

Integrating Cloud and Container Technologies into University Numerical Weather Prediction (NWP) Curriculum

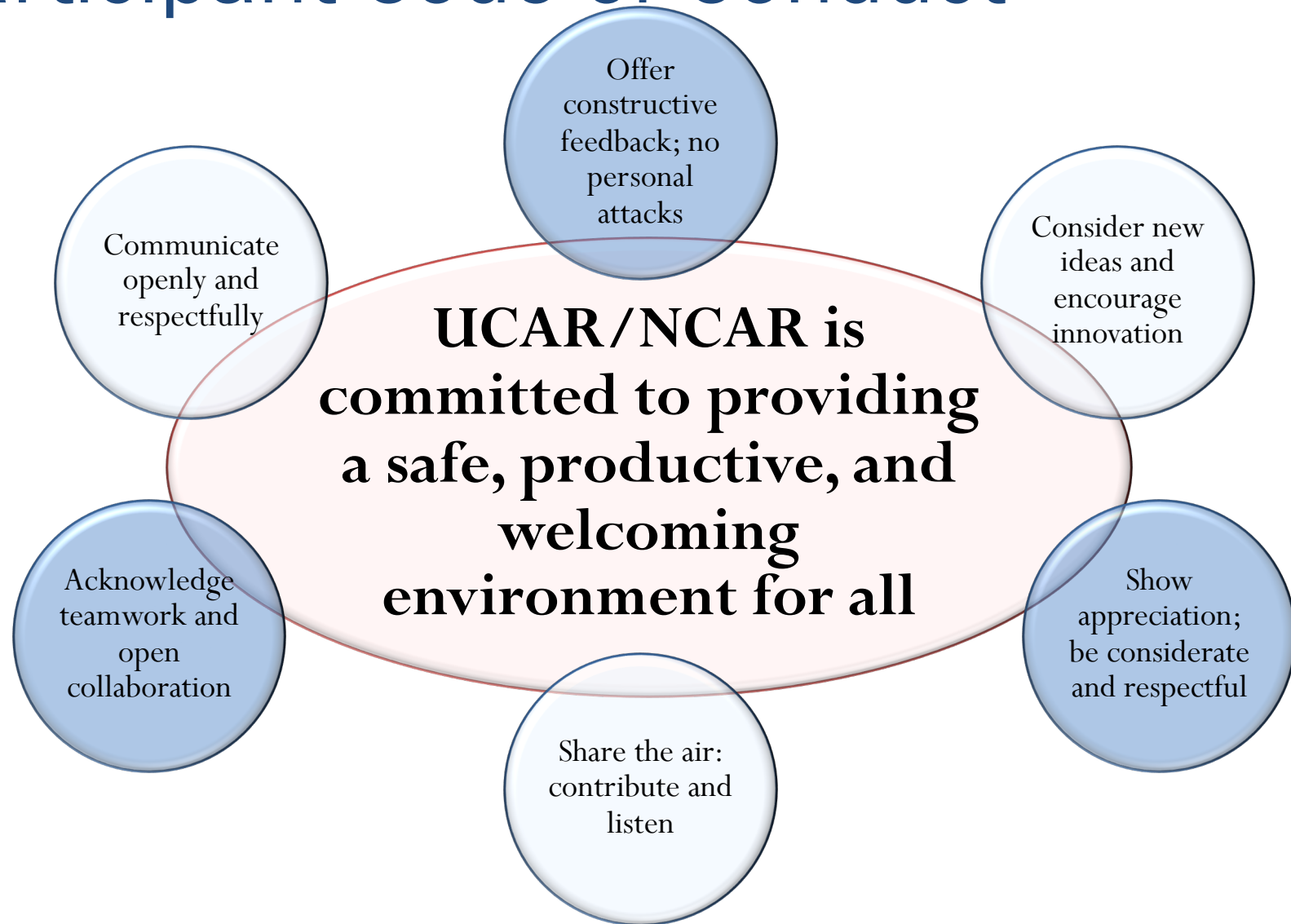
Welcome!

Kate Fossell, John Halley Gotway,
Michelle Harrold, Mike Kavulich, and Jamie Wolff

DTC Workshop Organizing Committee



Participant Code of Conduct



Why are we here?



INNOVATIVE TECHNOLOGIES



- **Container Software:** Portable, reproducible science
- **Cloud Computing:** Accessible, on-demand compute and storage



END-TO-END SYSTEM



Full containerized NWP system, including:
Model, Pre/Post-processing, Data Assimilation, Visualization, and Verification



EDUCATION & OUTREACH

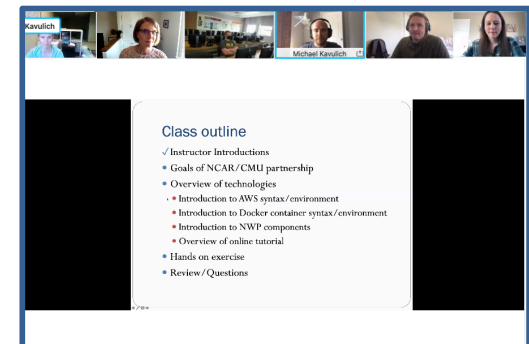
- AMS Short Course offerings
- University collaborations
- Step-by-step Online Tutorial

TARGET AUDIENCES

- Academic community, including MSIs
- Researchers
- Resource-limited institutions

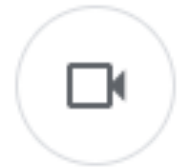
FUTURE ACTIVITIES

- Continued E&O
- New university collaborations

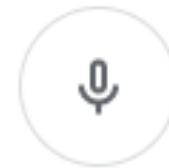


Meeting Expectations

- Please turn your video on when speaking and during breakouts!
 - We would love to see your faces to facilitate conversation
- We want to hear from you!
 - Please raise your hand when you would like to speak
- Remember to remain muted unless speaking!
 - To avoid distracting background noise
- Please remain focused and be engaged!
 - We look forward to a productive workshop



Raise hand



Logistics

- Google Meet platform will be used throughout the workshop (plenary, hands-on practice, and breakout discussions)
 - The same link will be used every day (link in email)!
 - Feel free to use the chat feature to post questions/comments.
 - During hands-on practice, we can move individuals into a Q&A breakout room for screensharing, as needed.
 - For the breakout sessions, we will be providing DTC facilitators in each but we will solicit a scribe & spokesperson to help for the report outs.
- Shared Google Drive folder (link in email)
 - Resource materials
 - Logging onto AWS: IP address and Password
 - Breakout materials
 - Group assignments
 - Slide template with questions for consideration to be used for report-out
 - Presentations
 - Will also be shared on the event page agenda after the event



Agenda Overview

Time (MT)	Mon, 7 June	Tues, 8 June	Wed, 9 June
9:00	Welcome Introductions (Jamie Wolff - DTC)	Current curriculum approaches (Tom Guinn - Embry-Riddle Aeronautical University)	Introduction to AWS Academy/Educaate (Mike Bryant and John Bjerke - AWS)
9:10		Current curriculum approaches (John Mejia - Desert Research Institute)	
9:20	Overview of DTC cloud/container capabilities (Mike Kavulich, Jr. - DTC)	Q&A on current curriculum approaches	
9:30		Testimonial #1 (Sam Ng - Metropolitan State University-Denver)	
9:40		Testimonial #2 (John Allen - Central Michigan University)	
9:50	Case overview (Michelle Harrold)	Q&A on testimonials	Breakout #3
10:00	Break	Break	
10:20		Logging onto AWS (Kate Fossell - DTC)	Breakout #2
10:30	Hands-on practice with DTC cloud/container capabilities (Michelle Harrold - DTC)		
10:40	"Lunch" Break	Outbrief for Breakout #2	Outbrief for Breakout #3
10:50		"Lunch" Break	
11:00			Continued: Hands-on practice with DTC cloud/container capabilities
11:10		Demonstration of customization options (Michelle Harrold - DTC)	
11:20	Breakout #1	Hands-on practice: Customization of case 1, Run new case	Help Desk / Open Forum (Hands on practice; Specific questions)
11:30			
11:40	End of Day		



Introductions

- Invite you to turn on your camera, unmute, and say hi!
 - Name, title, affiliation

- Facilitators:

Kate Fossell

John Halley Gotway

Michelle Harrold

Mike Kavulich

Jamie Wolff

- Participants

Registered Participant Institutions

- We are excited to see a number of institutions represented!

Amazon Web Services

Central Michigan University

Desert Research Institute

Embry-Riddle Aeronautical University

GAMA1

George Mason University

Indian Institute of Technology – Mumbai

Inter American University of Puerto Rico

Jackson State University

Metropolitan State University of Denver

Michigan State

Military University of Technology – Warsaw

National Center for Atmospheric Research

National Oceanic and Atmospheric Administration

Purdue University

University of Miami

Space Applications Centre - India

St. Cloud State University

University of Albany

University of California Davis

University of Colorado Boulder

University of Hawaii

University of Michigan

University of Utah

University of Washington

Visayas State University

York University

