



2019 SSPEED CONFERENCE

POST-HARVEY ERA: RESILIENT ENGINEERING, INFRASTRUCTURE & POLICY

DAY 1 TUESDAY, OCTOBER 8, 2019

7:45 - 8:15 REGISTRATION & COFFEE (THE COMMONS)

INTRODUCTION

8:15 - 8:30 Reginald DesRoches, Dean of Engineering, Rice University

8:30 - 8:40 Philip Bedient, Director, SSPEED Center & Professor, Rice University

KEYNOTE

RESILIENT HOUSTON

8:40 - 9:00 Marissa Aho, Chief Resilience Officer, City of Houston

KEYNOTE

GALVESTON BAY PARK: SECURITY, RESILIENCY, EQUITY

9:00 - 9:25 Rob Rogers, FAIA, Founder, ROGERS PARTNERS Architects + Urban Designers

SESSION I.

URBAN DESIGN & NEW POLICIES FOR FLOOD PROTECTION

9:25 - 9:45 **Flood Warning, Analysis & Mapping for a Resilient Future**

Philip Bedient, Director, SSPEED Center & Professor, Rice University

9:45 - 10:05 **Toward Smart Resilience: The Case of Access and Mobility in Flood Prone Communities**

Jamie Padgett, Associate Professor, Rice University

10:05 - 10:20 **The New Rules – What You Need to Know**

Charles Penland, Senior Principal, Walter P Moore

10:20 - 10:40 BREAK (THE COMMONS)

SESSION II.

IDENTIFYING & COMMUNICATING FLOOD RISK TO THE PUBLIC

10:40 - 11:00 **Why is the Effect of Growth on Stormwater Infrastructure an Afterthought?**

Jerry Cotter, Chief of Water Resources Management, USACE (Ft. Worth)

11:00 - 11:20 **Strategies for Engaging the Public around Risk, Recovery, and Resilience**

Kyle Shelton, Director of Strategic Partnerships, Kinder, Rice University

11:20 - 11:40 **Measuring, Mapping, and Managing Flood Risk**

Sam Brody, Director of CTBS & Professor, Texas A&M Galveston

11:40 - 12:00 **MAAPnext – A Next step to Evolving Floodplain Mapping**

Ataul Hannan, Director of Planning, Harris County Flood Control District

12:00 – 1:00 LUNCH (THE COMMONS)

KEYNOTE

FUTURE OF THE PORT

1:00 - 1:30 Ric Campo, Chairman of the Port Commission, Port of Houston

SESSION III.

CLIMATE CHANGE EFFECTS ON FLOODING

1:30 - 1:50 **The Worst Case Scenario**

John Nielson-Gammon, Texas State Climatologist & Professor, Texas A&M University

1:50 - 2:10 **Future Texas Hurricanes: More like Harvey, or More like Ike?**

Pedram Hassanzadeh, Assistant Professor, Rice University

2:10 - 2:30 **Climate Change and the Future of Hurricanes**

Dan Cohan, Associate Professor, Rice University

2:30 - 2:50 BREAK (THE COMMONS)

SESSION IV.

COASTAL SURGE MITIGATION UPDATE

2:50 - 3:10 **Implementing the Galveston Bay Park Plan**

Jim Blackburn, Co-Director, SSPEED Center & Professor, Rice University

3:10 - 3:30 **Coupled Rainfall-Storm Surge Modeling in Support of Hurricane Flood Protection System Evaluation in Coastal Texas**

Clint Dawson, John J. McKetta Centennial Energy Chair in Engineering, UT Austin

3:30 - 3:50 **Coastal Texas Protection and Restoration Feasibility Study: Project Update**

Kelly Burks-Cope, Research Ecologist, USACE Galveston

Tony Williams, Environmental Review Coordinator, Texas GLO

PANEL

COASTAL RESILIENCY | MODERATED BY JIM BLACKBURN

3:50 - 4:40

- David Batker, President and Chief Economist, Earth Economics
- Kelly Burks-Copes, Research Ecologist, USACE Galveston
- Robert Twilley, Executive Director, Louisiana Sea Grant and Professor in Oceanography & Coastal Science, LSU
- Tony Williams, Environmental Review Coordinator, Texas GLO

RECEPTION

JOIN US FOR FOOD, DRINKS, & POSTER SESSION

4:40 - 6:40

Generously sponsored by AECOM, Arcadis, Geosyntec Consultants, Inc., Kinder Institute, Texas Coastal Exchange, Vieux & Associates, Inc., & Walter P Moore



2019 SSPEED CONFERENCE

POST-HARVEY ERA: RESILIENT ENGINEERING, INFRASTRUCTURE & POLICY

DAY 2 WEDNESDAY, OCTOBER 9, 2019

8:00 – 8:30 REGISTRATION & COFFEE (THE COMMONS)

SESSION I. FLOOD MITIGATION IN THE BAYOU CITY

8:30 - 8:50 **Why Do we Keep Flooding?**

Larry Dunbar, Project Manager, SSPEED Center

8:50 - 9:10 **Buffalo Bayou & Tributaries Resiliency Study**

Andrew Weber, Project Manager, USACE
Michael Kauffman, Hydraulics and Hydrology, USACE

9:10 - 9:30 **TBA**

Beth White, President and CEO, Houston Parks Board

KEYNOTE HOUSTON BAYOUS & RESILIENCY: COUNTY PERSPECTIVE

9:30 - 9:55 R. Jack Cagle, Commissioner, Harris County Precinct 4

9:55 - 10:20 BREAK (THE COMMONS)

SESSION II. NON-STRUCTURAL MITIGATION

10:20 - 10:40 **Texas Coastal Exchange: Supporting Natural Coastal Ecosystems to Reduce the Effects of Climate Change and Flooding**

Azure Bevington, Science and Technical Director, Texas Coastal Exchange

10:40 - 11:00 **Building a Plane While Flying It: Pursuing Nature Based Approaches to Non-Structural Aspects of Coastal Resilience**

Elizabeth Winston-Jones, Board of Directors, Lone Star Coastal Alliance

SESSION III. CONCURRENT SESSIONS

SESSION A WILL BE HELD IN THE AUDITORIUM. SESSION B WILL BE HELD IN ACC 107.

11:00 - 12:15 A. FLOOD WARNING SYSTEMS FOR RESILIENT INFRASTRUCTURE (AUDITORIUM)

11:00 - 11:20 **Flood Alert Systems Empowered by Machine Learning Algorithms**

Nick Fang, Assistant Professor, UT Arlington

11:20 - 11:40 **Integrating Scalable Roadway-Level Flood Warning Sensors: A Bottom-Up Approach**

Jacob Torres, Principal, Torres & Associates, LLC.

11:40 - 12:00 **Development, Operation, and Maintenance of the HCFCD's Flood Forecast Program**

Justin Terry, Flood Forecaster, HCFCD

12:00 - 12:15 **Developing Integrated Floodplain Management from Scratch – Featuring the Chehalis River Basin Flood Warning System**

David Curtis, Sr., Vice President, WEST Consultants

B. PANEL | HARRIS COUNTY'S NATURAL ASSETS: MAKING NATURE WORK FOR A MORE RESILIENT REGION (ACC 107)

MODERATOR

Larry Dunbar, Project Manager, SSPEED Center

PANELISTS

- Mary Anne Piacentini, President & Chief Executive Officer, Katy Prairie Conservancy
- Matthew Berg, CEO & Principal Scientist, Simfero Consultants
- Stephen Benigno, Ecologist, Harris County Flood Control District

12:15 – 1:15 LUNCH (THE COMMONS)

SESSION IV. CONCURRENT SESSIONS

SESSION A WILL BE HELD IN THE AUDITORIUM. SESSION B WILL BE HELD IN ACC 107.

1:15 - 2:15 A. ENVIRONMENTAL RESILIENCE IN EXTREME EVENTS (AUDITORIUM)

1:15 - 1:35 **Resilience of Environmental and Industrial Infrastructure**

Hanadi Rifai, Professor, University of Houston

1:35 - 1:55 **Sediment Transport Vulnerabilities in Extreme Hydrology and Hydrodynamics**

Amin Kiaghadi, Post Doc, University of Houston & University of Texas at Austin

1:55 – 2:15 **Debris Vulnerabilities During Hurricanes and Severe Storms**

John Pardue, Professor, Louisiana State University

B. ENGAGING THE COMMUNITY IN RESILIENCE (ACC 107)

Community Resiliency by Design

Susan Rogers, Associate Professor & Director of the CDRC, UH

Evaluating Neighborhood-Scale Flood Hazard and Flood Mitigation Options for Greens Bayou Watershed

Andrew Juan, Research Scientist, SSPEED

Accelerate Recovery: Looking towards the Future for Advanced Ways to Survive Disasters

Ivory Mayhorn, Executive Director, Houston Launch Point

PANEL

LOOKING TOWARD THE FUTURE AND FINAL THOUGHTS | MODERATED BY CHARLIE PENLAND

2:15 - 3:15

- John Blount, County Engineer, Harris County
- Russ Poppe, Executive Director, Harris County Flood Control District
- Carol Ellinger Haddock, Director, Houston Public Works

KEYNOTE

STATE OF PRECINCT 2

3:15 - 3:35 Adrian Garcia, Commissioner, Harris County Precinct 2

CLOSE

THANK YOU FOR ATTENDING SSPEED'S ANNUAL CONFERENCE.

3:35 - 3:40

Philip Bedient, Director, SSPEED Center & Professor, Rice University