Review of the Tsunami Warning and Forecast System and Overview of the Nation's Tsunami Preparedness

Committee

John A. Orcutt

Chair

John A. Orcutt (Chair) is a distinguished professor of geophysics at the University of California, San Diego. Dr. Orcutt earned a B.S. in mathematics and physics from the U.S. Naval Academy, an M.Sc. in physical chemistry as a Fulbright Scholar from the University of Liverpool, and a Ph.D. in geophysics from the University of California, San Diego, Scripps Institution of Oceanography. His research focuses on cyberinfrastructure and geophysical applications; geophysical studies of ocean seismo-acoustics including rough seafloor scattering, acoustic-elastic interactions, and the use of small arrays; structure of the elastic earth using seismology, synthetic seismograms, and geophysical inverse theory; internal structure of ocean spreading centers; genesis of the oceanic lithosphere; and nuclear test-ban verification methods. Dr. Orcutt is a past president of the American Geophysical Union and a Secretary of the Navy/Chief of Naval Operations Oceanography Chair. He is a member of the American Philosophical Society and served briefly as Interim President of the Ocean Drilling Program in 2000. Dr. Orcutt is a former member of the Ocean Studies Board and has served on numerous NRC committees, including the OSB’s Committee on Exploration of the Seas.

Martha R. Grabowski

Vice Chair

Martha A. Grabowski (Vice-chair) is a professor and the director of the Information Systems program at Le Moyne College and Research Professor of Decision Sciences and Engineering Systems at Rensselaer Polytechnic Institute. Dr. Grabowski earned a MBA, MS in Engineering and a Ph.D. in management and information systems from Rensselaer Polytechnic Institute and a B.S. from the US Merchant Marine Academy. A licensed former merchant officer and retired LCDR in the US Naval Reserve. Her research focuses the impact of technology in safety-critical systems, risk analysis and risk mitigation in large-scale systems, and the role of human and organizational error in high consequence settings. Dr. Grabowski is currently chair of the NRC’s Marine Board and has served on numerous NRC committees, including chairing the Committee for Evaluating Shipboard Display of Automated Identification Systems.

Brian F. Atwater

Member

Brian Atwater is a geologist employed by the U.S. Geological Survey and based at the University of Washington. Dr. Atwater earned a Ph.D. in geology from the University of Delaware. Having used geology as a long-term advisory of earthquakes and tsunamis in the Cascadia region of western North America, he is now trying to make this strategy helpful to developing countries. He also seeks to mentor scientists in assessing tsunami hazards on the centennial and millennial timescales of great-earthquake recurrence. These overeseas efforts now include a UNESCO project at the Makran subduction zone and a fulbright in Indonesia. Dr. Atwater is exploring earthquake geology in the British Virgin Islands to help guide the Nuclear Regulatory Commission on tsunami hazards of the U.S. Atlantic coast. Dr. Atwater is a member of the National Academy of Sciences.

Ann Bostrom

Member

Ann Bostrom is associate professor and associate dean for research in the Daniel J. Evans School of Public Affairs at the University of Washington. Her research interests include how people understand and make decisions about risks, and how to improve risk communications to support decision making. Bostrom served on the faculty at the Georgia Institute of Technology (Georgia Tech) from 1992-2007, where she most recently was Associate Dean for Research in the Ivan Allen College of Liberal Arts and Professor in the School of Public Policy. From 1999-2001 Bostrom worked as director of the Decision Risk and Management Science Program at the National Science Foundation. Among her book publications are the edited volume Risk Assessment, Management and Decision Support, and co-authorship of Risk Communication: a Mental Models Approach. Bostrom is currently risk communication area editor for Risk Analysis, an associate editor for the Journal of Risk Research, and risk communication editor for Human and Ecological Risk Assessment. Bostrom received the 1997 Chauncey Starr award for a young risk analyst form the Society for Risk Analysis for her work on mental models of hazardous processes, and was named a fellow of the Society in 2007. She is a member of the U.S. EPA Science Advisory Board Committee on Valuing the Protection of Ecosystems and Ecoservices, and has served on several National Academies committees.

George Crawford

Member

George Crawford is the earthquake program manager for the Washington State Emergency Management Division. He is responsible for managing the seismic safety efforts in the state through the earthquake, tsunami, and volcano programs. He co-developed the All-Hazard Alert Broadcasting Radio, which is now being deployed in the state, nation, and internationally. Mr. Crawford has worked extensively with coastal Native American Tribes to connect scientific evidence and tribal oral history, which has led to the development of the video “Run to High Ground.” He has also concentrated his efforts in partnerships with the U.S. Geological Survey, the U.S. Forest Service, and local county emergency managers in developing mitigation, preparedness, and planning strategies for the many communities that surround the state’s five volcanoes. He staffs the Seismic Safety Committee, which is charged with providing policy recommendations to the Washington State Emergency Management Council on seismic safety issues related to hazards presented by earthquakes, volcanoes, and tsunamis. He is the chair of the State/Local Tsunami Work Group, which is developing approaches for tsunami preparedness and mitigation efforts in tsunami hazard zones, and a Washington State representative to the National Tsunami Hazard Mitigation Program.

Richard K. Eisner

Member

Richard Eisner is a government liaison in the BayPrep Division of the Fritz Institute. Prior to joining the Fritz Institute, he worked for 23 years as the coastal regional administrator for the California Governor’s Office of Emergency Services, where he was responsible for the State’s disaster response in the San Francisco Bay Region and north coast counties. He also served as manager for the California Integrated Seismic Network’s Tsunami and Earthquake Programs. Prior to that appointment, Mr. Eisner served as the founding director of the Bay Area Regional Earthquake Preparedness Project, providing planning and technical assistance to promote and support earthquake preparedness and hazard mitigation by local governments and businesses throughout the San Francisco Bay Region. In 2007, he received the Lifetime Achievement Award by the Western States Seismic Policy Council. Mr. Eisner recently served on the NRC Panel on Solid-Earth Hazards, Resources, and Dynamics.

Jian Lin

Member

Jian Lin is a senior scientist at the Woods Hole Oceanographic Institution. He earned his Ph.D. in geophysics from Brown University. His research focuses on Earth's lithosphere processes that lead to catastrophic events of earthquakes, volcanism, and tsunamis. He has conducted extensive research on stress interaction and triggering of earthquakes in California and elsewhere in the world. He has led and participated in numerous oceanographic expeditions to the Pacific, Atlantic, and Indian Oceans to investigate mid-ocean ridge volcanism, deep-sea hydrothermal vents, underwater earthquakes, and tsunamis. He is also currently focusing on two areas of tsunami research: paleo-seismological dating of tsunamis and mega-earthquakes and modeling tsunami sources in the Atlantic.

Douglas. S. Luther

Member

Hugh B. Milburn

Member

Hugh B. Milburn is retired from the National Oceanic and Atmospheric Administration and is now an independent consultant. Mr. Milburn worked at NOAA’s Pacific Marine Environmental Laboratory for 22 years, last as a supervisory ocean engineer. He earned an MSE in ocean engineering from the University of Washington. His interests include the development of moored systems to serve research and operational requirements of global scale measurements and observation with a focus on materials, sensors, data telemetry, and deployment methodologies. Mr. Milburn is also involved in the development of seafloor observatories utilizing advanced communications for data acquisition and desktop control. He was part of the team that developed the NOAA Deep-Ocean Assessment and Reporting of Tsunami (DART) system. In 2005, he received the Department of Commerce’s Gold Medal for research and development leading to the creation of a tsunami forecasting capability.

Dennis S. Mileti

Member

Dennis Mileti is a professor emeritus in the Department of Sociology and a research scientist in the Natural Hazards Center at the University of Colorado. Dr. Mileti earned a Ph.D. in sociology from the University of Colorado. His research focuses on environmental sociology, complex organizations, research methods, and collective behavior. In 2007, he earned the Outstanding Civilian Service Medal from the U.S. Department of the Army. Dr. Mileti has served on previous NRC committees, including the Committee on Natural Disasters.

Emile A. Okal

Member

Costas E. Synolakis

Member

Costas Synolakis is a professor of civil, environmental, aerospace, and mechanical engineering and the director of the Tsunami Research Center at the University of Southern California. Dr. Synolakis earned a Ph.D. in civil engineering from the California Institute of Technology. His research focuses on tsunami run up, computer tomography, vibration, isolation of art objects, and earthquake hazards reduction.

Nathan J. Wood

Member

Nathan Wood is a research geographer at the U.S. Geological Survey. Dr. Wood earned a Ph.D. in geography from Oregon State University. His research focuses on characterizing and communicating societal vulnerability to natural hazards, with emphasis on tsunamis in the Pacific Northwest and Hawaii. He uses GIS software, collaborative community-based processes, and perception surveys to better understand how communities are vulnerable to tsunamis.

Harry Yeh

Member

Harry Yeh is the Miles Lowell and Margaret Watt Edwards Distinguished Chair in Engineering and a professor of coastal and ocean engineering at Oregon State University. Dr. Yeh earned a Ph.D. in civil engineering from the University of California, Berkeley. His research focuses on environmental fluid mechanics, ocean and coastal wave phenomena, flow-structure interactions, tsunami induced scour, wind turbulence, structure control (tuned liquid dampers), physical processes in lakes and oceans, and tsunami hazard mitigation.