CSSG Advisors







Rakesh Goel, Professor of Civil Engineering at Cal Poly, San Luis Obispo, specializes in earthquake analysis and design of structures. His work has been adapted by seismic codes and guidelines in the US, such as ASCE 7-02 and FEMA-356. He has authored/co-authored more than one-hundred technical publications and has been awarded the Huber Research Prize and Norman Medal by the American Society of Civil Engineers. He also served as the seismic consultant on the recently updated California State Multi-Hazard Mitigation Plan.

Chris Dicus, Ph.D., Associate Professor, Natural Resources Department Chris Dicus serves on the Board of Directors for the Association for Fire Ecology and is current President of the Los Padres Chapter of the Society of American Foresters. His research focuses on fire in the wildland-urban interface and how forestry practices affect fire behavior. He also serves as a fire behavior specialist on major wildland fires, and has recent international experience in Australia.

Robb Moss, Ph.D., P.E., Assistant. Professor, Civil & Environmental Engineering Department

Robb Moss is assistant professor with the Department of Civil and Environmental Engineering, having expertise in geotechnical earthquake engineering, engineering seismology, and earthquake engineering risk and reliability. A member of the NSF-sponsored team that investigated the levee failures in New Orleans after Hurricane Katrina, he has participated in earthquake reconnaissance teams traveling to Alaska, Turkey, Mexico, and around California. His international consulting experience includes seismic geotechnics of onshore and offshore projects. He earned a Ph.D. from UC Berkeley.



James P. Mwangi, Ph.D., P.E., Assistant Professor, Architectural Engineering Department.

James was born in Kenya, East Africa and worked for the Kenya government prior to proceeding to Nigeria for graduate studies. James taught at the University of Nairobi for three years. He then went to University of California, Davis for doctoral studies. Afterwards, he worked for Buehler & Buehler Structural Engineers, Sacramento, California for nine years after which he joined the faculty at Cal Poly. Immediately following the 6.5 magnitude San Simeon earthquake of December 2003, James participated in the Safety Assessment Program (SAP) of the quake damaged building in downtown Paso Robles, California.



Paula A. Schulz, President, Natural Hazards Mitigation

Paula Schulz is president of Natural Hazards Mitigation, a disaster mitigation and recovery planning firm. Ms. Schulz served as inter-governmental liaison consultant during preparation of the 2007 State of California Multi-Hazard Mitigation Plan, undertaking agency coordination and regulatory compliance reviews. She is former State Hazard Mitigation Officer and Chief, Hazard Mitigation Section, for the California Governor's Office of Emergency Services.



Dan Turner, Executive Director, Urban Forest Ecosystem Institute, Cal Poly Dan Turner is former Fire Chief of CAL FIRE for the Central Coast Area, with 37 years of experience in disaster planning, response, recovery, and mitigation, having held a command responsibility in 12 federally declared disasters including the Oakland Hills Fire, Firestorm of 2003, Sacramento River Delta Flooding, and Loma Prieta, Northridge, and San Simeon Earthquakes. He holds a BS in Forestry from Cal Poly.

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Community Safety & Sustainability

The mission of the Community Safety and Sustainability Group (CSSG) at California Polytechnic State University, San Luis Obispo (Cal Poly) is to promote disaster-resilient community development through applied research and policy guidance. The CSSG has the experience and capacity to address hazard mitigation and disaster recovery projects at the local, state, and international scales. The group is housed in the Planning, Design and Construction Institute (PDCI), College of Architecture and Environmental Design (CAED), and draws faculty from all over the Cal Poly campus.

CSSG Co-Directors



Kenneth C. Topping, FAICP

Ken Topping is Project Director of the State Hazard Mitigation Plan Revision Project, a Lecturer with the City and Regional Planning Department at Cal Poly, president of Topping Associates International, and former director of planning for the City of Los Angeles (1986-1990). Recognized internationally for work integrating city planning with disaster management, he has advised on projects in Australia, China, Korea, Libya, Nepal, the Philippines, Taiwan, and Japan, his country of birth. From 2002-2004, he was visiting professor with the Disaster Prevention Research Institute, Kyoto University. Co-principal investigator on NSF-sponsored research comparing redevelopment after the 1995 Hanshin-Awaji Earthquake and 1994 Northridge Earthquake, he is co-author of "Planning for Post-Disaster Recovery and Reconstruction," and an advisor to New Orleans on post-Katrina recovery.



William J. Siembieda, Ph.D., AICP





Michael R. Boswell, Ph.D., AICP

Michael Boswell is an Associate Professor of City and Regional Planning Department at Cal Poly. He has a Master of Science (M.S.P.) and Ph.D. in Urban & Regional Planning from Florida State University. He has published on topics such as hurricane disaster mitigation, disaster loss estimation, adaptive management and governance, local government planning and decision-making, and sustainable development. He recently completed a study on the implementation of local hazard mitigation planning under DMA 2000. Dr. Boswell worked as a professional planner in state and local government in Florida. His public service leadership includes a five-year term on the City of San Luis Obispo Planning Commission, including one year as Chair.

The City and Regional Planning Department (CRP) is California's premier program for the education of professional planners. Nationally ranked and recipient of more American Planning Association academic and student awards than any other program of its kind in the US, CRP is one of five departments in California's most comprehensive College of Architecture and Environmental Design (CAED). CRP offers a BSCRP degree, an MCRP degree, and a joint MS in Transportation Engineering/Planning.

City & Regional Planning Department California Polytechnic State University San Luis Obispo, CA 93407-0283 Phone: (805) 756-1315 E-mail: crp-cssg@calpoly.edu Web: www.planning.calpoly.edu



INTERDISCIPLINARY RESEARCH

The CSSG can conduct all types of interdisciplinary research related to mitigation and disaster planning. For example, the CSSG assists Cal EMA in formulating the 2010 State of California Multi-Hazard Mitigation Plan. Our team has the capacity to conduct mitigation, recovery, and sustainability research, and can partner in integrating local hazard mitigation plans with general plan safety elements. The following describes our experience. We welcome inquiries regarding potential new projects.

THE 2007 CALIFORNIA STATE MULTI-HAZARD MITIGATION PLAN

With CSSG's help, California has become a leader in planning for community safety and sustainability through mitigation of natural and humancaused hazards. Through a cooperative contract, a faculty-student team helped the Governor's Office of Emergency Services – now the California Emergency Management Agency (Cal EMA) – prepare the 2007 State of California Multi-Hazard Mitigation Plan.

FEMA has designated the 2007 Plan as an Enhanced State Mitigation Plan, assuring California eligibility for larger amounts of mitigation grant funding than under the 2004 Standard Plan, adding tens of millions of dollars following the 2008 wildfires. Only nine state plans have received this designation.

The 2007 Plan assesses hazards, risks, vulnerabilities, and potential losses, and promotes effective mitigation strategies, addressing emerging threats such as climate change, tsunamis, and potential Bay Delta Area levee failure. A statewide risk analysis using GIS modeling describes the distribution of primary hazards (earthquakes, wildfires, and floods).

CSSG Projects





Innovations of the 2007 plan include: (1) an assessment of FEMA-approved Local Hazard Mitigation Plans (LHMPs) prepared by over 500 cities, counties, and special districts in California, and (2) the State Mitigation Assessment Response Team (SMART) system, in which field teams assess post-disaster effectiveness of completed mitigation projects.

CURRICULUM ADVANCEMENT: SUSTAINABLE ENVIRONMENTS

CSSG has promoted courses linking disaster research with environmental design. Two courses are: UNIV 339 Disaster Resistant Sustainable Communities, covering prevalent hazards and promoting application of disaster risk reduction strategies to create safer, more resilient cities; and, CRP 458 Local Hazard Mitigation Planning and Design, examining federal/state mitigation and recovery systems, applying pre- and post-disaster solutions to community design. These are included in the new Disaster Management/Homeland Security program developed by University Extension.

INTERNATIONAL INVOLVEMENT

CSSG co-directors and faculty advisors have extensive international backgrounds and contacts, leading to the Cal Poly sponsored International Symposium on Urban Disaster Reduction and Regeneration held in November 2005, featuring presentations by prominent researchers from Costa Rica, Japan, the Philippines, Taiwan, and Venezuela and the United States. The symposium identified challenges and opportunities in sustainable development and disaster management education.