

IS-GEO 2019: Advanced Interdisciplinary Approaches for Discovery and Learning



University Corporation for Atmospheric Research (UCAR) - 3450 Mitchell Lane, Boulder, CO 80301

AGENDA

June 17, 2019 – June 21, 2019

Day - 1 Monday June 17, 2019

Time	Item Description	Room
7:45 - 8:00	Transport from Hampton Inn Lobby to UCAR	Hampton Inn Lobby
8:00 - 9:00	Breakfast Chat	UCAR FL Atrium
9:00 - 10:00	Keynote - The Future of IS-GEO - <i>Dr. Suzanne Pierce</i> spierce@tacc.utexas.edu - @HelpfulTangent https://www.tacc.utexas.edu/about/directory/suzanne-pierce	UCAR Large Auditorium
10:00 - 10:30	Break	UCAR FL Atrium
10:30 - 12:00	IS-GEO Collaborative Project Updates - <i>Pete Marchetto Moderator</i> <ul style="list-style-type: none"> ● 3D PAWS - <i>Keith Maull</i> kmaull@ucar.edu https://www.iepas.ucar.edu/core-programs/3dpaws/ ● "The DiscoveryFramework" - <i>Misty Porter</i> misty.porter@ku.edu https://interactiveviz.dept.ku.edu/DiscoverWater/ SimTable - <i>Stephen Guerin</i> stephen@simtable.com - @simtable http://www.simtable.com/	UCAR Large Auditorium
12:00 - 13:00	Working Lunch (Provided)	
13:00 - 14:00	IS-GEO Collaborative Project Introduction - Moderated by Mike Daniels Theme: Colorado Flood Monitoring Presentation: Boulder County Highway Department Flood Pane Managers Presentation: Real Time Monitoring and Control Urban Water Systems	UCAR Large Auditorium
14:00 - 15:00	Tutorials: DataX Science Gateway/CHORDs Introduction	UCAR Large Auditorium
15:00 - 15:30	Break	UCAR FL Atrium
15:30 - 17:00	Project group selection and planning sessions	UCAR 1003/1002 Breakout Rooms

Day - 2 Tuesday, June 18, 2019

Time	Item Description	Room
7:45 - 8:00	Transport from Hampton Inn Lobby to UCAR	Hampton Inn Lobby
8:00 - 9:00	Breakfast Chat	UCAR FL Atrium
9:00 - 9:30	Travel to SparkFun - 6333 Dry Creek Pkwy, Niwot, CO 80503	Sparkfun
9:30 - 12:00	Factory Tour and Project Construction	Sparkfun
12:30 - 13:30	Working Lunch - Niwot Tavern (Reservation for 30 at 12:30pm) Menu: https://www.niwottavern.com/menus/ Address: 7960 Niwot Road, Niwot, CO 80503	Niwot Tavern
13:30 - 17:00	Project Construction	Sparkfun
18:00-20:00	Working Dinner at Element Bistro (<i>Located by conference hotel Hampton Inn</i>) Menu: https://www.elementbistroboulder.com/menu Address: 6315 Lookout Rd, Boulder, CO 80301	Element Bistro

Day - 3 Wednesday, June 19, 2019

Time	Item Description	Room
7:45 - 8:00	Transport from Hampton Inn Lobby to UCAR	Hampton Inn Lobby
8:00 - 9:00	Breakfast Chat	UCAR FL Atrium
9:00 - 9:30	Travel to SparkFun - 6333 Dry Creek Pkwy, Niwot, CO 80503	Sparkfun
	Adaptive Sensing	Integrated Modeling / Machine Learning
9:30 - 12:00	Project Construction	Model Design and Development
12:00 - 13:00	Working Lunch (Provided)	
13:00 - 16:00	Project Construction	Model Integration / Dashboard Integration

Day - 4 Thursday, June 20, 2019

Time	Item Description		Room
7:45 - 8:00	Transport from Hampton Inn Lobby to UCAR		Hampton Inn Lobby
8:00 - 9:00	Breakfast Chat		UCAR FL Atrium
9:00 - 12:00	Presentations - Moderated by Je'aime Powell <ul style="list-style-type: none"> ● Geoscience Paper of the Future - <i>Daniel Garijo</i> dgarijo@isi.edu - @dgarijov http://scientificpaperofthefuture.org/ ● Constructing a valid sediment erosion model for the West Valley nuclear waste site - <i>Katy Barnhart</i> katherine.barnhart@colorado.edu - @katybarnhart https://instaar.colorado.edu/people/katy-barnhart/ 		UCAR Large Auditorium
12:00 - 13:30	Working Lunch (UCAR) and Poster Session and SimTable Demo		UCAR FL Atrium
	Adaptive Sensing	Integrated Modeling / Machine Learning	(Group Dependent)
13:30 - 17:00	Device Field Deployments <ul style="list-style-type: none"> ● Boulder Canyon / Boulder Falls ● S. Outlep Property - GPS: 40.114835,-105.383476 	Model Design and Development - UCAR 1003/1002	

Common Terminology:

- **Science Gateway or Portals** - Generally a website that allows science & engineering communities to access shared data, software, computing services, instruments, educational materials, and other resources specific to their disciplines to facilitate collaboration.
- **CHORDS (Cloud HOSted Real-time Data Services)** - It is a real-time data service for the geosciences that provides an easy-to-use system to acquire, navigate, and distribute real-time data via cloud services and the Internet.
- **Integrated Models** - Models that span multiple academic disciplines, such as geoscience, economics, climate science, energy systems, land-use change, hydrology and many others.
- **Dashboards** - An information management tool that visually tracks (graphs), analyzes and displays key performance indicators (KPI), metrics and key data points related to a specific process.
- **Microcontrollers** - A small computer on a single integrated circuit.
- **APIs (Application Programming Interfaces)** - a set of clearly defined methods of communication for a web-based system, operating system, database system, computer hardware, or software library.
- **Sensors** - A device, module, or subsystem whose purpose is to detect events or changes in its environment and send the information to other electronics.

Day - 5 Friday, June 21, 2019		
Time	Description	Room
7:45 - 8:00	Transport from Hampton Inn Lobby to UCAR	Hampton Inn Lobby
8:00 - 9:00	Breakfast Chat	UCAR FL Atrium
9:00 - 10:00	Project Deployment and Integrated Modeling Reports and Deliverables	UCAR Large Auditorium
10:00 - 10:30	Break	UCAR FL Atrium
10:30 - 12:00	Collaborator Presentations - Moderated by Suzanne Pierce <ul style="list-style-type: none"> NIST Cloud Federation work and the Open Research Cloud Alliance - <i>Craig Lee</i> craig.a.lee@aero.org Creative Science for Sustainable Energy, Agriculture, and Water - <i>Mary Hill</i> mchill@ku.edu - @mary2hill http://discover-energy.ku.edu 	UCAR Large Auditorium
12:00 - 13:00	Working Lunch UCAR (Provided)	UCAR FL Atrium
13:00 - 16:00	Collaborative Discussions	UCAR Large Auditorium

ISGEO Community Resources

Communication

Website: <https://is-geo.org/>

Slack: <https://is-geocommunity.slack.com>

Twitter: @IS_GEOCommunity

YouTube: <https://www.youtube.com/channel/UCiKhb4vDFS-yvjVmE5q5Nw>

Data Storage and Data Streaming

Science Gateway: <https://ptdatax.tacc.utexas.edu/>
- My Projects/ISGEO

CHORDS: <http://jetstream1.chordsrt.com/>

Microcontroller: <https://www.particle.io/>

Github: <https://github.com/IS-GEO>



IS-GEO
Intelligent Systems for Geosciences