The Fire Weather Research Workshop
San José State University
26 April 2019

Speaker Bios

Leila Carvalho (UC Santa Barbara)
Professor Leila M. V. Carvalho obtained her BSc, MSc and PhD degrees in Meteorology at the University of Sao Paulo (USP). She joined the Department of Geography, UC Santa Barbara (UCSB) in 2009. Prior to UCSB, she was Assistant Professor (tenured) at the Department of Atmospheric Sciences, USP, Brazil (1998-2008). Her broad research interests are in climate variability and change on multiple scales. More specifically, she is interested in mountain meteorology, fire weather conditions, extreme precipitation, tropical climates and monsoon systems.

Carrie Bowers (San Diego Gas and Electric)
Carrie received her MS degree in Meteorology from SJSU in the fall 2018. She is now working as a wildfire meteorologist at San Diego Gas and Electric. Her thesis just received the 2019 SJSU Thesis of the Year Award.

Warren Blier (NWS WFO Monterey)
Warren has his B.S. degree in Atmospheric Science from UC Davis in 1982 and his Ph.D. in Atmospheric Sciences from the University of Washington in 1989 (did his dissertation research at NCAR). He was an Assistant Professor in the Department of Atmospheric Sciences at UCLA from 1990-1997 prior to joining the National Weather Service in 1998 as the Science and Operations Officer (SOO) for the San Francisco Bay Area Forecast Office in Monterey.

Heather Kane (Southern California Edison)
Heather received her BS in Earth System Science at UC Irvine and is completing her MS degree in Meteorology at SJSU. She is currently employed at Southern California Edison as a meteorologist.

Richard Bagley (Pacific Gas and Electric)
Richard completed both his BS and MS degrees in Meteorology at SJSU. He is currently a contract meteorologist with PG&E and works as a forecaster and in the fuel moisture monitoring program.

Matthew Brewer (San José State University)
Matt received his BS in Atmospheric Science from SUNY Albany in 2018 and joined the lab las summer. He is also the labs UAS operator and is focusing his research on combining lidar, radar and UAS observations of fire plumes.

Ali Tohidi (One Concern, Inc.)
Dr. Ali Tohidi is a scientist at One Concern In., working on wildfire resiliency. Previously, he was a Postdoctoral Scholar in the Fire Protection Engineering Department at the University of Maryland, College Park. He received his M.Sc. from Sharif University of Technology, Tehran, Iran focusing on wind-induced gravity currents in aquatic canopy zones. He, then, moved to Clemson, South Carolina where he received his Ph.D. in Applied Fluid Dynamics. His Ph.D. research focus has been on wildfire spread mechanisms, firebrands' thermo-mechanical & aerodynamic properties, and fire plume dynamics. His corresponding research thrusts are Fluid and Fire Dynamics, Artificial Intelligence (AI), CFD, and Data-Driven Modeling."

Adam Kochanski (University of Utah)
Dr. Adam Kochanski is a research assistant professor working at the University of Utah Atmospheric Sciences Department. He received his M.Eng in Chemical Engineering and MBA from Technical University of Lodz (Poland) and Ph.D. in Atmospheric Sciences from the University of Nevada, Reno. His main research interests include fire-atmosphere interactions including air quality impacts of wildland fires. He is a modeler with extensive experience in running numerical simulations of fire, smoke, and regional climate on high-performance computing platforms. He is a co-developer of the coupled fire-atmosphere model WRF-SFIRE, the integrated fire and air quality system and WRF-SFIRE-CHEM, as well as the fire forecasting system WRFX. He is one the modeling leads for the Fire and Smoke Model Evaluation Experiment (FASMEE) and a member of the Rocky Mountain Center for Fire-Weather Intelligence (RMC) steering committee.

Natalie Wagenbrenner (US Forest Service)
Natalie is a Research Meteorologist at the Missoula Fire Sciences Laboratory. She's been with Forest Service research since 2004 and with the Fire Lab since 2012. She has a B.S. in Biological Engineering from the University of Missouri and M.S. and PhD degrees in Biological Systems Engineering/Atmospheric Sciences from Washington State University.

Sen Chiao (San José State University)
Dr. Sen Chiao is a professor in the Department of Meteorology and Climate Science at San Jose State University (SJSU). Prior to joining SJSU in 2011, he was in the Department of Marine and Environmental Systems at Florida Institute of Technology. Currently Dr. Chiao is serving as the director of the NASA MIRO Center for Applied Atmospheric Research and Education. He is also the PI for the High Performance Computing (HPC) facility at SJSU.

Edward Hyer (Naval Research Laboratory)
Edward Hyer is a Physical Scientist at the Naval Research Laboratory in Monterey, California. At NRL, Dr. Hyer works on a range of projects improving various components of the Navy's aerosol forecasting capability, as well as building capabilities and advancing the science of air quality modeling for the broader community. His primary projects have been improvements to the satellite-based smoke emissions estimation model FLAMBE, and assimilation of over-land optical depth data to improve the aerosol model analysis and forecast. Dr. Hyer works on a broad range of observations of fire and smoke, including detailed examinations of the information content of fire and aerosol detections from polar and geostationary satellite sensors.

Nick McCarthy (University of Queensland)
Nick is a Wildfire Data Scientist at One Concern and PhD Candidate at The University of Queensland Atmospheric Observations Research Group. His PhD research saw multiple deployments to wildfires around Australia and in the USA to quantify the large scale interactions of wildfire and atmosphere with various remote sensing tools, including mobile X-band radar. This involved the quantification of fire behavior and spread, thunderstorm interaction and growth and related processes fire-modification of weather by use of extensive remote sensing, field mapping and integration into incident management teams. The work has been adopted by fire management agencies in Australia and was awarded the American Meteorological Society Spiros G. Geotis prize for Radar in 2017.

Craig Clements (San José State University)
Craig is an Associate Professor of Meteorology at SJSU and Director of the Fire Weather Research Laboratory. He leads research on fire weather, extreme fire behavior, fire-atmosphere interactions, and conducting wildland fire field experiments. Dr. Clements has over 25 years of experience in meteorological field observations and teaches courses in Fire Weather, Wildfire Science, Mountain Meteorology, Climate Change, and Meteorological Instrumentation. He received his PhD in Geophysics from the University of Houston, his MS in Meteorology from the University of Utah, and a BS degree in Geography from the University of Nevada, Reno. In 2012, Dr. Clements received the National Science Foundation's CAREER Award for his research on wildfire dynamics and fire weather.

<u>Panel Participants</u>

Tom Rolinski (Southern California Edison)
Tom is currently the Fire Scientist for Southern California Edison (SCE) one of the nation's largest utilities. In this role Tom is responsible for bringing together the latest science and technology to help build a comprehensive fire program for reducing wildfire risk across SCE's service territory. Prior to joining Southern California Edison, Mr. Rolinski worked for the federal government for nearly 27 years, spending most of that time in fire weather. During the last 15 years, he became a recognized leader in California's fire program. His pioneering approach to fire meteorology and his collaborative spirit have led the way in developing new tools to assess wildfire threat across the state.

Robyn Heffernan (NWS National Fire Weather Program)
Robyn Heffernan is the National Weather Service Fire Weather Science and Dissemination Meteorologist located at the National Interagency Fire Center in Boise, ID. Since early 2011, Robyn has been responsible for leading several technological and science based efforts for the NWS fire weather program, as well as integrating these efforts into fire weather operations. In addition, she manages the dissemination of fire weather information to

key customers and partners and is responsible for the training of fire weather forecasters, including IMETs. Robyn serves on several national committees, subcommittees and teams including the current chair position on the National Wildfire Coordinating Group (NWCG) Fire Environment Committee (FENC).

Scott Strenfel (Pacific Gas & Electric)
Scott received his BS and MS degrees in Meteorology at SJSU and was one of the first graduates from the SJSU fire weather research lab. After SJSU, he joined Sonoma Technology where he studied the efficacy of satellite fire detection systems and particulate emissions from fires. He joined PG&E in 2011 and is currently supervisor of the meteorology operations and analytics team.

Chris Waters (Cal Fire)
Chris has been in the Fire Service for 20 years and currently the Division Chief assigned to Delta Conservation Camp in Suisun City, CA where he is responsible for 6 Type I CAL FIRE hand crews and CAL FIRE Suppression Operations in Solano, Yolo, and Colusa Counties. He has worked in fire weather, fire danger, fire behavior; and is a qualified Fire Behavior Analyst. He is also assigned to CAL FIRE Incident Management Team 3 as an Operations Section Chief.