicity Testing | **M. Hanson**

Metals: Application of Models and Bioavailability Measures - Recent Developments | W. Adams, E. Garman, C. Bergeron, N. Paden

7.05.P-We188 Current activities towards updating U.S. Environmental Protection Agency's Aquatic Life Ambient Water Quality Criteria (AWQC) for metals | **C. Bergeron**

7.05.P-We189 Updates to the EPA Framework for Metals Risk Assessment | **W. Adams**

7.05.P-We190 EPA GIS Tool Application for Displaying Water Chemistry and Freshwater Aquatic Life Criteria Values for Metals | **L. Cruz**

7.05.P-We191 Lessons learned from deriving arsenic human health water quality criteria in Idaho | **N. Paden**

7.05.P-We192 A Case Study Demonstrating the Use of Multivariate Analyses and Metals Bioavailability Models to Understand Causes of Seasonal Sublethal Toxicity in Discharge from a Former Mine Pit | **S. Roark**

7.05.P-We193 Using Multiple Lines of Evidence to Characterize Reductions in Metals Toxicity in a Groundwater-Surface Water System with Constructed Habitat Wetlands at a Former Vanadium Mine Site | **A. Wilson-Fallon**

To Eat, or Not to Eat? The Guts of PFAS Related Fish Advisories | E. Pulster, C. McCarthy, C. Carignan, J. Petali

7.10.P-We195 Influence of PFAS and other chemical mixtures data on existing risk-based screening levels used in fish consumption advisories | **W. Heiger-Bernays**

7.10.P-We196 Bioaccumulation potentials and Ecological impacts of Per- and polyfluoroalkyl substances (PFAS) exposure to Recreational fisheries in offshore Biscayne Bay, Miami, Florida | **O. Ogunbiyi**

7.10.P-We197 PFAS in Colorado Fish: Policy Development and Community Engagement | **K. Barton**

7.10.P-We198 Per- and polyfluorinated alkyl substances (PFAS) in finfish and shellfish from the Great Bay Estuary and the Gulf of Maine | **N. Giffard**

Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis | C. LaLone, N. Basu

8.05.P-We199 ToxCast's invitroDB: Software and database enhancements to support continued integration and use of in vitro screening data | **M. Feshuk**

8.05.P-We200 Development of a Curated, Cross-Species Androgen Receptor Database | **S. Vliet**

Systems Approaches | C. Ng, S. Lynn, A. Samel

8.06.P-We202 Life Cycle Assessment of Integrated Membrane Treatment for Wastewater Reclamation: A Case Study | **K. Razman**

8.06.P-We203 Investigation on the Characteristics of Consumers towards Development of Sustainable E-Waste Management: A Case Study on Households in Putrajaya, Malaysia | **M. Hanafiah**

8.06.P-We204 Use of avian indicators in evaluating remediation and restoration effectiveness | **D. Sullivan**

8.06.P-We205 Evaluating Impacts to the U.S. Department of Defense Mission from Chemical Regulation of Phosphoric Acid, Triphenyl Ester (TPP) and Tris(2-chloroethyl) Phosphate (TCEP) | **K. Hendrixson**

Virtual-Only Presentations

To view virtual-only presentations, visit the meeting platform or download the SETAC Pittsburgh app at pittsburgh.setac.org.

Nanoparticle Biological Interactions and Their Responses | O. Tsyusko, S. Loureiro, E. Petersen

1.07.V-01 Foliar Exposure of Cd-Stressed Okra Plants to CeO2-NPs Unaltered Cd Bioaccumulation but Declined Fruit Cd Contents and Enhanced Fruit Nutritional Quality by Modulating Stress Enzymes | **Z. Han**

1.07.V-02 Toxicity and bioaccumulation of titanium dioxide nanoparticles in the life cycle of the freshwater shrimp Atya lanipes | **S. Cruz-Rosa**

Aquatic Toxicology, Ecology and Stress ResponseFate and Effects of Chemicals from Stormwater Runoff | K. Rader, J. McIntyre, K. Schiff

2.07.V-01 Assessing the Health Effects of 6PPD-quinone on Newly Feeding Juvenile Chinook and Coho Salmon | **B. Lo**

Pelagic and Benthic Harmful Algal Blooms (HABs): The Detection, Fate, Effects, Monitoring and Management of Blooms | D. Perkins, A. Wilson, K. Pokrzywinski, J. Smith

2.10.V-01 Biodegradation of Microcystins Using mlr Gene Cluster: A Review on Recent Advances Based on Bibliometric and Content Analysis (1994 – May.2022) | **Q. Wang**

2.10.V-02 California's Harmful Algal Bloom-Related Illness Workgroup Identifies Atypical Routes of Potential Human Exposure | **B. Stanton**

Understanding the Ecological Effects of Nanoplastics in Aquatic Environments | K. Ho, S. Kane Driscoll, R. Burgess

2.13.V-01 Solving Familiar Problems: Leveraging Ecotoxicity Testing Methods for Nanomaterials to Evaluate Microplastics and Nanoplastics | **E. Petersen**

2.13.V-02 Previous Successes and Future Opportunities for the Analysis of Environmental Nanoplastics with Pyrolysis - GC/MS | **M. Seeley**

Aquatic Toxicology, Ecology and Stress Response | C. Ng, S. Lynn, A. Samel

2.14.V-02 Evaluation of the effect of humic acid on inorganic chemicals using Daphnia magna | **T. Abe**

2.14.V-04 Effects of phenanthrene exposure on the B-esterases, antioxidant enzymes activities and oxidative damage in Octopus maya (Voss and Solís Ramírez, 1966) embryos | **G. Rodríguez-Fuentes**

Bridging Ecotoxicology and Risk Assessment for Aquatic and Terrestrial Plants | J. Arnie, V. Sesin

3.01.V-01 Transcriptomic Analysis of Raphidocelis Subcapitata Exposed to Macrolide Antibiotics: The Role of DNA Replication in Hormesis and Growth Inhibition | **J. Guo**

PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray

3.04.V-01 Omics-Based Assessment of Wild-Caught Freshwater Turtles Exposed to Elevated PFAS Concentrations | **D. Beale**

3.04.V-02 Novel Polyfluoroalkyl Betaines Persist in Oxic Soils and Bioaccumulate in Earthworms | **M. Liu**

Wildlife Risk Assessment in the 21st Century: Integrating Emerging Science in Advancing Risk Assessment for Wildlife | T. Bean, B. Sample, M. Johnson

3.05.V-01 Survey of new and emerging tools for wildlife ecological risk assessment | **C. Kilgour**

3.05.V-02 Exploring publicly available economic and health-related data to identify biocides with potential to be emerging or priority environmental contaminants – two case studies relevant for aquatic wildlife | **S. Marteinson**

3.05.V-03 GoMAMN: A Forum for Connection and Collaboration Focused on Values Driven Priorities for Bird Monitoring | **A. Fournier**

Biodegradation of Polymers in the Environment | Y. Chai, J. Thelusmond

4.06.V-01 A green-based approach to study the elevational effect on crude oil-pollution on microbes in a field in the Niger Delta | **I. Edamkue**

Environmental Forensics | N. Rose, G. Johnson

4.08.V-01 Source attribution of PFASs in human serum for a paper-mill impacted community | **Y. Guo**

Fate, Effects, Mitigation and Monitoring of Emerging Oilfield Contaminants in Aquatic Environment | X. Wang, D. Orihel, B. Zhang

4.10.V-01 Sedimentary eDNA metabarcoding reveals that PAHs contamination is linked to river phytoplankton and fish biodiversity loss | **H. Yongrong**

Human Exposure to Organic Contaminants of Concern | A. Salamova, E. Ulrich

4.12.V-01 PFAS Exposure via Drinking Water and Diet in a Midwestern Community with a Former Paper Mill | **Y. Guo**

4.12.V-04 PFAS Exposure from Home Produced and Locally Captured Foods in a Midwestern PFAS-Impacted Community | **A. Bhattacharya**

4.12.V-05 High Ocurrence of Aflatoxins in Maize and Peanuts and Exposure Assessment of the Population in Ghana | **E. Dankyi**

Chemistry and Exposure Assessment | C. Ng, S. Lynn, A. Samel

4.20.V-01 Biological and environmental factors affecting radium 226 levels in soft tissue and shell of American oysters (crassostrea virginica) | **S. Banville**

4.20.V-02 Potentially Sacrificing Human and Environmental Health for Food Security | **L. Bredenhann**

4.20.V-03 Occurrence of Organic UV Absorbents in the Deepwater Redfish (Sebastes mentella) from the St. Lawrence Estuary and Gulf | **F. Moualek**

4.20.V-04 Concentration of HHCB in Sediment from 2006 to 2019 in U.S. Receiving Water Bodies and Implications for Environmental Risk | **S. Wang**

4.20.V-05 Health significance of pesticides non-compliances of tomato and lettuce for Chilean consumers | **E. Jara-Torres**

In silico NAMs: Recent Developments and Regulatory Applications | M. Embry, K. Fay, P. Thomas, G. Hodges

5.11.V-02 Machine Learning Models For Predicting Human Liver Microsomal Metabolism of Organophosphate Pesticides | **S. Ekins**

5.11.V-03 Predicting Site-specific Toxicity of Fish to Metals: A New Machine Learning-based Approach | **Y. Cheng**

5.11.V-04 Performance Comparison of Acetylcholinesterase Inhibition Machine Learning Models for Multiple Species | **P. Vignaux**

Leveraging and Adapting Environmental Methods and Monitoring Tools for COVID-19 Public Health Research and Surveillance | S. Mayasich, E. Villegas

5.12.V-01 Development of a Multiplex RT-qPCR Assay for the Simultaneous Detection and Monitoring of Seasonal Enteric and Respiratory Viruses in Wastewater | **T. de Melo**

The Other Bees: Approaches for the Pesticide Risk Assessment of Non-Apis Bees and Other Insect Pollinator Species | A. Schmolke, S. Hinarejos, N. Galic

5.18.V-01 BeeGUTS – a TKTD Model for the Interpretation and Extrapolation of Bee Survival Data | **J. Baas**

Metals: Application of Models and Bioavailability Measures - Recent Developments | W. Adams, E. Garman, C. Bergeron, N. Paden

7.05.V-01 Development of the Updated Ecological Risk Classification of Inorganic Substances | **M. Beking**

Risk Communication : Strategies for Cross Communication Among Different Science Disciplines With Risk Issues | S. Sager, R. Zajac-Fay, M. Beal, J. Clarkson

7.06.V-01 Risk Communication - The Power of One-On-One Communication | **M. Hamilton**

Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis | C. LaLone, N. Basu

8.05.V-01 Application of Interspecies Correlation Estimation (ICE) Models in EPA's Risk Assessment Frameworks | **S. Raimondo**

Submit your abstract by 30 November!

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Thursday Events

DAILY SCHEDULE			
7:00–15:00	SETAC Help Desk and Registration	Concourse A	
7:00–17:45	Coat and Luggage Check	Concourse A	
8:00–9:00	Special Session: Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis – Part 1	306/307	
8:00–10:00	Special Session: Healthy Water – Indigenous Community Led Water Management Through Traditional Ecological Knowledge (TEK)	301/302	
8:00–10:00	Morning Poster Sessions and Networking	Exhibit Hall A	
9:00–10:00	Special Session: Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis – Part 2	Exhibit Hall A	
10:00–12:40	Morning Platform Sessions	see p. 60	
10:00–11:00	SETAC North America Inclusive Diversity Committee	315	
12:30–14:00	2022/2023 Program Committees Luncheon	329	
12:40–14:00	Lunch (on your own)		
14:00–16:40	Afternoon Platform Sessions	see p. 62	
16:40–17:00	Beverage Break and Networking	Ballroom Gallery	
17:00–17:30	Closing	Ballroom A	

Join Us for the Closing

Beverage Break and Networking

16:40–17:00 | Ballroom Gallery

Mingle with colleagues one final time and get a taste of our next meeting location, Louisville, KY, by trying some Derby Pie.

Closing

17:00–17:30 | Ballroom A

Raffle Sponsored by

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Event will be live streamed – sponsored by the Endowment Fund.

Thursday Sessions

Special Sessions

Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis

Chairs: Carlie LaLone and Nil Basu

Part 1: 8:00–9:00 | 306/307, and Part 2: 9:00–10:00 | Exhibit Hall A

In an era when technologies have been developed to enhance knowledge delivery and scientific data processing (e.g., NCBI, Gene Ontology Resource, CompTox Chemicals Dashboard, ECOTOX, EnviroTox, AOP-Wiki, EcoOmicsAnalyst, SeqAPASS), there are opportunities to leverage data for making immense strides in almost every field of science, including environmental toxicology. Software tools, bioinformatics algorithms and large volume databases are being developed at increasing speeds with increasing technological sophistication to rapidly process large amounts of data for innumerable scientific applications. With these advances, there are unique opportunities to bring together immense amounts of data using computational methods that could not be accomplished previously through manual efforts; however, to take advantage of the ever-increasing volume of available data, systems must be interoperable. This session will highlight workflows, tools and databases, specifically focusing on publicly accessible platforms intended to promote interoperability and provide data for a variety of scientific applications. Case examples included in this session will demonstrate how data, results and outputs have been combined to improve the understanding of chemical effects on humans and the environment. Through discussions centered on strategic interoperability, it is anticipated that innovative connections may be discovered or expanded for chemical safety assessments.

	8:00–8:05	8:05–8:10	8:10–8:15	8:15–8:20	8:20–8:25
306/307	**Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis –Part 1** | C. LaLone, N. Basu				
	8.05A.T-01 Standardization and Streamlining of Quality Control (QC), Data Provenance, and Data Source Cataloging Workflows Using the Data Accuracy Tool (DAT) | **J. Wall**	**8.05A.T-02** EPA's CompTox Chemicals Dashboard: Making Connections for You | **N. Sipes**	**8.05A.T-03** EAS-E Suite: A data integration and modelling framework to improve the understanding of chemical exposures and effects on humans and the environment. | **J. Arnot**	**8.05A.T-04** A unified framework to enable streamlined RNA-seq analysis for non-model organisms | **J. Ewald**	**8.05A.T-05** Functional Annotation of Genome Content via Conserved Protein Domain Architecture | **A. Marchler-Bauer**

	8:00–8:20	8:20–8:40	8:40–9:00
301/302	**Healthy Water - Indigenous Community Led Water Management Through Traditional Ecological Knowledge (TEK)** | S. Fernandes, M. Olsgard, J. Lazorchak, B. Rashleigh		
	1.06.T-01 Integration of TEK into Exposure-Based Release Limits for Effluents | **S. Fernandes**	**1.06.T-02** How might we advance decolonization of chemicals management? | **E. Eronen**	**1.06.T-03** Incorporating Traditional Ecological Knowledge Into the Risk Assessment and Cleanup Process at Contaminated Sites | **M. Krasnec**

	9:00–10:00			
Exhibit Hall A	**Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis –Part 2** | C. LaLone, N. Basu			
	8.05B.T-01 Software Demonstrations			
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Special Sessions

Healthy Water – Indigenous Community Led Water Management Through Traditional Ecological Knowledge

Chairs: Stacey Fernandes, Mandy Olsgard, James M. Lazorchak and Brenda Rashleigh

8:00–10:00 | 301/302

Indigenous Peoples use traditional knowledge, developed over generations, to protect their people, environment, waters and land resources. However, it is acknowledged that Indigenous Peoples have been disproportionately affected by contamination. It is critical for Indigenous People to have the opportunity and ability to influence environmental management on traditional lands. This includes the incorporation of Indigenous values into the approach for releases from industrial operations to the management of legacy contaminant issues. An important concept is the integration of Traditional Ecological Knowledge (TEK) in environmental science, policy and decision-making. TEK may be reflected in the Clean Water Act: to restore and maintain the chemical, physical and biological integrity of the Nation's waters. For example, an area in the Clean Water Act that reflects TEK is in state water quality standard's antidegradation policy. This session provides a platform for the input of Indigenous cultural knowledge into the SETAC community. Respectful, equitable and meaningful collaborations with Indigenous Peoples under the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) definition of "free, prior, and informed consent" are needed to transform environmental management frameworks and options. Presenters will discuss how joint governance initiatives with Indigenous and traditional communities have been used to broaden the context for examining contaminant exposures and potential risks to human and environmental health in a holistic manner, specifically through integration of Indigenous knowledge systems and TEK in ecotoxicology, environmental assessment, management approaches, risks of consumption of contaminated fish by substance fisherman and decisions related to water quality issues from anthropogenic activities.

8:25–8:30	8:30–8:35	8:35–8:40	8:40–8:45	8:45–9:00	
Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis –Part 1 | C. LaLone, N. Basu					306/307
8.05A.T-06 SeqAPASS implements strategic connections of knowledge streams to inform species extrapolation for chemical safety | **C. LaLone**	**8.05A.T-07** US-align: Universal Structure Alignments of Proteins, Nucleic Acids, and Macromolecular Complexes | **C. Zhang**	**8.05A.T-08** Enhancing the FAIRness (Findability, Accessibility, Interoperability, Reusability) of the AOP-Wiki | **S. Edwards**	**8.05A.T-09** Geospatial Analyses and Applications in Support of Integrative Environmental Health Science | **D. Jones**	**8.05A.T-10** Discussion	

9:00–9:20	9:20–9:40	9:40–10:00	
Healthy Water - Indigenous Community Led Water Management Through Traditional Ecological Knowledge (TEK) | S. Fernandes, M. Olsgard, J. Lazorchak, B. Rashleigh			301/302
1.06.T-04 A Pathway Towards Equitable and Sustainable Access to Freshwater Resources In Developing Countries | **B. Opeolu**	**1.06.T-05** Community-based Wetland Health Monitoring Pilot Program using Indigenous Knowledge and Western Science-based Indicators | **T. Lowe**	**1.06.T-06** Discussion	

9:00–10:00	
Software and Database Development and Application: Toward Interoperability for Knowledge Synthesis –Part 2 | C. LaLone, N. Basu	Exhibit Hall A
8.05B.T-01 Software Demonstrations	

5. Environmental Risk Assessment	6. Engineering, Remediation and Restoration	7. Policy, Management and Communication	8. Systems Approaches	

Thursday Sessions

Morning Talks (T)

	10:00–10:15	10:20–10:35	10:40–10:55	11:00–11:15
301/302	**Scientific Advances in PAH Research Enabled by Superfund Research Centers** | S. Harper, R. Tanguay			
	1.09.T-01 Source Apportionment Of Polycyclic Aromatic Hydrocarbons In The Sediment Of The Newtown Creek Superfund Site | **M. Al Hello**	**1.09.T-02** Firefighter Dermal Exposure Assessment with Silicone Samplers | **E. Bonner**	**1.09.T-03** Detection of PAH compounds in DWH crude oil and their effects on Caenorhabditis elegans germ cell apoptosis, associated with CYP450s upregulation | **X. Pan**	**1.09.T-04** Role of Alkylated Polycyclic Aromatic Hydrocarbons in Mixture Toxicity from a Legacy Creosote Site | **I. Moran**
304/305	**Developing Endangered Species Assessments for Pesticides in the United States: Progress to Date and Next Steps** | S. Teed, M. Winchell, D. Moore			
	5.08.T-01 The United States Department of Agriculture's Role in the Endangered Species Act Consultation Process for Pesticides | **E. Arnold**	**5.08.T-02** Deriving Aquatic Exposure Distributions Using a Probabilistic Pesticide Usage Approach | **H. Rathjens**	**5.08.T-03** Application of Landscape Scale Lines of Evidence in Pesticide Endangered Species Assessments to Promote Focused Avoidance and Minimization Measures | **M. Kern**	**5.08.T-04** Species Extent in Regulatory Decision Making: Tracking Changes and Refinements to the Species Ranges | **D. Campana**
306/307	**Risk and Exposure Tools to Manage Common Metals** | T. Sorell, C. Montgomery			
	5.15.T-01 Managing Ambient Metals in Human Health and Ecological Risk Assessment | **T. Sorell**	**5.15.T-02** Making the World Safe for Shrews: Good Science, Good Policy, or ....? | **D. Smith**	**5.15.T-03** Evaluating Appropriate Oral Reference Values for Risk Assessment of Copper | **M. McArdle**	**5.15.T-04** Short-Term Environmental Inhalation Toxicity Criteria for Airborne Manganese Protective of Neurological and Respiratory Effects for use in Air Toxics Risk Assessment | **C. Perry**
310/311	**Advances in Methods, Policies and Practices for Safer and More Sustainable Alternatives** | C. Rudisill, M. Jacobs, M. Roy			
	8.01.T-01 Regulatory Alternatives Assessments that Lead to Successful Chemical Substitution | **C. Rudisill**	**8.01.T-02** Building effective alternatives assessment infrastructure | **C. Rudisill**	**8.01.T-03** Determining the Feasibility and Availability of Alternatives in State-led Alternatives Assessments: Case Studies from Washington State | **R. Eaton**	**8.01.T-04** Filling Data Gaps for Chemical Hazard Assessment in Alternatives Assessments: Analogue Selection Using a Multifactor Approach | **M. Kawa**
Ballroom A	**PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects** | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray			
	3.04B.T-01 "Happy Outside, Stressed Inside" - Soybean Response to Environmentally Relevant Perfluorobutanoic acid | **E. Omagamre**	**3.04B.T-02** Comparison of the Sub-lethal Metabolic Response of Daphnia magna to Per- and Polyfluoroalkyl Substances (PFAS) of Varying Chain Length | **L. Labine**	**3.04B.T-03** Sublethal Toxicity of Diverse PFASs to Three Freshwater Invertebrates: Comparisons Among Species, Structures, and Mixtures | **S. Kadlec**	**3.04B.T-04** Feeding Ration Impacts on Larval Pimephales promelas Growth Endpoint After a 7-Day Subchronic Perfluorooctane Sulfonic Acid (PFOS) Exposure | **J. Boyda**
Ballroom B	**Microplastics in the Environment and Risk Assessment: A One-Health Perspective** | M. Williams, S. Brander, S. Harper, M. Surette			
	5.13A.T-01 Determining Effects of Polystyrene Micro- and Nanoplastic (MNPs) Ingestion on Aedes aegypti and Aedes albopictus Mosquitoes | **G. McConnel**	**5.13A.T-02** Response of a Freshwater Zooplankton Community to Microplastics in Two Large-Scale In-Lake Mesocosm Studies | **D. Langenfeld**	**5.13A.T-03** Microplastics Exposure: An Emerging Health Threat to the U.S. Military | **J. Rusiecki**	**5.13A.T-04** Comparison of Two Procedures for Microplastics Analysis in Sediments Based on an Interlaboratory Exercise | **T. Langknecht**
401/402	**Novel Methods and Approaches for Assessing Effluents and Ambient Water Toxicity** | D. Soucek, C. Flinders, W. Goodfellow, J. Lazorchak			
	1.08.T-01 Knowledge Sharing to Improve Toxicity Testing Efficiency and Outcomes: SETAC's Aquatic Toxicity Testing Interest Group and Culture Troubleshooting Subgroup Activities | **C. Flinders**	**1.08.T-02** Potential risks of pharmaceuticals and personal care products in an urban tributary of the Potomac River | **S. Glaberman**	**1.08.T-03** Mechanism-based Biomonitoring With Enhanced Throughput For Examination Of Human Impacted Surface, Ground and Drinking Water | **J. Vanden Heuvel**	**1.08.T-04** Systematic evaluation of factors affecting the characterization of wastewater effluents using gene expression | **A. Biales**
406	**Using Measured Data of Chemicals in Environmental Risk Assessment: Improving the Understanding of Uncertainties** | G. Merrington, L. Nowell			
	4.19.T-01 Introductory Remarks	**4.19.T-02** Is it necessary to evaluate the reliability and relevance of measured chemical data in the environment? | **G. Merrington**	**4.19.T-03** Evaluating the Reliability of Environmental Concentration Data to Characterize Exposure for Use in Environmental Risk Assessments | **M. Hladik**	**4.19.T-04** Criteria for Evaluating the Relevance of Environmental Exposure Datasets | **A. Peters**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Morning Talks (T)

11:20–11:35	11:40–11:55	12:00–12:15	12:20–12:35	
Scientific Advances in PAH Research Enabled by Superfund Research Centers | S. Harper, R. Tanguay				
1.09.T-05 Time-related Alteration of Aqueous-Phase Polycyclic Aromatic Hydrocarbon (PAH) Photoproducts in the Presence of TiO2 Nanoparticles | **L. St Mary**	**1.09.T-06** Exposure to Benzo[a]pyrene (BaP) Induces Gut microbiota Shifts and Developmental Toxicity in Zebrafish (Danio rerio) | **P. Ranasinghe**	**1.09.T-07** Benzo[a]pyrene Exposure Induces Persistent Transgenerational Mitochondrial Dysfunction in Zebrafish | **L. Jasperse**	**1.09.T-08** Transcriptomic and Methylomic Changes Underlying Evolved Polycyclic Aromatic Hydrocarbons Resistance in Teleost Fish | **A. Harishchandra**	301/302
Developing Endangered Species Assessments for Pesticides in the United States: Progress to Date and Next Steps | S. Teed, M. Winchell, D. Moore				
5.08.T-05 Evaluating Effects of Pesticide Use to Federally Listed Species and its Practical Application in Recent Pesticide Registration Actions | **A. Wray**	**5.08.T-06** Challenges and opportunities for using population modeling to assess risks of pesticides to threatened and endangered species | **V. Forbes**	**5.08.T-07** Why, When, and How to Incorporate Usage Data in ESA Pesticide Risk Assessments | **M. Winchell**	**5.08.T-08** Let's Keep It Local: Refining Aquatic Exposure Estimates Using Species-Specific Landscape Information | **C. Holmes**	304/305
Risk and Exposure Tools to Manage Common Metals | T. Sorell, C. Montgomery				
5.15.T-05 Application of a Statistically Derived Site-Specific Ecological Screening Metric to Direct a Tidal Flat Remedial Dredging | **C. Montgomery**	**5.15.T-06** Baseline Ecological Risk Assessment of a Metals-Impacted Pond: Using Site Specific Information to Focus Remediation Goals | **L. McIntosh**	**5.15.T-07** Background Metals in Risk Assessment and Risk Management, It Ain't That Hard | **T. House-Knight**	**5.15.T-08** Metal pollution in aquatic ecosystems become a cause for concern: A case study of the Umgeni River system, South Africa | **J. Lebepe**	306/307
Advances in Methods, Policies and Practices for Safer and More Sustainable Alternatives | C. Rudisill, M. Jacobs, M. Roy				
8.01.T-05 The ChemFORWARD SAFER Program and Safer Trade Name Ingredients | **C. Bartlett**	**8.01.T-06** A Trade Name Market Differentiator: Case Studies under the ChemFORWARD SAFER Program | **K. Reynolds Reid**	**8.01.T-07** Eliminating 6PPD from tire manufacturing: Computational efforts toward safer antiozonants | **E. Rossomme**	**8.01.T-08** Understanding Lessons Learned from Efforts to Accelerate the Substitution of Safer Alternatives to Aqueous Film Forming Foam | **M. Jacobs LeFevre**	310/311
PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray				
3.04B.T-05 PFAS and other contaminants of emerging concern in a Great Lakes urban-dominant watershed: implications for human and ecosystem health | **T. Baker**	**3.04B.T-06** Integration of Multi-omics Reveals the Commonality of Neurotoxicity Caused by PFOS and PFBS in Zebrafish Larvae | **E. Min**	**3.04B.T-07** in Vitro Characterization of the Emerging Perfluoroalkyl Substance Replacement, Perfluoroethylcyclohexane Sulphonate (PFECHS) | **H. Mahoney**	**3.04B.T-08** Using Fatty Acids and Stable Isotopes to Assess the Flow of Perfluoroalkyl Substances in a linked Aquatic-Terrestrial Avian Food Web | **K. Hopkins**	Ballroom A
Microplastics in the Environment and Risk Assessment: A One-Health Perspective | M. Williams, S. Brander, S. Harper, M. Surette				
5.13A.T-05 A Potential Vector Into the Food Web: Factors Affecting the Adsorption of Three Microcystin Analogues Onto Six Virgin and Aged Microplastics | **D. Souza Moura**	**5.13A.T-06** High-accuracy determination of microplastic source using specific profiles of organic/inorganic plastic additives as chemical tracers and estimation for their environmental load | **S. Yamahara**	**5.13A.T-07** Discussion	**5.13A.T-08** A Strategy for the Risk Assessment of Micro/nanoplastics for Ecological Systems, Ecosystem Services, Human Health, and Human Well-being | **W. Landis**	Ballroom B
Novel Methods and Approaches for Assessing Effluents and Ambient Water Toxicity | D. Soucek, C. Flinders, W. Goodfellow, J. Lazorchak				
1.08.T-05 Biological Activity in U.S. Food Processing Plant Effluent | **E. Medlock Kakaley**	**1.08.T-06** Florida Apple Snail (Pomacea paludosa)-an ecologically relevant and sensitive species for aquatic toxicity testing | **T. Hoang**	**1.08.T-07** Strategies for Toxicity Identification Evaluations when Standard Tests and Species do not Resolve the Toxicity | **K. Kulacki**	**1.08.T-08** Applicability of passive sampling and bioassay measurements in assessing performance of water treatment technologies: A case study of the South African landscape | **H. Nyoni**	401/402
Using Measured Data of Chemicals in Environmental Risk Assessment: Improving the Understanding of Uncertainties | G. Merrington, L. Nowell				
4.19.T-05 Toward Practice Implementation of the CREED Approach for Environmental Assessments | **A. Ryan**	**4.19.T-06** A meta-analysis of the occurrence of alkylphenols and their ethoxylates in surface waters and sediments in the United States | **J. Newsted**	**4.19.T-07** Measured Pollen and Nectar Residues in Semi-Field Studies to Assess Risk to Pollinators | **S. Kroder**	**4.19.T-08** Discussion	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Thursday Sessions

Afternoon Talks (T)

	14:00–14:15	14:20–14:35	14:40–14:55	15:00–15:15
301/302	**Enhanced Strategies and Best Practices for Identifying and Evaluating Endocrine System Adverse Effects** | E. Mihaich, J. Wolf, S. Lynn			
	1.05.T-01 Analysis of Historical Control Data for the Extended Amphibian Metamorphosis Assay | **K. Coady**	**1.05.T-02** Morphohistological Data of Normal Variation of the Thyroid Glands From Tadpoles in Amphibian Metamorphosis Assays Using Automated Image Analysis by Machined Learned Algorithms | **K. Weber**	**1.05.T-03** Cytotoxicity Profiling to Help Differentiate Endocrine and Non-Endocrine Effects in the H295R Steroidogenesis Assay | **S. Levine**	**1.05.T-04** Influence of Systemic Copper Toxicity on Early Development and Metamorphosis in Xenopus laevis | **D. Fort**
304/305	**Deriving and Implementing Ecologically Relevant Water Quality Criteria and Guidelines** | A. Peters, C. Mebane, J. Stauber			
	7.03.T-01 Considerations for Selecting and Adopting International Ecological Screening Values | **S. Thakali**	**7.03.T-02** Quantifying Conservatism in ecoTTC and CTD: Case Study of Benzene-Like Chemicals with Regulatory Water Quality Criteria Values | **K. Connors**	**7.03.T-03** Deriving Environmental Quality Standards for fipronil under the European Water Framework Directive for UK freshwaters | **G. Merrington**	**7.03.T-04** Updating the Chronic Nickel Biotic Ligand Model for Regulatory Applications in Europe | **A. Peters**
306/307	**New Tools and Wise Perspectives: Advancing Environmental Assessment and Management Through Reflection** | A. Ryan, F. Nilsen, R. Stahl, T. Augspurger			
	8.04.T-01 What I Learned the Hard Way about Assessment Innovations | **G. Suter**	**8.04.T-02** Assessing chemical risks under the European Water Framework Directive, a prosaic reality | **G. Merrington**	**8.04.T-03** Data Accessibility: The Next Frontier for Environmental Science and SETAC | **R. Otter**	**8.04.T-04** Discussion
310/311	**Canada's Oil Sands and Dilbit** | R. Frank, J. Gutierrez-Villagomez			
	2.04.T-01 Understanding the uptake and bioaccumulation of trace metals following exposure of aquatic invertebrate Lumbriculus variegatus to pit lake sediments from the Alberta Oil Sands Region | **A. Nagel**	**2.04.T-02** Scope for Growth and Histopathological Alterations in Pacific Oysters (Crassostrea gigas) Exposed to Marine Diesel, Crude Oil, and Diluted Bitumen | **A. Hura**	**2.04.T-03** The little things: effects of oil spills on invertebrates and early life stages of fish, a summary of ecosystem studies conducted at the IISD-Experimental Lakes Area | **L. Timlick**	**2.04.T-04** Chronic toxicity and bioaccumulation of trace elements in daphnids exposed to water and sediment from an oil-sands tailings pit lake | **S. Choi**
Ballroom A	**PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects** | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray			
	3.04C.T-01 Solutions to the PFAS crisis through use-inspired basic research systems approaches | **R. Jordan**	**3.04C.T-02** Measurement of the Solubility of Serum Albumin for Perfluorooctane Sulfonate (PFOS) via Rapid Thin-Film Solid Phase-Microextraction | **S. Hsu**	**3.04C.T-03** PFAS in Wildlife: Lessons from 15 years of Occurrence Data and New Standard Methods including EPA 1633 | **B. Chandramouli**	**3.04C.T-04** Getting From Here to There: Testing the Applicability of Bioaccumulation Factors for PFAS for Freshwater Fish | **K. Whitehead**
Ballroom B	**Microplastics in the Environment and Risk Assessment: A One-Health Perspective** | M. Williams, S. Brander, S. Harper, M. Surette			
	5.13B.T-01 Effect of Vibrio and Microcystis Co-Exposures on Microplastic Bioaccumulation in the Eastern Oyster, Crassostrea virginica: Implications for Human Dietary Exposures | **J. Wenclawiak**	**5.13B.T-02** Microplastic Accumulation, Excretion, and Effects on the Behavior of Freshwater Organisms-Daphnia magna | **J. Okutsu**	**5.13B.T-03** Discussion	**5.13B.T-04** International Interlaboratory Intercalibration Study for Microplastics in Environmental Media | **C. Wong**
401/402	**Addressing Exposure and Risk Associated With Chemical Contaminants in the Era of Big Data** | L. Li, A. Sangion, H. Peng			
	4.01.T-01 Addressing uncertainty in fundamental physical-chemical properties for environmental chemistry | **T. Brown**	**4.01.T-02** Curation Decisions and Statistical Methods for Large-Scale Ecological Risk Prioritization in Surface Water: Maximizing Incomplete and Non-Optimal Data | **R. Sayre**	**4.01.T-03** Reconstruction of Chemical Exposures using Indoor Dust Levels: Evaluation with Measured Biomonitoring Data | **H. Shin**	**4.01.T-04** Should we assess the "mobility" of chemicals from a perspective of the "hazard" or "exposure"? | **Z. Zhang**
406	**SARS-CoV-2: Pivoting From Watersheds to Sewersheds in Response to a Global Pandemic** | L. Langan, M. Servos, F. Oloye			
	5.21.T-01 Responding to a pandemic: Development of SARS-CoV-2 wastewater surveillance to support public health action | **M. Servos**	**5.21.T-02** Comparison of buffer concentration and direct capture method for purification of viral nucleic acid for epidemiological surveillance of SARS-CoV-2 | **L. Langan**	**5.21.T-03** Concatenated Plasmid for Improved Quantification and Normalization in COVID-19 Wastewater Surveillance | **M. Yang**	**5.21.T-04** The Utility of qPCR Assays for the Monitoring of Variants of SARS-CoV-2 in Wastewater Extracts | **C. Sing-Judge**
	1. Environmental Toxicology and Stress Response	**2. Aquatic Toxicology, Ecology and Stress Response**	**3. Wildlife Toxicology, Ecology and Stress Response**	**4. Chemistry and Exposure Assessment**

Afternoon Talks (T)

15:20–15:35	15:40–15:55	16:00–16:15	16:20–16:35	
Enhanced Strategies and Best Practices for Identifying and Evaluating Endocrine System Adverse Effects | E. Mihaich, J. Wolf, S. Lynn				
1.05.T-05 Discussion	**1.05.T-06** Site-Directed Mutagenesis of Human Type 3 Iodothyronine Deiodinase to Evaluate SeqAPASS Predictions of Cross-Species Susceptibility to Chemical Inhibition | **S. Mayasich**	**1.05.T-07** Faster and Easier!. . . but Better? "Key Characteristics" vs. Weight of Evidence for Identifying Endocrine Disruptors | **C. Borgert**	**1.05.T-08** Key characteristics Versus Weight of Evidence for Assessing Endocrine Disruption: Case Study on Glyphosate | **D. Farmer**	301/302
Deriving and Implementing Ecologically Relevant Water Quality Criteria and Guidelines | A. Peters, C. Mebane, J. Stauber				
7.03.T-05 Evaluating the Benefits of Improved Implementation and Revision of the Environmental Quality Standard for Nickel under the Water Framework Directive | **C. Schlekat**	**7.03.T-06** The structure of aquatic life criteria definitions for time-varying conditions: Arguments for replacing averaging periods with allowable frequencies of exceedence | **C. Mebane**	**7.03.T-07** Discussion	**7.03.T-08** Discussion	304/305
New Tools and Wise Perspectives: Advancing Environmental Assessment and Management Through Reflection | A. Ryan, F. Nilsen, R. Stahl, T. Augspurger				
8.04.T-05 Environmental Risk Assessment in the Tropics – Disasters, Innovations and Quality Control | **R. Smith**	**8.04.T-06** A Retrospective Look at Regulatory Whole Effluent Toxicity Data: Can we learn more from the data? | **M. Embry**	**8.04.T-07** Information Flow Analysis: A Method for Connecting Relevant Study Areas to Each Other and to Decision Making | **V. Pauna**	**8.04.T-08** Bioinformatics: A new frontier for extrapolating toxicity knowledge to protect the diversity of species in the environment | **C. LaLone**	306/307
Canada's Oil Sands and Dilbit | R. Frank, J. Gutierrez-Villagomez				
2.04.T-05 Application of biomimetic extraction (BE) as a pragmatic analytical tool to support decision making for water and sediment quality assessments involving complex organic mixtures | **A. Redman**	**2.04.T-06** Ecotoxicological Effects of Fluvial Erosional Sediments on the Basal Components of the Aquatic Foodweb in Oil sands: An Integrated Experimental Approach | **D. Nunes Cardoso**	**2.04.T-07** The effects of petroleum exposure on DNA damage and gene expression in the Pacific Oyster, Crassostrea gigas | **I. Borea**	**2.04.T-08** Non-Lethal Mucus and Caudal Fin Sampling of Fathead Minnow to Assess Oil Exposure Effects | **J. Gutierrez-Villagomez**	310/311
PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray				
3.04C.T-05 Using a Probabilistic Approach in an Ecological Risk Assessment PFAS Food-Web Based Model | **K. Parakal**	**3.04C.T-06** Validation of Food Web Models for Per- and Polyfluoroalkyl Substances or PFAS | **J. Zodrow**	**3.04C.T-07** Comparing activity and concentration-based trophic magnification factors of perfluoroalkyl substances within an urban terrestrial food-web | **K. Fremlin**	**3.04C.T-08** Tissue Distribution of PFAS in Avian Species: Uncertainties and Data gaps | **J. Newsted**	Ballroom A
Microplastics in the Environment and Risk Assessment: A One-Health Perspective | M. Williams, S. Brander, S. Harper, M. Surette				
5.13B.T-05 Degradation of plastics in a hyper-arid environment | **R. Habib**	**5.13B.T-06** Physical Characterization of Microplastic Contamination in Urban Wet and Dry Deposition | **M. Kosuth**	**5.13B.T-07** Can We Apply a Site-Specific Ecological Risk Assessment Framework for Microplastics? | **R. Zajac-Fay**	**5.13B.T-08** Discussion	Ballroom B
Addressing Exposure and Risk Associated With Chemical Contaminants in the Era of Big Data | L. Li, A. Sangion, H. Peng				
4.01.T-05 An Integrated Approach to Identify the Toxic Contaminants Impacting an Endangered Beluga Whale Population | **H. Barrett**	**4.01.T-06** Plasma Protein Binding of 109 Per- and Polyfluoroalkyl Substances (PFAS): Using Category-Based New Approach Methods to Inform PFAS Toxicokinetics | **B. Wetmore**	**4.01.T-07** Precision Environmental Health Monitoring by Longitudinal Exposome and Multi-Omics Profiling | **P. Gao**	**4.01.T-08** Poster Highlights | **L. Li**	401/402
SARS-CoV-2: Pivoting From Watersheds to Sewersheds in Response to a Global Pandemic | L. Langan, M. Servos, F. Oloye				
5.21.T-05 Developing an interpretation model for wastewater SARS-CoV-2 viral load – a case of three Canadian Prairies cities | **F. Oloye**	**5.21.T-06** Targeted Wastewater-Based Surveillance for COVID-19 Outbreaks in the Long-term care facilities in Edmonton, Canada | **X. Pang**	**5.21.T-07** To Be Prepared for the Future, We Must First Examine What Lies Beneath-Wastewater Surveillance as a Tool to Monitor Pathogens. Exploring Methods, Data Trends, and the Future of Wastewater Surveillance | **G. Islam**	**5.21.T-08** Panel Dsicussion: Lessons learrned and the path forward | **M. Servos**	406
5. Environmental Risk Assessment	**6. Engineering, Remediation and Restoration**	**7. Policy, Management and Communication**	**8. Systems Approaches**	

Poster Schedule

Setup: 7:00–8:00 (see p. 10 for map of posters)
Take down: 14:00–14:15

Presenters are expected to attend their poster during most of the break.

Morning Poster Session: 8:00–10:00
Lunch Break: 12:40–14:00

Late-Breaking Science Posters

SETAC accepts late-breaking science posters; however, they are submitted after our print deadline. A list of the accepted posters can be found at the poster supplies desk in Exhibit Hall A. Poster IDs for these late submissions start with P-Th151 on Thursday.

Adverse Outcome Pathways - Development and Applications | D. Villeneuve, J. O'Brien, D. Knapen

1.03.P-Th001 AOP-Wiki Release 2.5 – What's new with the Adverse Outcome Pathway Framework? | **D. Villeneuve**

1.03.P-Th002 Elucidating the mechanism through which low-dose neonicotinoid and pyrethroid insecticides disrupt insect ecdysis | **N. Krishnan**

1.03.P-Th003 Defining the Biologically Plausible Taxonomic Domain of Applicability Can Enhance the Utility of an Adverse Outcome Pathway for Understanding Apis and Non-Apis Bee Health | **M. Jensen**

1.03.P-Th004 A Computational Comparative Analysis of microRNA Function between Oncogenes and Tumor Suppressor Genes | **S. Tian**

1.03.P-Th005 Avian-Specific Evidence for Endocrine Disruption Adverse Outcome Pathways from Chicken Embryos Exposed to Bisphenol A and Ethinylestradiol | **T. Sharin**

1.03.P-Th006 AOP 310: Embryonic activation of the Ah Receptor in fishes leading to reproductive failure, via epigenetic down-regulation of GnRHR | **C. Collins**

1.03.P-Th007 Development of neurobehavior AOP: Comparisons of multiple endpoints and fish species after exposure to neurotoxicants | **C. Murphy**

Enhanced Strategies and Best Practices for Identifying and Evaluating Endocrine System Adverse Effects | E. Mihaich, J. Wolf, S. Lynn

1.05.P-Th008 Protective Effects Of Cotreatment With Curcumin And Quercetin Against Atrazine-Induced Changes In Some Testicular Indices In Wistar Rats | **L. Ndufeiya-Kumasi**

1.05.P-Th009 Histological Lesions in African Clawed Frogs (Xenopus laevis) Used in the Amphibian Metamorphosis Assay | **K. Weber**

1.05.P-Th010 Histological Lesions in Fathead Minnows (Pimephales promelas) Used in the Fish Short Term Reproduction Test | **K. Weber**

1.05.P-Th011 Molluscs in Toxicology Testing Emphasizing Snails | **K. Weber**

1.05.P-Th012 Comparison of Xenopus laevis NF developmental stage-matched control data in Amphibian Metamorphosis Assay continuous quantitative endpoints (HLL, SVL, wet weight) | **D. Fort**

1.05.P-Th014 Adverse thyroid and neurodevelopmental effects of DiNP in GH3 cell and zebrafish (Danio rerio): A comparison with DEHP | **Y. Ihn**

1.05.P-Th015 Effects of reproductive endocrine system in male zebrafish exposed to mixtures of avobenzone and homosalate | **S. Lee**

1.05.P-Th016 Toxic effects of four UV-filters on the thyroid endocrine system and development in zebrafish | **Y. Ka**

1.05.P-Th017 Characterizing Neuroendocrine and Neurotoxic Effects of Bifenthrin to Salmonids and Influence of Climate Change to Toxicity: An Integration of Omic Profiles to Apical Endpoints | **J. Magnuson**

1.05.P-Th018 Thyroid Endocrine Disruptor Screening System Using Thrγ-/- and Dre-miR-499-/- Knock-out Zebrafish | **I. Lee**

1.05.P-Th019 OECD validation of the Rapid Androgen Disruption Activity Reporter (RADAR) assay | **G. Lemkine**

1.05.P-Th020 An In Silico Approach for Biomarker Discovery of PFAS Toxicity Effects in Fish | **R. Nolen**

1.05.P-Th021 Development and assessment of Adverse Outcome Pathways for juvenile hormone mediated effects of environmental stimuli and chemicals in cladoceran | **H. Watanabe**

1.05.P-Th022 Investigating the cause of Largemouth Bass intersex in an urban wastewater dominated river | **V. McGruer**

1.05.P-Th023 Sex Hormone Disruption Potentials of Major Polyhalogenated Carbazoles (PHCZs) in Human Adrenocortical Carcinoma (H295R) Cell Line | **Y. Nam**

1.05.P-Th024 Thyroid Hormone Disrupting Potential of Acetyl Tributyl Citrate (ATBC) in embryo-larval Zebrafish (Danio Rerio) | **Y. Cho**

1.05.P-Th025 Differential Isoform Usage in Fathead Minnows After Estrogenic Exposure | **J. Fetke**

Novel Methods and Approaches for Assessing Effluents and Ambient Water Toxicity | D. Soucek, C. Flinders, W. Goodfellow, J. Lazorchak

1.08.P-Th026 Non-aqueous reversed liquid chromatography separation technique to monitor fullerene congeners-colloidal nanoparticles in the environment | **N. Hendricks**

1.08.P-Th027 Mathematical Modelling of Ostracod Bioassay for Evaluating the Toxicity of Chemically Contaminated Water Resources | **I. Onwurah**

1.08.P-Th028 Comparison of Zebrafish Toxicity Between Different Developmental Windows of Exposure to Three Environmentally Relevant PFAS Compounds | **P. Shankar**

1.08.P-Th029 Spatial and Temporal Distribution of Glucocorticoid and Estrogen Receptor-Mediated Bioactivities in Relation to a Wastewater Input on the South Platte River (Denver, CO, USA) | **J. Cavallin**

1.08.P-Th030 Ecotoxicological Evaluation of Water and Sediment of The Doce River and Marine Areas Impacted by the Fundão Tailings Dam Failure, Brazil | **C. Martins**

1.08.P-Th031 Standardization of a short-term chronic method using Daphnia magna | **L. Glimsdal**

1.08.P-Th032 Behavior of Adults and Juveniles of a Freshwater Shredder Shrimp, Xiphocaris elongata, After Individual Exposure to Insecticides | **M. Santos-Crespo**

1.08.P-Th033 Influence of Behavior Protocol Light Intensities on Determining Chemical Effects | **B. Hill**

1.08.P-Th034 Effects of Exposure to Binary Mixtures of Thiamethoxam and Imidacloprid on the Neurobehavior and Development of Fathead Minnow Larvae | **A. Jeninga**

Scientific Advances in PAH Research Enabled by Superfund Research Centers | S. Harper, R. Tanguay

1.09.P-Th035 Rapid, Low-Cost Measurement of PAH Contamination in Oysters Using Novel Antibody-Based Biosensor Technology | **K. Prossner**

1.09.P-Th036 Polycyclic Aromatic Hydrocarbons (PAHs) in Surface Marine Sediments from Cartagena Bay (Colombia) | **B. Jaramillo-Colorado**

1.09.P-Th037 Benzo[a]pyrene-Induced Impacts on Paternal Genotype Result in Multigenerational Gene Expression, DNA Methylation, and Behavioral Changes | **M. Sturgis**

1.09.P-Th038 Concentration-Response Gene Expression Analysis in Zebrafish Reveals Transcriptional Responses Phenotypically-Anchored to Retene Teratogenicity | **L. Wilson**

1.09.P-Th039 Examining the Effect of Aqueous Benzo(a)pyrene Exposure on Anxiety-like Behavior in the Zebrafish, Danio rerio | **A. Dunton**

1.09.P-Th040 Assessing the Acute Toxicity of Photodegraded Naphthalene in a Dermal Model | **M. Brzezinski**

Canada's Oil Sands and Dilbit | R. Frank, J. Gutierrez-Villagomez

2.04.P-Th041 Plant-Enhanced Degradation of Phenanthrene: Microcosm Experiment at the IISD-Experimental Lakes Area, Canada | **M. Stanley**

2.04.P-Th043 Does Enhanced Monitored Natural Recovery Reduce Aqueous PACs After Primary Oil Spill Cleanup: Results from the Freshwater Oil Spill Remediation Study (FOReSt) at the IISD-Experimental Lakes Area | **V. Palace**

2.04.P-Th045 Biodegradation of Polycyclic Aromatic Compounds by Engineered Floating Wetlands: Optimizing Plant Species Ratios and Nutrient Additions for Oil Spill Bioremediation | **A. Guttormson**

2.04.P-Th046 Quantitative source apportionment of polycyclic aromatic compounds in the Athabasca River watershed | **M. Alam**

2.04.P-Th047 Comparing Polycyclic Aromatic Compounds in Air at Surface-Mining and In-Situ Mining Areas in the Alberta Oil Sands Region | **J. Schuster**

2.04.P-Th048 Chronic Toxicity of Oil Sands Process Water in Early Life Stage Wood Frogs (Lithobates sylvaticus) | **B. Kelly**

2.04.P-Th049 Chronic Toxicity of Oil Sands Process Water in Early Life Stage Rainbow Trout | **B. Kelly**

2.04.P-Th050 Spatiotemporal Distributions of Naphthenic Acids in Surface Water From Wetlands in the Athabasca Oil Sands, Canada | **I. Vander Meulen**

PFAS and Related Compounds in Terrestrial and Aquatic Wildlife: Exposure, Uptake, Tissue Distribution and Toxic Effects | N. Karouna-Renier, C. Murphy, C. Custer, M. Murray

3.04.P-Th051 Active Biomonitoring for PFAS using the invasive Asian clam in the Occoquan River Watershed | **L. Koban**

3.04.P-Th052 Combined Effects of Mixed Per- and polyfluoroalkyl Substances on the Nrf2-ARE Pathway in ARE reporter-HepG2 cells | **A. Ojo**

3.04.P-Th053 Examining Effects of an Estrogenic PFAS, 1H,1H,8H,8H-Perfluorooctane-1,8-diol (FC8-diol), Using the Fathead Minnow Ecotoxchip | **K. Santana Rodriguez**

3.04.P-Th054 Exposure to Per- and Polyfluoroalkyl Substances (PFAS) Increases Larval Amphibian Susceptibility to Parasitic Infections | **M. Lech**

3.04.P-Th055 Determination of Bioconcentration Factors for Per- and Polyfluorinated Alkyl Substances in Aquatic Invertebrates | **I. Mundy**

3.04.P-Th056 Investigating the Role of Coastal Wetland Filtration on Per- And Polyfluoroalkyl Substances (PFAS) Contamination | **A. Pavia**

3.04.P-Th057 The Impact of Perfluorooctane Sulfonate on Photosynthesis and Cellular Processes: Insight from the Diatom, Thalassiosira pseudonana | **S. Davis**

3.04.P-Th058 Considerations for the Use of Zebrafish Toxicity Data for PFOS Aquatic Life Criteria Derivation | **J. Conder**

3.04.P-Th059 Spatial and temporal trends of perfluoroalkyl substances (PFAS) in seabird eggs from the Pacific coast of Canada | **R. Kesic**

3.04.P-Th060 Ecotoxicity and Accumulation of Perfluorononanoic Acid (PFNA) in Fathead Minnows and an Approach to Developing Protective Thresholds in the Aquatic Environment Through Species Sensitivity Distribution | **J. Suski**

3.04.P-Th061 Uptake and elimination of per- and polyfluoroalkyl substances in earthworms exposed to amended artificial soil | **G. Lotufo**

3.04.P-Th062 Role of salinity in the differential regulation of transporters by PFOS in Fundulus heteroclitus | **T. Davis**

3.04.P-Th063 Hexafluoropropylene Oxide Dimer Acid (GenX) Reproductive Toxicity and Neurotoxicity in Caenorhabditis elegans | **S. Cash**

3.04.P-Th064 Enhanced PFAS Precursor Detection In Fish Tissue From AFFF Contaminated Waters Using An Orbitrap Exploris 240 Mass Spectrometer | **S. Choyke**

3.04.P-Th065 Developmental Impacts of Hypersalinity and Per- and Polyfluoroalkyl Substances (PFAS) on Early Life Stage Red Drum | **K. Roark**

3.04.P-Th066 Consideration of Site-Specific Conditions and Food Web Structures in Per- and Polyfluoroalkyl Substances (PFAS) Bioaccumulation: A Watershed-Scale Case Study | **S. Thakali**

3.04.P-Th067 PFAS Trends in Freshwater Fishes of New York State | **E. Levanduski**

3.04.P-Th068 Does exposure route matter? Toxicity of perfluorooctane sulfonate (PFOS) to the house cricket via diet and drinking water | **A. Pellegrini**

3.04.P-Th069 Body Compartment Partitioning and Ecological Effects of PFAS Mixtures in a Multi-Species System | **A. Narizzano**

3.04.P-Th070 Thyroid Hormone Disruption Potentials of Two Fluorotelomers, 6:2 Fluorotelomer Sulfonate and 6:2 Fluorotelomer Alcohol in Embryo-Larval Zebrafish (Danio rerio) | **E. Kim**

3.04.P-Th071 Exploring Toxicokinetics of PFAS Across Exposure Routes, Life Stages, and Sex Across Taxonomically Diverse Amphibians | **M. Scherer**

Addressing Exposure and Risk Associated With Chemical Contaminants in the Era of Big Data | L. Li, A. Sangion, H. Peng

4.01.P-Th072 Machine Learning to Integrate Environmental Modeling and Monitoring Data | **D. Dreier**

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