

## OCTOBER 8-10, 2019

HOSTED AT THE HILTON ALEXANDRIA OLD TOWN  
1767 KING ST | ALEXANDRIA, VA 22314

### Tuesday, October 8, 2019 MHK Track 1 | Foundational R&D, Technology Design, and Validation

Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:00 AM	8:45 AM	Check-in, Breakfast				
8:45 AM	9:15 AM	U.S. Department of Energy (DOE) Water Power Technologies Office (WPTO) Overview	Alejandro Moreno	WPTO	Plenary	Grand Ballroom A/B/C
9:15 AM	9:25 AM	Remarks from Department of Energy Deputy Assistant Secretary for Renewable Power	David Solan	DOE	Plenary	Grand Ballroom A/B/C
9:25 AM	9:40 AM	Keynote - Paul Bunje, Co-Founder & CSO/COO, Conservation X Labs	Paul Bunje	Conservation X Labs	Plenary	Grand Ballroom A/B/C
9:40 AM	9:55 AM	Keynote - Emily Reichert, CEO, Greentown Labs	Emily Reichert	Greentown Labs	Plenary	Grand Ballroom A/B/C
9:55 AM	10:25 AM	Fireside Chat with Keynote Speakers and Alejandro			Plenary	Grand Ballroom A/B/C
10:25 AM	10:45 AM	Peer Review Logistics	Allison Johnson	WPTO	Plenary	Grand Ballroom A/B/C
10:45 AM	11:00 AM	Coffee Break and Transition				
11:00 AM	11:45 AM	MHK Program Overview	Tim Ramsey	WPTO	MHK Plenary	Grand Ballroom A&B
11:45 AM	12:30 PM	WPTO Support to Testing featuring Ryan Coe, Sandia National Laboratories; Jonathan Colby, Verdant Power; Steve DeWitt, WPTO; Lauren Moraski Ruedy, WPTO; Brian Polagye, Pacific Marine Energy Center & University of Washington	Tim Ramsey (moderator)	WPTO	MHK Plenary	Grand Ballroom A&B
12:30 PM	1:20 PM	Lunch				
1:20 PM	1:40 PM	Overview of Foundational & Crosscutting R&D	Bill McShane	WPTO	Foundational R&D	Grand Ballroom A&B
1:40 PM	1:50 PM	Introduce FOA Projects	Yana Shiningier	WPTO	Foundational R&D	Grand Ballroom A&B
1:50 PM	2:20 PM	Reduction of System Cost Characteristics through Innovative Solutions to Installation, Operations and Maintenance	Michael Ondusko	Columbia Power Technologies, Inc.	Foundational R&D	Grand Ballroom A&B
2:20 PM	2:50 PM	Demonstration of an Advanced Multi-Mode Point Absorber for Wave Energy Conversion	Tim Mundon	Oscilla Power, Inc.	Foundational R&D	Grand Ballroom A&B
2:50 PM	3:20 PM	Advanced TidGen Power System	Jarlath McEntee	Ocean Renewable Power Company (ORPC) - Maine	Foundational R&D	Grand Ballroom A&B
3:20 PM	3:35 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Foundational R&D	Grand Ballroom A&B
3:35 PM	3:50 PM	Coffee Break				
3:50 PM	4:00 PM	Introduce Lab Projects	Jeff Rieks	WPTO	Foundational R&D	Grand Ballroom A&B
4:00 PM	4:30 PM	Wave Energy Converter (WEC) Modeling	Yi-Hsiang Yu	NREL, SNL	Foundational R&D	Grand Ballroom A&B
4:30 PM	5:00 PM	DTOcean (Optimal Design Tools for Ocean Energy)	Jesse Roberts	SNL	Foundational R&D	Grand Ballroom A&B
5:00 PM	5:30 PM	Material Design Tools for Marine and Hydrokinetic Composite Structures	Bernadette Hernandez-Sanchez	SNL, PNNL, NREL	Foundational R&D	Grand Ballroom A&B
5:30 PM	5:45 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Foundational R&D	Grand Ballroom A&B
5:45 PM	6:15 PM	Peer Reviewer Only Meetings				Madison

## Tuesday, October 8 MHK Track 2 | Reducing Barriers to Testing and Data Sharing

Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:00 AM	8:45 AM	Check-in, Breakfast				
8:45 AM	9:15 AM	U.S. Department of Energy (DOE) Water Power Technologies Office (WPTO) Overview	Alejandro Moreno	WPTO	Plenary	Grand Ballroom A/B/C
9:15 AM	9:25 AM	Remarks from Department of Energy Deputy Assistant Secretary for Renewable Power	David Solan	DOE	Plenary	Grand Ballroom A/B/C
9:25 AM	9:40 AM	Keynote - Paul Bunje, Co-Founder & CSO/COO, Conservation X Labs	Paul Bunje	Conservation X-Labs	Plenary	Grand Ballroom A/B/C
9:40 AM	9:55 AM	Keynote - Emily Reichert, CEO, Greentown Labs	Emily Reichert	Greentown Labs	Plenary	Grand Ballroom A/B/C
9:55 AM	10:25 AM	Fireside Chat with Keynote Speakers and Alejandro			Plenary	Grand Ballroom A/B/C
10:25 AM	10:45 AM	Peer Review Logistics	Allison Johnson	WPTO	Plenary	Grand Ballroom A/B/C
10:45 AM	11:00 AM	Coffee Break and Transition				
11:00 AM	11:45 AM	MHK Program Overview	Tim Ramsey	WPTO	MHK Plenary	Grand Ballroom A&B
11:45 AM	12:30 PM	WPTO Support to Testing featuring Ryan Coe, Sandia National Laboratories; Jonathan Colby, Verdant Power; Steve DeWitt, WPTO; Lauren Moraski Ruedy, WPTO; Brian Polagye, Pacific Marine Energy Center & University of Washington	Tim Ramsey (moderator)	WPTO	MHK Plenary	Grand Ballroom A&B
12:30 PM	1:20 PM	Lunch				
1:20 PM	1:40 PM	Overview of Reducing Barriers to Testing	Steve DeWitt	WPTO	Testing & Data	Grand Ballroom C
1:40 PM	1:50 PM	Introduce Lab Projects	Simon Gore	WPTO	Testing & Data	Grand Ballroom C
1:50 PM	2:20 PM	MHK Regulatory Initiatives Analysis	Bo Saulsbury	PNNL	Testing & Data	Grand Ballroom C
2:20 PM	2:50 PM	MHK Environmental Compliance Cost Assessment	Jesse Roberts	SNL	Testing & Data	Grand Ballroom C
2:50 PM	3:20 PM	Hydrodynamic and Acoustic Models for Quantitative Environmental Assessment	Jesse Roberts	SNL	Testing & Data	Grand Ballroom C
3:20 PM	3:35 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Testing & Data	Grand Ballroom C
3:35 PM	3:50 PM	Coffee Break				
3:50 PM	4:00 PM	Introduce Lab Projects	Dana McCoskey	WPTO	Testing & Data	Grand Ballroom C
4:00 PM	4:30 PM	MHK Performance Measurement and Instrumentation	Rick Driscoll	NREL	Testing & Data	Grand Ballroom C
4:30 PM	5:00 PM	Video Analysis Software Development	Shari Matzner	PNNL	Testing & Data	Grand Ballroom C
5:30 PM	5:45 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Testing & Data	Grand Ballroom C
5:45 PM	6:15 PM	Peer Reviewer Only Meetings				Madison

Wednesday, October 9 MHK Track 1   Foundational R&D, Technology Design, and Validation						
Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:00 AM	8:30 AM	Check-in, Breakfast				
8:30 AM	8:45 AM	Review of Major International Developments in Marine Energy	Henry Jeffrey	International Energy Agency-Ocean Energy Systems	MHK Plenary	Grand Ballroom A&B
8:45 AM	8:50 AM	Introduction: PacWave	Steve DeWitt	WPTO	MHK Plenary	Grand Ballroom A&B
8:50 AM	9:20 AM	Enabling Cost-Effective Electricity from Ocean Waves - PacWave	Burke Hales	Oregon State University	MHK Plenary	Grand Ballroom A&B
9:20 AM	9:40 AM	PacWave Q&A	Burke Hales	Oregon State University	MHK Plenary	Grand Ballroom A&B
9:40 AM	9:50 AM	Break and Transition				
9:50 AM	10:00 AM	Introduce Lab & FOA Projects	Bill McShane	WPTO	Foundational R&D	Grand Ballroom A&B
10:00 AM	10:30 AM	Optimal Wave Energy Converter (WEC) Controls using Causal and MPC Methods	Mirko Previsic	Re Vision Consulting, LLC	Foundational R&D	Grand Ballroom A&B
10:30 AM	11:00 AM	Wave Prediction Leveraging Multiple Measurement Sources - A Sensor Fusion Approach	Mirko Previsic	Re Vision Consulting, LLC	Foundational R&D	Grand Ballroom A&B
11:00 AM	11:10 AM	Coffee Break				
11:10 AM	11:40 AM	Advanced Wave Energy Converter (WEC) Dynamics and Controls	Ryan Coe	SNL	Foundational R&D	Grand Ballroom A&B
11:40 AM	12:10 PM	Wave Energy Converter (WEC) Design Optimization	Ryan Coe	SNL	Foundational R&D	Grand Ballroom A&B
12:10 PM	12:30 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Foundational R&D	Grand Ballroom A&B
12:30 PM	1:15 PM	Lunch				
1:15 PM	1:35 PM	Overview of Technology-Specific Design and Validation	Lauren Moraski Ruedy	WPTO	Foundational R&D	Grand Ballroom A&B
1:35 PM	1:45 PM	Introduce FOA Projects	Erik Mauer	WPTO	Foundational R&D	Grand Ballroom A&B
1:45 PM	2:05 PM	HydroAir Power Take Off System	Rod Blunk	Siemens Government Technologies	Foundational R&D	Grand Ballroom A&B
2:05 PM	2:25 PM	Demonstration of the Ocean Energy (OE) Buoy at US Navy's Wave Energy Test Site	Erik Mauer (on behalf of OE)	Ocean Energy USA LLC	Foundational R&D	Grand Ballroom A&B
2:25 PM	2:45 PM	Joint Q&A for Siemens & OE			Foundational R&D	Grand Ballroom A&B
2:45 PM	3:00 PM	Coffee Break				
3:00 PM	3:30 PM	Azura Demonstration at the Navy's Wave Energy Test Site (WETS)	Bradley Ling	Northwest Energy Innovations	Foundational R&D	Grand Ballroom A&B
3:30 PM	3:35 PM	Introduce Lab Projects	Carrie Schmaus	WPTO	Foundational R&D	Grand Ballroom A&B
3:35 PM	4:05 PM	WaveSPARC	Jochem Weber	NREL	Foundational R&D	Grand Ballroom A&B
4:05 PM	4:35 PM	Flexible Material WEC Technology Techno-Economic Performance	Jochem Weber	NREL	Foundational R&D	Grand Ballroom A&B
4:35 PM	5:05 PM	Standards Development for Marine Energy	Walt Musial	NREL	Foundational R&D	Grand Ballroom A&B
5:05 PM	5:25 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Foundational R&D	Grand Ballroom A&B
5:25 PM	5:55 PM	Peer Reviewer Only Meetings				Madison
6:15 PM	8:30 PM	Optional, No-Host Trivia at Port City Brewing <a href="#">Pre-Pay and Registration Required</a>				

Wednesday, October 9 MHK Track 2   Reducing Barriers to Testing and Data Sharing						
Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:15 AM	8:30 AM	Check-in, Breakfast				
8:30 AM	8:45 AM	Review of Major International Developments in Marine Energy	Henry Jeffrey	International Energy Agency-Ocean Energy Systems	MHK Plenary	Grand Ballroom A&B
8:45 AM	8:50 AM	Introduction: PacWave	Steve DeWitt	WPTO	MHK Plenary	Grand Ballroom A&B
8:50 AM	9:20 AM	Enabling Cost-Effective Electricity from Ocean Waves - PacWave	Burke Hales	Oregon State University	MHK Plenary	Grand Ballroom A&B
9:20 AM	9:40 AM	PacWave Q&A	Burke Hales	Oregon State University	MHK Plenary	Grand Ballroom A&B
9:40 AM	9:50 AM	Break and Transition				
9:50 AM	9:55 AM	Introduce Mammal Study	Corey Vezina	WPTO	Testing & Data	Grand Ballroom C
9:55 AM	10:25 AM	Marine Mammal Behavioral Response to Tidal Turbine Sound	Brian Polagye	University of Washington	Testing & Data	Grand Ballroom C
10:25 AM	10:35 AM	Introduce Triton & FOA 1418	Dana McCoskey	WPTO	Testing & Data	Grand Ballroom C
10:35 AM	11:15 AM	Triton Initiative	Meg Pinza	PNNL	Testing & Data	Grand Ballroom C
11:15 AM	11:30 AM	Coffee Break				
11:30 AM	12:00 PM	NoiseSpotter: Cost-effective, Real-time Acoustic Characterization and Localization System	Kaus Raghukumar	Integral Consulting Inc.	Testing & Data	Grand Ballroom C
12:00 AM	12:30 PM	DAISY: A Drifting Acoustic Instrumentation System	Brian Polagye	University of Washington	Testing & Data	Grand Ballroom C
12:30 PM	1:15 PM	Lunch				
1:15 PM	1:45 PM	A Combined Electric/Magnetic Field Instrument for MHK Environmental Monitoring	Alan Chave	Woods Hole Oceanographic Institution	Testing & Data	Grand Ballroom C
1:45 PM	2:15 PM	Benthic Habitat Monitoring Tools for MHK Environmental Assessments	Gene Revelas	Integral Consulting Inc.	Testing & Data	Grand Ballroom C
2:15 PM	2:45 PM	Long-Range Target Detection and Classification System for Environmental Monitoring at MHK Sites	Jim Dawson	BioSonics Inc.	Testing & Data	Grand Ballroom C
2:45 PM	3:00 PM	Coffee Break				
3:00 PM	3:30 PM	Unobtrusive Multi-Static Serial LiDAR Imager (UMSLI) for Wide-Area Surveillance and Identification of Marine Life at MHK Installations	Anni Dagleish	Florida Atlantic University	Testing & Data	Grand Ballroom C
3:30 PM	4:00 PM	Third-Generation Adaptable Monitoring Package (3G-AMP)	Brian Polagye	University of Washington	Testing & Data	Grand Ballroom C
4:00 PM	4:30 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Testing & Data	Grand Ballroom C
4:30 PM	4:50 PM	End-of-Session Triton & 1418 discussion as a group	All attendees	WPTO	Testing & Data	Grand Ballroom C
4:50 PM	5:20 PM	Peer Reviewer Only Meetings				Madison
6:15 PM	8:30 PM	Optional, No-Host Trivia at Port City Brewing <a href="#">Pre-Pay and Registration Required</a>				

Thursday, October 10 MHK Track 1   Foundational R&D, Technology Design, and Validation						
Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:15 AM	9:00 AM	Check-in, Breakfast				
9:00 AM	9:05 AM	Introduce FOA & Lab Projects	Carrie Noonan	WPTO	Foundational R&D	Grand Ballroom A&B
9:05 AM	9:35 AM	Kinetic Hydropower System (KHPS) TriFrame Mount Integrated Development and IO&M Testing at RITE	Dean Corren	Verdant Power, Inc.	Foundational R&D	Grand Ballroom A&B
9:35 AM	10:05 AM	CalWAVE Open Water Demonstration	Thomas Boerner	CalWave Power Technologies Inc.	Foundational R&D	Grand Ballroom A&B
10:05 AM	10:35 AM	A Hermetically Sealed Magnetically Geared Marine Hydrokinetic Generator	Jonathan Bird	Portland State University	Foundational R&D	Grand Ballroom A&B
10:35 AM	10:45 AM	Coffee Break				
10:45 AM	11:15 AM	Robotic Juggler Offshore WEC	Vassilios Vamvas	Enorasy LLC	Foundational R&D	Grand Ballroom A&B
11:15 AM	11:45 AM	Techno-Economic Analysis and Program Support	Scott Jenne	NREL	Foundational R&D	Grand Ballroom A&B
11:45 AM	12:05 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Foundational R&D	Grand Ballroom A&B
12:05 PM	12:25 PM	Closing Remarks on Foundational R&D	Lauren Moraski Reudy & Bill McShane	WPTO	Foundational R&D	Grand Ballroom A&B
12:25 PM	1:15 PM	Lunch				
1:15 PM	1:45 PM	Powering the Blue Economy: WPTO Strategy Presentation	Simon Geerlofs	WPTO	MHK Plenary	Grand Ballroom A&B
1:45 PM	2:00 PM	Remarks from Deerin Babb-Brott, Principal Assistant Director for Oceans and Environment, White House Office of Science and Technology Policy	Deerin Babb-Brott	White House	MHK Plenary	Grand Ballroom A&B
2:00 PM	3:00 PM	PBE Panel – Perspectives from End Users featuring Jenn Garson, WPTO; Carl Gouldman, NOAA; Karl Hill, Igiugig Village Council; Dana Manalang, University of Washington; Richard Schilke, Nishati, Inc. Reenst Lesemann	Reenst Lesemann (moderator)	NHA Marine Energy Council	MHK Plenary	Grand Ballroom A&B
3:00 PM	3:10 PM	WPTO Presentation on Mechanisms for PBE	Jenn Garson	WPTO	MHK Plenary	Grand Ballroom A&B
3:10 PM	3:30 PM	Open Q&A and Discussion	Multiple	Multiple	MHK Plenary	Grand Ballroom A&B
3:30 PM	3:45 PM	Coffee Break and Transition				
3:45 PM	5:30 PM	“Town Hall” with WPTO Staff (open feedback forum for all attendees)	All attendees	All attendees	Plenary	Grand Ballroom A/B/C
5:30 PM	6:00 PM	Peer Reviewer Only Meetings (all MHK reviewers)				Madison

Thursday, October 10 MHK Track 2   Reducing Barriers to Testing and Data Sharing						
Start	End	Agenda Session	Presenter	Affiliation	Track	Room
8:15 AM	8:45 AM	Check-in, Breakfast				
8:45 AM	9:05 AM	Overview of Data Sharing & Analysis and Introduction of Lab Projects	Hoyt Battey	WPTO	Testing & Data	Grand Ballroom C
9:05 AM	9:35 AM	Tidal Resource Gaps Analysis	Kevin Haas (on behalf of NREL)	NREL	Testing & Data	Grand Ballroom C
9:35 AM	10:05 AM	Model Validation and Site Characterization for Early Deployment MHK Sites and Establishment of Wave Classification Scheme	Levi Kilcher	NREL, PNNL, SNL	Testing & Data	Grand Ballroom C
10:05 AM	10:35 AM	International Environmental Data Sharing Initiative (OES-Environmental & Tethys Database)	Andrea Copping	PNNL	Testing & Data	Grand Ballroom C
10:35 AM	10:45 AM	Coffee Break				
10:45 AM	11:15 AM	Marine and Hydrokinetic Data Repository (MHKDR)	Jon Weers	NREL	Testing & Data	Grand Ballroom C
11:15 AM	11:45 AM	MHK Data Products and User Community Development	Kelley Ruehl	SNL, NREL, PNNL	Testing & Data	Grand Ballroom C
11:45 AM	12:05 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Testing & Data	Grand Ballroom C
12:05 PM	12:25 PM	Closing Remarks on Testing & Data	Steve DeWitt	WPTO	Testing & Data	Grand Ballroom C
12:25 PM	1:15 PM	Lunch				
1:15 PM	1:45 PM	Powering the Blue Economy: WPTO Strategy Presentation	Simon Geerlofs	WPTO	MHK Plenary	Grand Ballroom A&B
1:45 PM	2:00 PM	Remarks from Deerin Babb-Brott, Principal Assistant Director for Oceans and Environment, White House Office of Science and Technology Policy	Deerin Babb-Brott	White House	MHK Plenary	Grand Ballroom A&B
2:00 PM	3:00 PM	PBE Panel – Perspectives from End Users featuring Jenn Garson, WPTO; Carl Gouldman, NOAA; Karl Hill, Igiugig Village Council; Dana Manalang, University of Washington; Richard Schilke, Nishati, Inc.	Reenst Lesemann (moderator)	NHA Marine Energy Council	MHK Plenary	Grand Ballroom A&B
3:00 PM	3:10 PM	WPTO Presentation on Mechanisms for PBE	Jenn Garson	WPTO	MHK Plenary	Grand Ballroom A&B
3:10 PM	3:30 PM	Open Q&A and Discussion	Multiple	Multiple	MHK Plenary	Grand Ballroom A&B
3:30 PM	3:45 PM	Coffee Break and Transition				
3:45 PM	5:30 PM	“Town Hall” with WPTO Staff (open feedback forum for all attendees)	All attendees	All attendees	Plenary	Grand Ballroom A/B/C
5:30 PM	6:00 PM	Peer Reviewer Only Meetings (all MHK reviewers)				Madison

