

# Climate Adaptation Workshop: Structural Design for Coastal Flood Resilience



May 16-17, 2024  
Princeton University



Final version (May 14)

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## Wednesday, May 15, 2024 (81 Alexander St)

6:00: PM - 8:00: PM Drop-in Hors d'oeuvres Reception at M. Garlock home (on campus, 81 Alexander St.)

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## Thursday, May 16, 2024 (016 Robertson Hall)

8:00: AM - 9:00: AM Registration and Continental Breakfast (Robertson Hall 016)

9:00: AM - 9:30: AM	<b>OPENING REMARKS</b>	Welcome Welcome Overview of Workshop	Branko Glisic, Prof. & Chair CEE, Princeton Univ. Jon Heinz, Exec. Director ATC Maria Garlock, Professor, CEE, Princeton Univ.
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9:30: AM - 10:20: AM	<b>Theme 1 STATE OF RESEARCH/PRACTICE (Part 1)</b>  (Moderator: Ali FarhadZadeh)	1a. Overview of Climate Change, Storm Surge and SLR Models  1b. Flood Hazard in the Built Environment  <i>(10 min) Questions</i>	Jayantha T. Obeysekera, Director of the Sea Level Solutions Center,FIU  Andrew Kennedy, Professor, Civil and Environmental Engineering and Earth Sciences,Notre Dame
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10:20: AM - 10:40: AM **BREAK**

10:40: AM - 11:55: AM	<b>Theme 1 STATE OF RESEARCH/PRACTICE (Part 2)</b>  (Moderator: Elizabeth English)	1c. State of Structural Engineering Flood Practice 1d. Case studies: Damage Classification, Fragility Quantification 1e. NYC climate adaptation plans: NY & NJ Harbor & Tributaries Focus Area Feasibility Study (HATS)  <i>(15 min) Questions/Discussion: State of Research/Practice</i>	Seth Thomas, Associate, KPFF Portland Structural Victoria (Tori) Tomiczek, Associate Professor,United States Naval Academy Bryce W. Wisemiller, U.S. Army Corps of Engineers
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11:55: AM - 1:15: PM **LUNCH (Whig Hall, Senate Chamber, Top Fl.)**

1:15: PM - 2:10: PM	<b>Theme 2 EXPERIMENTAL AND NUMERICAL CAPABILITIES/NEEDS</b>  (Moderator: Katerina Kyrioti)	2a. Experimental Facilities for Coastal Flood Resilience: State-of-Art and Needs 2b. Numerical Tools: Types, Pros/Cons, Needs  <i>(15 min) Questions/Discussion: Exp. &amp; Num. Cap. &amp; Needs</i>	Dan Cox, Professor, School of Civil and Construction Engineering, Oregon State Patrick Lynett, Professor, USC
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2:10: PM - 3:25: PM	<b>Theme 3 STRUCTURAL ENGINEERING DESIGN APPROACHES</b>  (Moderator: Landolf Rhode-Barbarigos)	3a. Coastal Bridges: Performance and Design for Coastal Resilience 3b. Elevated infrastructure: Performance and Design for Coastal and Offshore Resilience 3c. PBD Approach to Coastal Design of Structures  <i>(15 min) Questions/Discussion: Struc. Eng. Design Approaches</i>	Jamie Padgett, Chair, Department of Civil and Environmental Engineering, Rice Univ. Claudia Reis, Assistant Professor of Civil and Environmental Engineering, Lehigh Univ Trung Do, Assistant Professor, Univ. South Alabama
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3:25: PM - 3:45: PM **BREAK**

3:45: PM - 5:00: PM	<b>Theme 4 PRACTITIONER PERSPECTIVES</b>  (Moderator: Matt Gilbertson)	4a. Perspectives from Structural Engineering Practitioners: Needs & Challenges 4b. Perspectives from Coastal Engineering Practitioners: Needs & Challenges 4c. Perspectives from Architect and Planning Practitioners: Needs & Challenges  <i>(15 min) Questions/Discussion: Practitioner Perspectives</i>	Bill Coulbourne, Coulbourne Consulting Muthu Narayanaswamy, Director, Coastal and Compound Flood Risk, The Water Institute Elizabeth Hodges McQuade, Director, Architecture Background Office
6:00: PM - 6:30: PM -	<b>RECEPTION (Louis A Simpson International Building - Atrium) DINNER (Louis A Simpson International Building - Atrium)</b>		

**Friday, May 17, 2024 (016 Robertson Hall)**

7:30: AM - 8:30: AM **Continental Breakfast**

8:30: AM - 8:40: AM	<b>INTRODUCTION TO DAY 2</b>	Recap of Thursday, and Setting Goals for the Day	Maria Garlock, Princeton University
8:40: AM - 9:30: AM	<b>Theme 5 EDUCATIONAL EFFORTS</b> (Moderator: David Prevatt)	5a. New Class: Structural Engineering and the Ocean Environment 5b. An Interdisciplinary course: Building Design for Climate Change Adaptation  <i>(10 min) Questions/Discussion: Educational Efforts</i>	Shengzhe (Jackson) Wang, Assistant Professor of Civil and Environ. Engineering, Univ. Colorado Denver Gordana Herning, Visiting Assistant Professor of Design & Engineering Studies, Wesleyan University

**IDENTIFYING GOALS AND GAPS**

9:30: AM - 9:40: AM	Explain break out sessions and get in groups <i>coffee/snacks available, grab as needed during breakout</i>
9:40: AM - 11:25: AM	Breakout groups: Identify GOALS & GAPS in research and practice
11:25: AM - 11:40: AM	Groups summarize discussion to be presented to full participants

11:40: AM - 12:00: PM **Boxed Lunch**

12:00: PM - 12:45: PM Reporting of breakout groups: GOALS & GAPS in research, practice, and teaching

12:45: PM - 1:00: PM Closing

~1:30 PM - ~3:00 PM Optional: Historical and Architectural Tour of Princeton

**QR code to workshop webpage**



Has pdf of program and map of campus that marks all the relevant workshop locations (e.g. workshop site, lunch location, dinner location)