



ANNUAL WORKSHOP 2017



29 & 30 JUNE 2017

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CENSAM 10th Annual Workshop

Organisers' message:

On behalf of the organising committee, we are pleased to invite you to CENSAM's 10th annual workshop to be held in Singapore on 29th-30th June, 2017. The goal of our concluding workshop is to provide a forum for our achievements, recent research findings and technologies, and to create networking opportunities for sharing knowledge and collaboration.

In this year's programme, we highlight both achievements and ongoing Singapore-MIT collaborative work on air quality, regional climate, and marine and offshore monitoring and sensing. CENSAM researchers, collaborators, and alums will present talks and posters, providing a sense of the range of interdisciplinary research that has been conducted at CENSAM.

In addition, the workshop will feature invited talks by Dr. Farhana Anuar (National Climate Change Secretariat), Prof Stefan Wuertz (Research Director, Singapore Centre on Environmental Life Sci. and Engineering), Dr. Serena Teo, (Facility Director, St John's Island National Marine Laboratory), and Dr. Heiko Aydtt (Singapore-ETH Centre, Project Leader Cooling Singapore).

This year we also have a significant number of posters presented by each research group, so please make sure to set aside time during coffee and lunch breaks to enjoy one-on-one interaction with the presenters.

We look forward to your participation at CENSAM's 10th Annual Workshop. To register, please click the button below. Please do not hesitate to contact us if you require further information.

[REGISTER HERE](#)

[CONTACT ORGANISERS](#)

Do feel free to circulate this invitation to those who will be interested in attending our workshop.

Don't forget to
REGISTER



AGENDA

29 JUNE 2017, THURSDAY

12:45 -
13:00 Registration

13:00 - Welcome and Overview by Andrew Whittle, CENSAM Lead Principal Investigator and
13:20 Edmund K. Turner Professor in Civil Engineering at Massachusetts Institute of
Technology

13:20 - Thermal comfort and air quality for liveable cities
15:10 (Chair: Janelle Thompson + Cheng Dan)

13:20 - Buildings, vegetation and human activity in Singapore: discoveries and directions by
13:40 Leslie Norford, Professor of Architecture, MIT and former Lead Principal Investigator for
CENSAM

13:40 - Cooling Singapore by Heiko Aytz, Coordinator for Responsive Cities, Future Cities
14:00 Laboratory & Project Leader of Cooling Singapore, Singapore-ETH Centre.

14:00 - Numerical Modeling of Urban Climate: Understanding Microscale and Informing
14:20 Mesoscale by Negin Nazarian, Postdoctoral Associate, SMART-CENSAM

14:20 - How to battle air pollution and climate change in Singapore by Erik Velasco, Research
14:35 Scientist, SMART-CENSAM

14:35 - A new approach to quantifying and constraining biomass burning in Southeast and East
14:55 Asia by Jason Cohen, Professor at School of Atmospheric Sciences, Sun Yat-Sen University

14:55 -
15:10 Panel - Q&A

15:10 -
16:00 Coffee Break (50 min)

POSTER SESSION

16:00 - Marine contaminant transport and Sensing
17:45 (Chair: Paola Rizzoli + Jurriaan Gillissen)

16:00 - The History of Marine Paleoclimate and Anthropogenic Pb in the Singapore Region:
16:20 Coral Histories and Seawater Sampling by Edward A. Boyle, Professor of Marine
Geochemistry at the Department of Earth, Atmospheric and Planetary Sciences, MIT

16:20 - Zinc (Zn) chemical speciation in the Singapore coastal environment, the Malacca-Straits
16:35 and South China Sea by Gonzalo Carrasco, Postdoctoral Associate, SMART-CENSAM.

16:35 - Bioinspired sensors and robots by Michael Triantafyllou, Henry L. and Grace Doherty
16:55 Professor in Ocean Science and Engineering; Professor of Mechanical and Ocean Engineering;
Director, Center for Ocean Engineering, MIT

16:55 - Imaging Through Highly Scattering Media by Shakil Rehman, Research Scientist, SMART-
17:10 CENSAM

17:10 - **The coupled variability of the regional climate in the South China Sea** by **Jun Wei**,
17:30 *Assistant Professor, Department of Atmospheric and Oceanic Sciences, Peking University*

17:30 - **Panel - Q&A**
17:45

17:45 - **Cocktail Reception (Beer, Wine, finger food) and Music band (2hr 45min)**
20:30

POSTER SESSION

30 JUNE 2017, FRIDAY

08:30 - **Registration & Coffee**
09:00

9:00 - **Advanced technologies to promote water security (Chair: Leslie Norford + Chen Kian Wee)**
10:35

9:00 - **Online measurement and interpretation of drinking water quality** by **Andrew Whittle**,
9:20 *CENSAM Lead Principal Investigator and Edmund K. Turner Professor in Civil Engineering, MIT*

9:20 - **Electrochemical and colorimetric aptasensor technologies for rapid detection of viral contaminants in water** by **Masaaki Kitajima**, *Assistant Professor, Division of Environmental Engineering, Hokkaido University*
9:40

9:40 - **Next generation analysis of microbial water quality in the urban tropics** by **Janelle Thompson**, *Principal Investigator, SMART-CENSAM; Associate Director of Outreach, SMART*
10:00

10:00 - **Microbial Communities in the Urban Water Cycle: Fate of Pathogens** by **Stefan Wuertz**,
10:20 *Research Director (Environmental Engineering) & Professor, School of Civil and Environmental Engineering, NTU*

10:20 - **Panel - Q&A**
10:35

10:35 - **Tea Break (20 min)**
10:55

10:55 - **Integrated solutions for off-shore monitoring, modelling, and utilization**
12:50 **(Chair: Dick Yue + Grgur Tokic)**

10:55 - **Dynamics of sediment clouds and plumes with application to land reclamation and dredging activities** by **Eric Adams**, *Senior Lecturer, Senior Research Engineer, MIT*
11:15

11:15 - **Distributed System of Autonomous Buoys for Scalable Deployment and Monitoring of Marine Environment** by **Roland Bouffanais**, *Assistant Professor in the Engineering & Product Development (EPD), SUTD & Dick Yue, Philip J. Solondz Professor of Engineering, the Skolkovo Foundation Professor of Mechanical Engineering, and Professor of Mechanical and Ocean Engineering, MIT*
11:35

11:35 - **Monitoring Harmful Algal Blooms in Singapore waters: Toxic species** by **Sandric Leong**,
11:55 *Senior Research Fellow, Tropical Marine Science Institute, NUS*

11:55 - **New soft robot technologies and their potential environmental applications** by **Pablo Valdivia y Alvarado**, *Assistant Professor in the Engineering Product Development, SUTD*
12:15

12:15 - **Challenges for Marine Science in World's Busiest Port** by **Serena Teo**, *Facility Director, St John's Island National Marine Laboratory, C/O TMSI, NUS*
12:35

12:35 - **Panel - Q&A**
12:50

12:50 - **Lunch (1hr 30min)**
14:20

POSTER SESSION

14:20 - **Prediction and mitigation of climate impacts in South East Asia (Chair: Chien Wang + Benjamin Grandey)**
16:00

14:20 - **Singapore's Approach to Climate Change** by **Farhana Anuar**, *Senior Assistant Director (Policy Innovation & Futures), National Climate Change Secretariat, Strategy Group, Prime Minister's Office*
14:40

14:40 - **The Contribution of Fire and Non-fire Pollutants to Regional Air Quality in Southeast Asia** by **Lee Hsiang He**, *Research Scientist, SMART-CENSAM*
14:55

14:55 - **Tropical peatlands: fundamental principles and their applications for management** by **Alex Cobb**, *Research Scientist, SMART-CENSAM*
15:10

15:10 - **The Impact of Various Aerosol Emission Scenarios on Precipitation and its Effects on Lower Mekong River Hydrology** by **Yeo Lik Khian**, *PhD Student, SMART-CENSAM*
15:25

15:25 - **Climate change impacts over the Maritime and Asian Continents** by **Elfatih Eltahir**, *Breene M. Kerr Professor, MIT*
15:45

15:45 - **Panel - Q&A**
16:00

16:00 - **Tea Break (30 min)**
16:30

16:05 **Group Photo**

T: +65 6516 6129
E: censam@smart.mit.edu
W: censam.mit.edu