

# RESILIENCY

INTEGRATION

KNOWLEDGE



# SUSTAINABILITY



# Breaking Down RISK:

## *Resiliency, Integration, Sustainability and Knowledge* in a **Climate of Extremes**

**A Scientific Approach to Managing Alluvial Fan RISK  
A Joint Arid Regions Committee & FMA Symposium**



## **Breaking Down RISK:**

*Resiliency, Integration, Sustainability and Knowledge* in a **Climate of Extremes**

**A Scientific Approach to Managing Alluvial Fan RISK**  
**A Joint Arid Regions Committee & FMA Symposium**

### **Planning Committee:**

*Jeremy Lancaster, Julianne Miller, Jon Fuller, Jimmy O'Brien, Marty Teal, Jeanne Ruefer, Thomas Plummer*

**Speakers:** *Kyle House, Phil Pearthree, Robert Bezek.*



# Breaking Down RISK:

## *Resiliency, Integration, Sustainability and Knowledge* in a Climate of Extremes

**A Scientific Approach to Managing Alluvial Fan RISK  
A Joint Arid Regions Committee & FMA Symposium**

**10:00am - 10:10am**

**Introductory Remarks and description of Symposium Activities**

*FMA: Thomas Plummer P.E., CFM ARC: Marty Teal P.E., P.H., D.WRE*

**10:10am - 10:30am**

**Continuing the Legacy of Dr. Richard French's Work - Inaugural FMA Mentorship Award**

*Julianne Miller, Desert Research Institute*



# A Scientific Approach to Managing Alluvial Fan RISK

## A Joint Arid Regions Committee & FMA Symposium

10:30am - 12:30pm

**Basic Fan Science** - What is a fan, classification, fan flood processes, fan formation, similar landforms, soils, geographic variations, impacts of underlying geology, climate

*Kyle House, Ph.D - US Geological Survey.*

**Flooding on Fans** - Water & debris floods, avulsions, mapping of historical fan floods, surficial geomorphic mapping & hazard classification

*Phil Pearthree Ph.D - Arizona Geological Survey*

**Flooding and Debris Flows on California Fans** - California alluvial fans: regional differences, surficial geologic mapping and debris flow assessment

*Jeremy Lancaster CEG – California Geological Survey*

**Flooding and Debris Flows on Arizona/Nevada Fans**

*Kyle House, Ph.D - US Geological Survey.*



# A Scientific Approach to Managing Alluvial Fan RISK

## A Joint Arid Regions Committee & FMA Symposium

12:30pm - 1:30pm

Lunch Break - *On your own*

1:30pm - 2:00pm

### **Alluvial Fan Flooding and Semi - and Arid Land Hydrology**

- active vs inactive alluvial fan mapping, geomorphic surfaces and soil parameters, debris flows, wildfire affects, sheet flooding

*Julianne Miller, Desert Research Institute*

2:00pm - 2:45pm

**Current Research and Gaps** - surficial data, modeling tools, urban vs. natural systems, fan classification by process, flow attenuation

*Jon Fuller P.E., R.G., P.H., D.WRE, CFM, M.S - JE Fuller*

2:45-3:00

**Break**



# A Scientific Approach to Managing Alluvial Fan RISK

## A Joint Arid Regions Committee & FMA Symposium

3:00pm - 3:30pm

**Defining Risk on Alluvial Fans** - Characterizing fan flood hazards, vulnerability and risk. Integrating hazard mapping, damage assessment and managing risk.

*Jimmy S. O'Brien - Ph.D., P.E. - FLO-2D*

3:30pm - 5:20pm

**Panel: How Does the Science Presented Today Inform Our Risk Assessment?** - Question and Answer Discussion

*Facilitated by Robert Bezek, FEMA Region IX Panelists: Above Speakers and Participants*

5:20pm - 5:30pm

**Closing Remarks**

*Thomas Plummer P.E., CFM on behalf of FMA and Arid Regions Committee of ASFPM*

