

3rd Marine Imaging Workshop 2019 Program

Monday, June 24th

Time		Location
9:00 – 17:00	Registration	Bob Wright Building Lobby
8:45 – 14:30	Annotation Workshop (see agenda)	Bob Wright Building Room A104
14:30 – 17:00	Tour of Marine Technology Centre	Sidney, BC Transport by bus
18:30 – 21:30	Icebreaker	University Club

Tuesday, June 25th

Time	Speaker	Title	Location
8:30 – 9:00		Registration	Bob Wright Building Lobby
9:00 – 9:30	Opening remarks	Welcome from ONC	Bob Wright Building Room A104
9:30 – 10:30	Keynote speaker: Peter Mieras	Snapshot: Status of connecting marine imaging, science and citizens	Bob Wright Building Room A104
10:30 – 11:00		Coffee break	Bob Wright Building Lobby

Session 1: Acquisition and Technology

11:00 – 11:20	Ross Griffin	Seeing reefs with sound: acoustic cameras as tools for assessing protected seabed habitats in turbid environments	Bob Wright Building Room A104
11:20 – 11:40	Andreas Marouchos	Design and development of sub-sea image acquisition systems; a decade of CSIRO sub-sea imaging	Bob Wright Building Room A104
11:40 – 12:00	Paul L. D. Roberts	A three-dimensional, high-resolution, in situ particle and flow imaging instrument (EyeRIS)	Bob Wright Building Room A104

12:00 – 13:00		Lunch	Bob Wright Building Lobby
13:00 – 13:20	Dominique Pelletier	Looking back and forward: the use of imaging techniques in a marine research institute	Bob Wright Building Room A104
13:20 – 13:40	J Daniels	In-situ 2D flow measurements and scanned 3D reconstruction in midwater and benthic environments using DeepPIV	Bob Wright Building Room A104
Session 2: Image processing and enhancement			
13:40 – 14:00	Nick Mortimer	Image data ‘velocity’ – real-time pre-processing at sea based on the ‘agile’ concept	Bob Wright Building Room A104
14:00 – 14:20	Jin Wei Lim	Unsupervised clustering of multi-resolution seafloor images for efficient scene understanding	Bob Wright Building Room A104
14:20 – 14:40	Tunai Porto Marques	A framework for the enhancement of low-lighting underwater images	Bob Wright Building Room A104
14:40 – 16:00		Poster session/Coffee break	Bob Wright Building Room A104
16:00 – 17:00		Day breakdown discussion	Bob Wright Building Room A104

Wednesday, June 26th

Time	Speaker	Title	Location
8:30 – 9:00		Registration	Bob Wright Building Lobby
9:00 – 10:00	Keynote speaker: Dr. Roger Hanlon	Quantifying dynamic camouflage in cephalopods: multiple tools, technologies and approaches to measure pattern, color and texture	Bob Wright Building Room A104
Session 3: Data management and sharing			
10:00 – 10:20	Brian Schlining	MBARI's Experiences Collecting and Managing Digital Video	Bob Wright Building Room A104
10:20 – 10:40	Alan Williams	Current and future value from towed camera image data	Bob Wright Building Room A104
10:40 – 11:10		Coffee break	Bob Wright Building Room A104

Session 4: Annotation

11:10 – 11:30	Chris Jackett	Image annotation at sea using VARS: management processes to ensure high data quality	Bob Wright Building Room A104
11:30 – 11:50	Jan Jansen	Analysing a large international collection of seafloor imagery for mapping Antarctic marine biodiversity: Challenges, ideas and opportunities	Bob Wright Building Room A104
11:50 – 12:10	Henk van Rein	How many jelly beans in the jar? Optimisation of observer-based image annotation methods	Bob Wright Building Room A104
12:10 – 13:10		Lunch	Bob Wright Building Room A104
Session 5: Biological and geological research			Bob Wright Building Room A104
13:10 – 13:30	Scott Foster	Being random and efficient: designing a flexible spatially-balanced imagery survey	Bob Wright Building Room A104
13:30 – 13:50	Catherine Borremans	Approaches for mapping and monitoring deep-sea habitats using optical imagery	Bob Wright Building Room A104
13:50 – 14:10	David Bowden	Time, technology, and perception: case studies combining seabed photographic survey data across surveys and years to address science and management questions in New Zealand	Bob Wright Building Room A104
14:10 – 14:30	Terri Souster	Non-Invasive monitoring methods using video and stills imagery	Bob Wright Building Room A104
14:30 – 15:00		Coffee Break	Bob Wright Building Room A104
15:00 – 15:20	Cherisse Du Preez	Moving beyond protection: image-based science to guide future monitoring of an offshore seamount network (Canadian Pacific)	Bob Wright Building Room A104
15:20 – 15:40	Xavier Mouy	Estimation of the biodiversity of fish and invertebrates using video and acoustics	Bob Wright Building Room A104
15:40 – 16:00	Abigail Powell	Analysis of AUV imagery for deep-sea ecosystem research	Bob Wright Building Room A104
16:00 – 17:00		Day breakdown discussion	Bob Wright Building Room A104
18:30 – 22:00		Workshop Dinner	Shaw centre for the Salish Sea

Thursday, June 27th

Time	Speaker	Title	Location
8:30 – 9:00		Registration	Bob Wright Building Lobby
9:00 – 10 :00	Discussion	Annotation workshop discussion and paper outline	Bob Wright Building Room A104
Session 6: Classification, detection, and machine learning			
10:00 – 10:20	Eric Jinks	One fish, two fish, red fish, blue fish: automated identification and counting of fish in underwater videos	Bob Wright Building Room A104
10:20 – 10:40	Amaya Alvarez Ellacuria	Image-based, unsupervised estimation of fish size from commercial landings using deep learning	Bob Wright Building Room A104
10:40 – 11:10		Coffee break	Bob Wright Building Lobby
11:10 – 11:30	Bhuvan M. Shashidhara	Hydrothermal Vent Scale Worm Segmentation using a Joint U-Net-CNN Architecture	Bob Wright Building Room A104
11:30 – 11:50	Oscar Pizarro	Benthic imaging and mapping assisted by autonomous machines	Bob Wright Building Room A104
11:50 – 12:10	Brian Schlining	FathomNet: An open, underwater image repository for automated detection and classification of midwater and benthic targets using machine learning	Bob Wright Building Room A104
12:10 – 12:30	Jenny Walker	The automation of extracting useful statistics from seafloor imagery: a new workflow	Bob Wright Building Room A104
12:30 – 13:30		Lunch	Bob Wright Building Lobby
13:30 – 13:50	Reinhard Koch	MorphoCluster: Efficient Annotation of Plankton images by Clustering	Bob Wright Building Room A104
13:50 – 14:10	Rafael Garcia	Deep Learning strategies to support the annotation of a poly-metallic nodule database	Bob Wright Building Room A104
14:10 – 15:10		Day breakdown discussion	Bob Wright Building Room A104
15:10 – 15:40		Coffee break	Bob Wright Building Lobby
15:40 – 16:40		Marine Imaging Workshop future directions	Bob Wright Building Room A104
16:40 – 17:00		Closing remarks	Bob Wright Building Room A104

Friday June 28th

Time	Fieldtrips	Location
13:00 – 18:00	Snorkeling trip	Downtown
9:00 – 17:00	Pacific Marine Circle Route	Departs from UVic