



**Sensing Forest Water Dynamics From Space:  
Towards Predicting the Earth System Response to Droughts**

**October 14-18, 2019  
Overview Schedule**

**Monday, October 14, 2019  
Sharp Lecture Hall, Arms Building - Caltech**

**Short Course: Forest Water Dynamics and the Earth System Response to Droughts  
Introductory Lectures - Open to all interested students, researchers and faculty**

Time	Event	Speaker
8:15 - 8:45	Coffee and Refreshments	
8:45 - 9:00	Logistics / Course Introduction	Michele Judd Michael Keller
9:00 - 9:45	Theoretical Basis of Tree Hydraulics	Ashley Matheny
9:45 - 10:30	Linking Hydraulic Stress and Tree Mortality: In-Situ Observations	Patrick Meir
10:30 - 11:00	Break	
11:00 - 11:45	How Can We Best Capture Vegetation Water Interactions in Earth System Models?	Pierre Gentine
11:45 - 12:30	Spaceborne Observations of Water in Trees	Alexandra Konings
12:30 - 1:30	Short Course Ends: Informal Lunch is provided outside Sharp Lecture Hall	
1:30 - 1:45	Walk to Keck Center, pick up badge and welcome packet, find seat in the Think Tank	

**Monday, October 14, 2019**  
**Invitation-Only Workshop Begins**  
**Keck Center - Think Tank, Room 155**

<b>Time</b>	<b>Event</b>	<b>Speaker</b>
1:45 - 2:30	Workshop Logistics and Introduction to KISS	Michele Judd
2:30 - 3:00	Participant Introductions	Michele Judd
3:00 - 3:30	Study vision and goals for this workshop	Sassan Saatchi
3:30 - 4:00	Break	
4:00 - 5:15	Plenary discussion: Study vision and workshop goals	Team Leads
5:15 - 5:30	Solicitation of lightning talks	Team Leads
5:30 - 6:00	Pack up and walk to the Athenaeum	All
6:00	Dinner at the Athenaeum	

**Tuesday, October 15, 2019 - Keck Center - Think Tank, Room 155**

<b>Time</b>	<b>Event</b>	<b>Speaker</b>
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Coffee and Refreshments at Keck Center	
9:00 - 9:40	Team leads review first day outcomes, schedule, charge for first breakout	Michele Judd and Team Leads
9:40 - 10:00	Possible lightning talks (2 x 10 min)	TBD by participants
10:00 - 10:30	Break	
10:30 - 12:30	Breakout #1: Identifying tractable science questions	3 Groups
12:30 - 2:00	Group Picture and Lunch at the Athenaeum	
2:00 - 2:15	Brief discussion, charge to second breakout	Team leads
2:15 - 4:00	Breakout #2: Identifying tractable science questions #2	3 Groups
4:00 - 4:30	Break	
4:30 - 5:30	Breakout reports and discussion reviewing science questions	All
5:30 - 7:30	POSTER-ish SESSION and Informal food truck dinner at the Keck Center (dinner starts at 6:30 pm)	

**Wednesday, October 16, 2019 - Keck Center - Think Tank, Room 155**

<b>Time</b>	<b>Event</b>	<b>Speaker</b>
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Coffee and Refreshments at Keck Center	
9:00 - 9:50	Group Pulse - What have you learned so far?	All
9:50 - 10:20	Lightning Talks (3 x 10 min)	TBD
10:20 - 10:30	Charge to second break-out group	Team Leads
10:30 - 11:00	Break	
11:00 - 12:30	Breakout # 3: Approaches to questions	3-4 Groups
12:30 - 2:00	Lunch at the Athenaeum	
2:00 - 3:00	Breakout reports	All
3:00 - 3:30	Group discussion	All
3:30 - 4:00	Break, walk over to Gordon Bonan lecture	All
4:00 - 5:00	Modeling the Terrestrial Biosphere in the Earth System: Moving Beyond the Incorrect but Useful Paradigm	Gordon Bonan
6:00	OPTIONAL: No-Host Dinner in Pasadena (KISS pays for grad students and postdocs)	

## Thursday, October 17, 2019 - Keck Center - Think Tank, Room 155

Time	Event	Speaker
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Coffee and Refreshments at Keck Center	
9:00 - 9:20	Logistics and Team Lead Goals for the Day	Michele Judd and Team Leads
9:20 - 10:10	Group Discussion: Selecting the most promising question/approach combinations	Speaker
10:10 - 10:30	Lightning talks (2 x 10 min)	TBD by participants
10:30 - 11:00	Break	
11:00 - 12:30	Breakout Groups Meet	All
12:30 - 2:00	Lunch on your own	
2:00 - 2:30	FREE THINK TIME (individual, or self organizing small groups)	All
2:30 - 3:15	Report outs from breakout groups: regroup or continue?	Groups
3:15 - 3:30	Plenary Discussion, reorganization?	All
3:30 - 4:00	Break	
4:00 - 5:30	Break Out Sessions	Groups
5:30	Workshop Day #4 Ends	All
6:00	Dinner at the Athenaeum (with spouses and significant others)	

**Friday, October 18, 2019 - Keck Center - Think Tank, Room 155**

<b>Time</b>	<b>Event</b>	<b>Speaker</b>
8:00 - 8:30	Institute Opens - FREE THINK TIME	
8:30 - 9:00	Coffee and Refreshments at Keck Center	
9:00 - 9:15	Logistics and Team Lead Goals for the Day	Michele Judd and Team Leads
9:15 - 10:00	Breakout Groups Report Out	All
10:00 - 10:30	Open Discussion of Breakout Group Recommendations and Path Forward to the Second Workshop	All
10:30 - 11:00	Break	
11:00 - 12:15	Open Discussion of Breakout Group Recommendations and Path Forward to the Second Workshop - action items assigned, etc.	All
12:15 - 12:30	Workshop Closeout	Michele Judd
12:30	Formal Workshop Concludes	
12:30 - 5:00	INFORMAL WORKSHOP SMALL GROUP COLLABORATION TIME	
5:00	Institute Closes	