

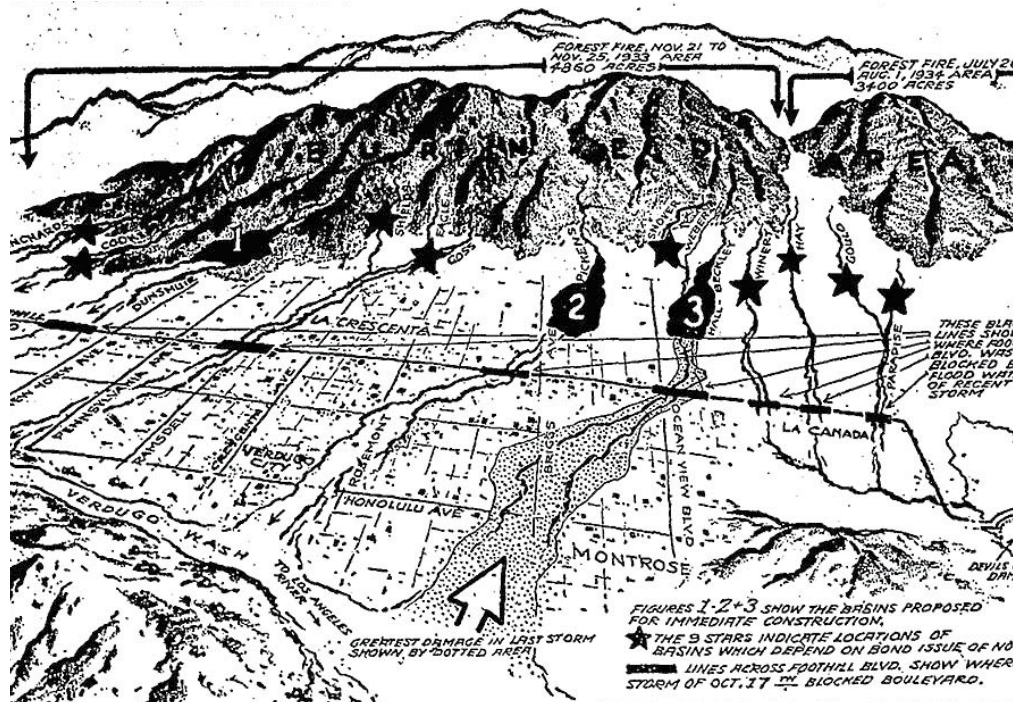
SAT-B02

Fire/Flood/Slide: The Other Impacts of Climate Change

Saturday, 20 October 2018

2:30-4:00, Room 108

1.5 PDH, LA CES/HSW, AICP, FL, GBCI, NY/HSW



Fires and landslides cost more lives and money each year than all other disasters combined. However, there are few resources dedicated to studying their impact on urban environments. This session delves into current thinking regarding these issues, discusses political & economic realities, and posits possible design solutions/ways forward.

Learning Objectives:

- Learn about Land Use policies affecting Development Patterns in Wildland Urban Interface Zones.
- Understand the effects of Climate Change on Debris Flows in relation to Fire / Flood Sequencing and Geological Processes.
- Learn about the Impacts of Building Codes and Vegetation Control Ordinances in High Fire Zones.
- Gain knowledge of Afforestation Strategies and their effectiveness in rehabilitating burn zones.

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Greg Kochanowski is Studio Director at Rios Clementi Hale Studios, a multi-disciplinary practice in Los Angeles. He seeks to combine the techniques and strategies of architecture, landscape-architecture, and urbanism to create unique, forward-thinking environments that build upon and enhance the specific qualities of a place. His research focuses on resilient landscapes within the WUI that create synergies between natural systems, infrastructure, and development.

Greg received the Young Architects Award from the Architectural League of New York, and has been awarded both locally and nationally. He is a licensed architect in the State of California, and currently teaches at Otis College of Art and Design and UCLA. Greg received his Masters in Architecture from UCLA.



Dr. Stephanie Pincetl is Professor-in-Residence at the UCLA Institute of Environment and Sustainability and Director of UCLA's California Center for Sustainable Communities. She conducts research on environmental policies and governance and analyzes how natural resources and energy are used to support human activities.

Dr. Pincetl has written extensively about land use in California, environmental justice, habitat conservation efforts, urban metabolism, water and energy policy. She has received funding from the National Science Foundation to conduct research on urban ecology and water management in Los Angeles, as well as from the California Energy Commission regarding energy use in communities in California.



Helen Kongsgaard's research situates landscape architecture within the emergent field of urban adaptation, examining the relevance of design to urbanism as cities respond to environmental and societal change. She is critic in landscape architecture at the Rhode Island School of Design and leads a collaborative design practice focused on the reclamation, adaptation and conservation of urban landscapes. She earned her MLA at Harvard University, where her research was supported by the David Rockefeller Center for Latin American Studies, the Center for Geographic Analysis and the Radcliffe Institute for Advanced Study.



Jeremy Lancaster is a Supervising Engineering Geologist and the program manager for the California Geological Survey's Regional Geologic Mapping Program. He has worked on alluvial fan flooding and debris flow hazards for over fifteen years, including participating on the California Alluvial Fan Task Force. Mr. Lancaster has authored several peer reviewed publications on the topic of debris flow hazards and recently worked with the USGS on evaluating the debris flow disaster that occurred after the Thomas Fire in Santa Barbara County, California, on January 9, 2018.

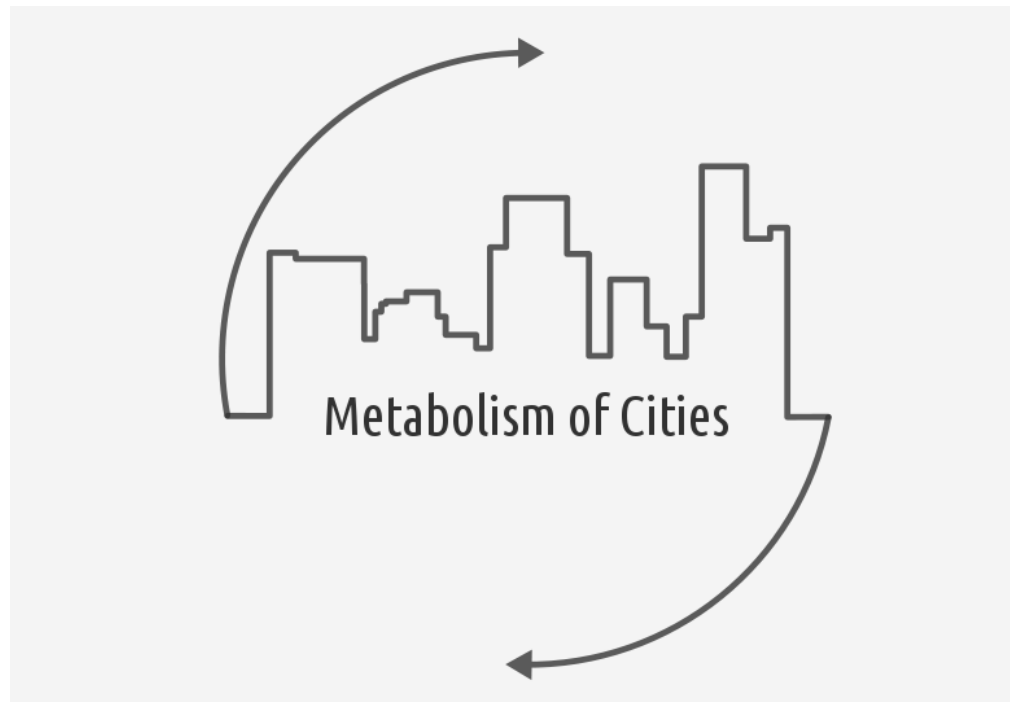
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**Political and Economic Frameworks of the
Wildland Urban Interface (WUI)**

Dr. Stephanie Pincetl (spincetl@ioes.ucla.edu)

Policy and Land Use

1. History of the relationship between urban and ex-urban expansion zones
2. Causes for the increasing incidence of wildfires that create conditions for mud and land slides
3. Development pressures and land use regulations that create conditions for increased fire hazards
4. Impacts of building codes and vegetation control ordinances

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**Urbanization of Alluvial Fans and the
Fire and Flood Sequence**

Jeremy Lancaster (jeremy.lancaster@conservation.ca.gov)

Visualization and Analysis of the Complex Dynamic of Landslides both digitally and through on the ground practice.

1. Urbanization of Alluvial fan landforms – when and where
2. Geologic processes, focusing on the fire and flood sequence
3. Debris flow hazards exposure on urbanized fans
4. Debris basins - significance and effectiveness
5. The January 9, 2018 Montecito Disaster – debris flow inundation areas, velocity, impact loads and damages

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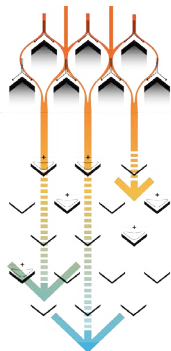
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INCUBATE

5-10 YEARS OF
EXTREME WEATHER

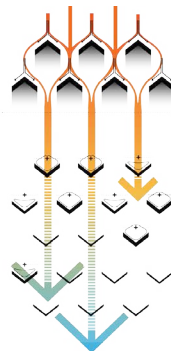
In the first 1-5 years, micro-basins begin to be built in the foothills above existing catch basins. These simple steel cages begin to catch and slow mud-flows. By filtering and separate debris particles in to rock, water and mud stress is relieved on the existing basins that are teetering on failure.



PHASE OUT

5-10 YEARS OF
EXTREME WEATHER

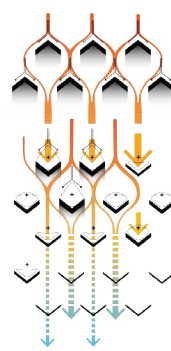
After 5 years of extreme weather, micro-basins create a capacity of 20,000 cubic yards, nearly doubling the capacity of the existing debris basin. This networked capacity allows the phasing out of the existing basin to build more micro-basins, strengthening the system.



HACKING

10-15 YEARS OF
EXTREME WEATHER

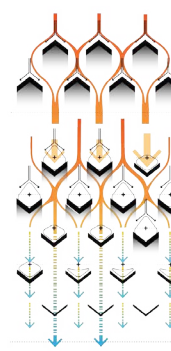
After 10 years, micro-basins have stabilized slide zones and have hacked existing water infrastructure. The naturalization of existing culverts connects the San Gabriel Foothills to the Los Angeles River. This connection is vital in moving water through the micro-basin filters to the natural watershed.



NETWORK

15-20 YEARS OF
EXTREME WEATHER

After 15 years, micro-basins have networked laterally along the foothills linking canyons together to create dynamic system of extreme weather mitigation. By fully connecting the mud-sheds and watersheds of a region, Los Angeles is a more stormproof city.



Present Potentials and Future Scenarios

Greg Kochanowski (greg@rchstudios.com)

Toward Resiliency: A Speculative Design Intervention in the San Gabriel Mountains, Los Angeles, CA

1. Magnitude: What is the role of design?
2. The Urban Problem of Debris: Basins and Spreading Fields
4. Micro Basins: From Object to Field
5. Realzing Olmstead: Reshaping the Public Realm through Material Reuse and Redistribution

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**Design for Urban Adaptation:
Conclusions and Synthesis**

Helen Kongsgaard (helen@kongsgaarden.com)

**Potentials for Research and Practice in the
Design Disciplines**

1. Quantifying Resilience
2. Temporal Dynamics and Points of Intervention
3. Design and the Post-Fire Landscape
(2017 Napa Valley Fires)
4. Implications for Design Practice and Theory for
Landscape Architecture

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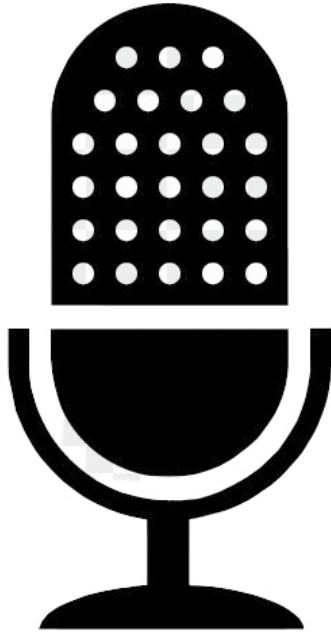
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Session Recording

This education session will be recorded and available online.

<http://www.asla.org/OnlineLearning.aspx>.

Individuals can view these for a small fee and PDHs can be earned by passing a self-study exam.

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