

Biographical Sketches

Panel Session III

Mel Drumm

Mel Drumm is the Executive Director of the Ann Arbor Hands-On Museum. Appointed to the post in October 2004, Mr. Drumm leads a creative team of museum professionals charged with providing unique informal educational and exhibit experiences to children and families in Washtenaw County, Southeastern Michigan and across the country. During Mr. Drumm's tenure, the Museum has designed and developed a new light and optics exhibit gallery, an interactive sculptural exhibit at the Ann Arbor District Library, created an exhibit gallery for the Michigan Information and Technology Center in Ann Arbor and built an unique hydrogen fuel cell exhibit as part of the Museum's developing energy gallery. Mr. Drumm has over thirty years of museum experience including seven years as President of the New Detroit Science Center where his team redesigned and renewed a 40,000 square foot science center into a contemporary, relevant and respected 115,000 square foot science center. Mr. Drumm has enjoyed a long association with the Cranbrook Institute of Science where he held a series of technology and education related positions including Physics Coordinator, Assistant Curator of Education and laser systems designer. A recent collaboration with Cranbrook included the design of an emerging technologies exhibit. He is a recipient of multiple museum and industrial theater awards. In 2001, the Michigan Museums Association awarded Mr. Drumm an award for the rebirth of the Detroit Science Center. In 2003, the Metro Detroit Science Teachers Association awarded Mr. Drumm their "Friend of Science" award for creating the New Detroit Science Center as an educational tool for regional schools. He also is the recipient of an award from the International Laser Display Association for an international traveling exhibit for ACG (Automotive Components Group of General Motors), now Delphi. Mr. Drumm serves on the Board of the Michigan Information Technology Center, sits on the Advisory Committee of the Macomb Cultural Center and is the co-chair and co-founder of the Washtenaw County Cultural Leaders Forum. He has served on the Boards of the Ann Arbor Clean Energy Coalition, the University Cultural Center Association, the Michigan Space and Science Center, the Science Fair of Metropolitan Detroit, and the International Science and Engineering Fair 2000. He also served on the Academic Advisory Committee of the Holocaust Memorial Center and the Advisory Board for the Space, Engineering, Mathematics, and Aerospace Academy of Wayne State University.

Kate Duckworth

Kate is the Assistant Director for the Exploratorium's Center for Learning and Teaching, and the former Program Manager for the Center for Informal Learning and Schools, a NSF-funded CLT that supports research and develops leadership in the study of informal science learning and institutions, and their relationships to schools. As part of the NISE Network, Duckworth oversees the design of the Annual Meeting as part of her ongoing interest in successful strategies for large-scale diverse collaborations, particularly around knowledge generation and impact. She has worked in the museum field since 1994; prior work included time as an animal rescue and rehabilitation specialist, a theatrical scenic artist, and several years in a CPA firm.

Eric Marshall

Eric Marshall is Director of the global science museum website TryScience.org and the project to support partnerships between science museums and scientists & engineers, VolITS (Volunteers TryScience) at the New York Hall of Science. His expertise lies in the study of interfaces. While pursuing his PhD in Applied Physics at UC San Diego, he received the MRS

Graduate Student Award. The bulk of his publications deal with correlation of micro- and nano-structure with electrical properties of intermetallic contacts and epitaxial thin films on compound semiconductors. Recently, he has shifted his attention towards the interface between informal science educators and scientists & engineers. After completing graduate work in Education at Columbia Teachers College, starting an education research group within the Physical Science Department of the IBM Research TJ Watson Research Laboratory, and serving as Curator of the Creative World at the California Science Center, he now directs TryScience.org and VoITS (Volunteers TryScience) at the New York Hall of Science. His goal is to support effective relationships between science & engineering education outreach efforts (in professional associations, universities, corporations, and government labs) and informal science education institutions (science centers/museums).

Marco Molinaro

Dr. Marco Molinaro has a dual B.S. in Biophysics and Chemistry from Wayne State University in Detroit, Michigan and a Ph.D. in biophysical chemistry from the University of California, Berkeley. Ever since the early 90's, he has been strongly involved with education at all levels and technology. From 1994 through 1999, Dr. Molinaro was involved in various national efforts (ModularChem Consortium and ChemConnections) to reform the undergraduate curriculum in chemistry utilizing problem-based approaches and technology. During that period, he spent a year as a research fellow at the University of Wisconsin, Madison, to research faculty use of technology in instruction. From 1998 through 2003, he was the founder and director of the ScienceVIEW educational multimedia design, research, and development group at the Lawrence Hall of Science (LHS) at UC Berkeley, specializing in creating multimedia materials aimed at teaching and learning science in formal and informal settings. Between his earlier chemistry work and LHS, he has developed more than 15 major CD-ROM and Internet-based products for teachers, students and families. During his tenure as ScienceVIEW director, he also led various research efforts related to educational technology effectiveness including: learning-optimized use of molecular simulations in the classroom, understanding the potential of computer-based data collection for formative assessment in formal and informal learning environments, and developing usability guidelines for creating age appropriate interactive activities on the Internet. He is currently focusing his attention to communicating the latest research results, and the science behind them, to students from 5 to 100 in both formal and informal settings. At UC Davis he is the Chief Education Officer for the Center for Biophotonics where he is in charge of coordinating all educational activities of the Center including those aimed at K-12, higher education, and the public. One of his newest projects is entitled Biophotonicsworld.org – a biophotonics knowledge base for education, research and industry. At LHS he recently completed his work as Principal Investigator for the Windows on Research: Focus on Nanotechnology public exhibit project.

Dr. Molinaro is a member of the graduate group in the School of Education at UC Davis. His current and on-going research interests involve: social interactions around technology use in informal and formal science settings, methods for facilitating public understanding of research, integrating cutting edge scientific research and researchers with the educational enterprise, and evaluation methods utilizing technology (including back-end and formative tools).

Gary Woodard

Gary Woodard is Associate Director of the NSF Science and Technology Center for Sustainability of semi-Arid Hydrologic and Riparian Areas (SAHRA), headquartered in the Department of Hydrology and Water Resources, The University of Arizona. His responsibilities include: knowledge transfer, which involves managing and directing technology transfer, public outreach, and professional development; international activities; and selected educational

activities,, including informal experiential water education. He also conducts research on municipal water demand and conservation issues that affect semi-arid and arid regions. Several of SAHRA's knowledge transfer efforts make use of new computer and communications technologies to raise the hydrologic literacy of K-12 students, water professionals, policy makers, and the general public. These include many Web-based services, such as a Global Water News Watch and UNESCO-supported News Tracker service. Woodard also lead efforts to develop touch-screen kiosks, displays, Web sites and DVDs for venues such as Sabino Canyon, Kartchner Caverns, and the Phoenix Zoo. More traditional outreach and education venues include the trade magazine, Southwest Hydrology, and a series of media briefings on research and forecasts on the ongoing drought. Current projects include developing inexpensive instrument technology in support of recruiting volunteer citizen scientists to gather widely distributed water resource data.