

Biographies

STEM Partnership-Building Forum June 28, 2006

Michael Aldaco

Assistant Vice President

University of California

For 31 years, Michael Aldaco has worked in California higher education institutions to increase opportunities for secondary students from all economic, racial and ethnic backgrounds. Since 2002 he has served as Assistant Vice President for Student Academic Preparation in the UC system-wide office in Oakland. In this capacity, Mr. Aldaco oversees California efforts to heighten the academic preparation of secondary school and community college students such that they are highly motivated and prepared to pursue university study. Currently, Mr. Aldaco serves as the Principal Investigator for a number of programmatic efforts. In that capacity he currently oversees Early Academic Outreach, MESA, Puente, California GEAR UP, and the Rural Student Education Program and the College Going Initiative, among others.

Mr. Aldaco is a former fellow of the Texaco Management Institute, the National Assembly of Hispanic Higher Education Associations and the National Center for Education Statistics. He was a board member of a think tank on multicultural admissions issues for the National Association of College Admissions Counselors. He is also the founding President of MESA USA, an association of MESA program directors from all of the states that offer MESA programs.

Mr. Aldaco holds a masters degree in education from CSU Bakersfield and a bachelors degree in sociology from UC Santa Barbara. He is a past president of the UC Santa Barbara Alumni Association.

Paula Arvedson, PhD

President, California Space Education & Workforce Institute

Dr. Paula Arvedson is President of the California Space Education & Workforce Institute, a nonprofit organization established to foster California space/science literacy, enhance California space-related education K-University, and ensure California an appropriate 21st Century space/technical workforce. Dr. Arvedson has worked with the Satellite & Education Conference for over 14 years, coordinating it for the last three years at Cal State L.A. She currently serves as President of the Satellite Educators' Association. She teaches courses on methods of teaching and on teaching critical thinking in the Charter College of Education. Dr. Arvedson has taught at Cal State L.A. for 17 years. Her doctorate is on mathematics development in young children. Her connections with high schools are enhanced by her husband, who teaches chemistry and is the Lead for the Satellite Communications Academy (Science Academy) at La Puente High School.

Joan S. Bissell, EdD

Associate Director, Teacher Education and Public School Programs
California State University

Dr. Joan S. Bissell is Associate Director of Teacher Education and Public School Programs for the California State University (CSU) system. She has staff responsibilities related to the CSU Math and Science Teacher Initiative, the Teacher Recruitment Projects, and evaluation of Early Assessment Program teacher professional development programs. Prior to her work at the Chancellor's Office of the CSU, Dr. Bissell was Dean of the College of Education and Integrative Studies at California State Polytechnic University, Pomona.

Herbert Brunkhorst

Chair, Dept. of Science, Mathematics and Technology Education
College of Education, CSU San Bernardino

Herbert Brunkhorst is Professor of Science Education and Biology at California State University, San Bernardino, and is currently Chair of the Department of Science, Mathematics, and Technology Education in the College of Education. He carries a joint appointment in the Department of Biology in the College of Natural Sciences. Dr. Brunkhorst earned a Ph.D. with majors in science education and plant physiology at The University of Iowa. He has been a science educator for the past 38 years; 17 years at the pre-college level and the past 21 years at the university level. Dr. Brunkhorst was co-principle investigator of the NSF funded California State University Science Teaching Development Project, a university system-wide collaboration to improve science teacher preparation. He served as a senior faculty researcher on a U.S. Department of Education and Office of Educational Research and Improvement project called the Salish Consortium, a multidimensional collaborative research effort for improving science and mathematics teacher education. Dr. Brunkhorst was selected as a California State University Chancellor's Teacher Preparation Scholar as a member of the teacher preparation curriculum development team. He is a past president of the Association for Science Teacher Education (formerly the Association for the Education of Teachers of Science), Director of Pre-service Teacher Preparation for the National Science Teachers Association, a Fellow of the American Association for the Advancement of Science, and a lifetime National Associate of the National Academies (Science, Engineering and Medicine).

Victoria Conner

Principal, Strategic Vitality, LLC

Victoria Conner is Principal of Strategic Vitality, LLC, a firm specializing in innovative strategy, communications and "creative consensus-building". Prior to founding Strategic Vitality, LLC, Ms. Conner served as Vice President/Chief Programs Officer and, for the California Space Authority (CSA). In this role, she served as Project Lead for the nation's first-ever statewide space strategic plan (1998) and for the 2004 CSA-facilitated California Space Enterprise Strategic Plan. Ms. Conner was Program Support Lead/Governor's Office Liaison for the first-ever Governor's Aerospace Summit (1999) and Forum Coordinator/Co-Developer of two statewide CSA/NASA space innovation

forums (1999/2000). She authored and served as Project Lead for CSA's \$500K+ Workforce Investment Act grant (2002-3) and co-designed CSA's statewide teachers' conference "Space in the Classroom". Her CSA responsibilities have also included development of numerous statewide collaboratives: Business Development (2004), Retention and Growth; Science, Research and Technology Development (1999); Space-Related Economic Development (1999) and Education/Workforce Development (1999/2004-5). Ms. Conner was the Project Lead/Author of the \$15M WIRED grant award received by the California Space Authority/California Innovation Corridor February, 2006 and is currently a WIRED partner engaged in implementation. She is a former elementary and middle school teacher, and a member of and past presenter for the Los Angeles Chapter of the Association for Strategic Planning. Ms. Conner has a BA in English from California State University, Fullerton.

Emily Chi

Embedded Software Engineer, Northrop Grumman Space Technology

Emily Chi is an Embedded Software Engineer at Northrop Grumman Space Technology (NGST). She graduated from MIT in 2004 with a Bachelors in Electrical Engineering and Computer Science, and has been working for Northrop Grumman for two years. She currently serves as the NGST Chairman of "Connect", a new employee organization of hundreds of recent NGST hires.

Dean E. Davis, PhD

Chairman, AIAA K-12 Strategy

Senior Principal Scientist, Engineer

Boeing Integrated Systems

Dean Davis is a Senior Principal Scientist/Engineer Analysis Senior Study Leader for the Boeing Advanced Systems Analysis, Modeling, Simulation and Experimentation (AMSE) organization in St. Louis, operating out of El Segundo, California. A University of Colorado graduate who specialized in physics, aerospace engineering and astrogeophysics, Mr. Davis also studied computer science at Denver Metro State College and systems engineering at University of Denver.

Mr. Davis has over 28 years experience as an operations research/intelligence analyst, aircraft/spacecraft design engineer, planetary scientist, systems engineer, survivability/vulnerability engineer and human factors engineer for Boeing, Lockheed Martin, Northrop Grumman, Raytheon, Hughes, TRW, Honeywell, Computer Science Corporation and General Dynamics, as well as his own company, Star Tech International. Over the last three decades, he has contributed to numerous scientific, commercial, military, and intelligence aircraft and spacecraft, including 52 Space Shuttle missions, International Space Station, Mars Opportunity and Spirit Rovers and various other planetary exploration missions, Hubble and James Webb Space Telescopes, and currently the Constellation Crew Exploration Vehicle (CEV) for human exploration and colonization of the moon and Mars.

An active volunteer in STEM-related education enhancement, Mr. Davis currently serves as Chairman of the American Institute of Aeronautics and Astronautics (AIAA) K-12 Strategy.

Jamie Foster

Chief Operations Officer, California Space Authority

Mr. Foster serves as the Chief Operations Officer at the California Space Authority (CSA). He has co-lead the development of the California Space Enterprise Strategic Plan and manages the California Space Infrastructure Program (CSIP). He earned his Bachelor of Arts degree in Geology from Carleton College, Northfield, MN and held an N.C.A.T.E. accredited secondary level teaching certificate. Mr. Foster has developed curriculum for children and adults in earth sciences, astronomy/cosmology, and railroading. He coached many Odyssey of the Mind (now Destination Imagination in California) teams, four of which went to State Finals and two to World Finals.

Bruce E. Gardner, PhD

Principal Director, Learning Systems, The Aerospace Institute The Aerospace Corporation

Dr. Bruce E. Gardner is Principal Director of Learning Systems for The Aerospace Institute, the educational division of The Aerospace Corporation. He is responsible for directing the planning, development, implementation, and evaluation of employee and customer continuing learning/career development programs and multimedia support resources. Dr. Gardner has been with The Aerospace Corporation since 1984. Between 1990-1995, he was Director of the Control Systems Analysis Department (Vehicle Systems Division), responsible for oversight of spacecraft and launch vehicle guidance/stability/control assessments for several major DOD space programs. In 1995, he assumed responsibility for institute technical education programs, and was involved as primary original designer and integrator for the Institute's "Aerospace Systems Architecting and Engineering Certificate Program." He presently oversees institute-sponsored learning activities in support of technical education, business/professional development, management development, and career path planning. Dr. Gardner holds a BS in Aerospace Engineering from University of Maryland; an MS in Mechanical Engineering from Drexel University; and a PhD in Aeronautics and Astronautics from Stanford University.

Laura R. Gilliom, PhD

Director, University Relations Program, Lawrence Livermore National Lab

Dr. Gilliom is the Director of the University Relations Program of the Lawrence Livermore National Laboratory (LLNL). She manages a \$16M program designed to enhance strategic collaboration between LLNL and universities, and to continue the effective relationships with the University of California (UC) Office of the President and the UC campuses. She also oversees the activities of the Science and Technology Education Program, six research institutes, and LLNL's graduate and postdoctoral fellowship programs. Dr. Gilliom received her BA in chemistry from Princeton University and her PhD in organic chemistry from the California Institute of Technology. She was a

technical staff member and held a variety of managerial roles at Sandia National Laboratories prior to moving to LLNL in 2001. From 1991-1993, she served as technical advisor at the Department of Energy, Defense Programs Headquarters in Washington, DC.

Jeff Gold

Director, Academic Technology Development California State University Office of the Chancellor

Jeff Gold manages a variety of educational technology projects for the CSU Office of the Chancellor, all of which provide students with pedagogically sound advising resources and learning tools. Mr. Gold's background includes 14 years of experience in the fields of education, academic technology, and business consulting. He began his career as a public school teacher in San Diego and has taught online and face-to-face courses as an adjunct professor for Pepperdine University's Masters of Educational Technology Program. Additionally, Mr. Gold received an MBA from Escuela de Negocios Las Palmas, a business school in Spain. He has managed online learning projects for several private sector companies.

Susan Hackwood, PhD

Executive Director, California Council on Science & Technology

Currently Executive Director of the California Council on Science & Technology (CCST), Dr. Susan Hackwood is also Professor of Electrical Engineering at UC Riverside, Visiting Associate in Engineering at the California Institute of Technology. CCST is a not-for-profit corporation comprised of 150 science and technology leaders sponsored by the key academic and federal research institutions in California. CCST advises the State on all aspects of science and technology including stem cell research, intellectual property, energy, information technology, biotechnology and education. Dr. Hackwood received a PhD in Solid State Ionics in 1979 from DeMontfort University, UK. Before joining academia, she was Department Head of Device Robotics Technology Research at AT&T Bell Labs. She has served as an engineering professor and robotic systems center director at UC Santa Barbara and was the founding Dean of the Bourns College of Engineering at UC Riverside. She has published over 140 technical publications and holds seven patents. She has worked extensively with industry, academia and government partnerships to identify policy issues of importance to the country's citizens and has been an active participant in regional and state economic development. Her current research interests include science and technology policy, distributed asynchronous signal processing and cellular robot systems. Dr. Hackwood sits on the board of several electronics companies, consulting on new product development.

Art Hammon

Pre-College Education Specialist, Jet Propulsion Laboratory

Art Hammon is Pre-College Education Specialist at the Jet Propulsion Laboratory (JPL). He consults with Solar Systems missions concerning their Education and Public Outreach. He is the former chair of the New Hampshire State Legislature Distance

Learning Commission, a technology professional development leader and 25-year teacher of Physical Sciences from grade seven through twelve. During his teaching years as a middle and high school science teacher, he served on a wide variety of boards and committees that developed curriculum for local, state and national groups.

Tom Hooper

**Industry Lead/WIRED California Team, Business Relations Group
Employment Training Administration, US Department of Labor**

Tom Hooper is the Industry Lead for the construction and transportation industries in the Business Relations Group of the US Department of Labor's Employment and Training Administration (ETA) and is part of ETA's Project Team for the California Innovation Corridor/CSA WIRED grant. Mr. Hooper's responsibilities as Industry Lead include identifying and prioritizing the industry primary workforce challenges, developing partnerships with key industry stakeholders, and identifying potential hiring and training needs which the ETA can target through investments. Mr. Hooper also serves as a Federal Project Officer, supporting three grants in the construction industry. As a part of the ETA Project Team for the California Innovation Corridor/CSA grant, Mr. Hooper works with staff at the US Department of Labor and the grantee to support the implementation of the project. Prior to joining the US Department of Labor, Mr. Hooper was a National Workforce Consultant with Goodwill Industries International. As a National Workforce Consultant, he was responsible for helping local Goodwills assess the workforce needs of their communities, analyzing the implications of national legislation for local Goodwills, and developing partnerships with national employers and government agencies.

Ron Hughes, PhD

**Associate Professor of Education, College of Education
California State University, Bakersfield**

Dr. Ron Hughes is Associate Professor of Education at California State University, Bakersfield. He teaches in the field of Curriculum and Instruction, and his expertise is in science education. He is the Faculty Coordinator for the CSU-NASA Collaborative for the CSU system. He has played a central role in the development of model Summer Institutes for teacher professional development that incorporate state-of-the-art NASA and JPL resources into K-12 science education.

**Susan D. Johnson, Manager
Recruitment & College Relations
Southern California Edison**

Susan Johnson is manager of recruitment and college relations for Southern California Edison, a subsidiary of Edison International. She joined Edison in 1973 and has over 30 years experience as a Human Resource professional. Susan has extensive human resources experience specifically in the area of talent acquisition. As the manager of recruitment and college relations, Susan has overall responsibility for the corporate college relations strategy, partnerships with community education leaders, diversity outreach strategy, as well as, executive on-boarding and oversight for human resources

compliance related activities . Susan earned a B.S. in organizational management from the University of Phoenix.

The Honorable Andrea Seastrand Executive Director, California Space Authority

The Honorable Andrea Seastrand serves as Executive Director of the California Space Authority (CSA), a statewide non-profit corporation designated by the State of California as California's official spaceport authority since April, 2001. Under Mrs. Seastrand's leadership, CSA has initiated the California Space Infrastructure Program and brought over \$100M since 1998 to space enterprise and its support in the areas of infrastructure, research and technology, education and workforce development. Mrs. Seastrand was born and raised in Chicago, graduated from DePaul University and is also a former fourth grade teacher. In 2001, she oversaw planning for CSA's statewide (4th – 8th grade) teachers' conference "Space in the Classroom".

As a former US Congresswoman, Mrs. Seastrand led space support efforts at the federal level with the introduction of the National Spaceport Act of 1995. She served on the House Committee on Science and the Transportation and Infrastructure Committee. Mrs. Seastrand also served as a Member of the California State Assembly from 1990 to 1994. Governor Arnold Schwarzenegger appointed Mrs. Seastrand in 2004 to serve as one of 20 members on the Governor's statewide Council on Base Support and Retention, the report of which was credited by the Governor as having a key role in retaining nearly all of the state's military installations.

Early in 2006, under Mrs. Seastrand's direction, CSA was successful in developing a winning proposal in response to the US Department of Labor (DoL) Workforce Innovation in Regional Economic Development (WIRED) Initiative. The WIRED Initiative is a major component of President George Bush's competitiveness agenda, unveiled during the 2006 State of the Union Address. CSA, as one of 13 awardees nationwide, will lead a 13 county economic region comprising the "California Innovation Corridor" in a 60+ member partnership effort. That effort consists of increasing entrepreneurship, supporting manufacturing value chain and supplier competitiveness, and fostering accelerated development of an innovation-oriented technical workforce.

Mrs. Seastrand is presently an alternate California delegate to the Aerospace States Association (ASA) and a member in Women In Aerospace (WIA), the Air Force Association (AFA), and the Navy League. She recently was invited by Gen. T. Michael Moseley, Chief of Staff of the U.S. Air Force, to join his newly formed Civic Leaders Group.

Edward Taylor

Mr. Taylor joined Google Engineering in October 2004 to focus on testing and quality issues across Google's software properties. His present responsibilities include testing of the Ads and Commerce system and infrastructure. Mr. Taylor has more than 20 years in the software industry, most which was spent with IBM's Santa Teresa Lab (now called Silicon Valley Lab) where he held various technical and management positions in the Data Base organization, primarily on DB2. While with IBM. Mr. Taylor was also

responsible for developing and delivering such diverse software products as (a first of its kind) SGML Document formatter for the publishing industry and an architecture and products for the definition and implementation of Information Warehouses. Also prior to joining Google, Mr. Taylor was Director of Quality for Verity Software, a leading Enterprise Search software company, and Director of Engineering Services for Legato Systems, a leader in storage management products. Mr. Taylor holds a BS in Business Administration and MS in CIS.

Judy Turner

Director of Programs and Partnerships, California Space Authority

Judy Turner is the Director of Programs and Partnerships at the California Space Authority (CSA). In this role, she also has responsibility for overall program management of the CSA/California Innovation Corridor's \$15M WIRED (Workforce Innovation in Regional Economic Development) grant from the US Department of Labor. Ms. Turner previously served as the Director of the Los Angeles office of the California Technology, Trade and Commerce, acting as the Governor's representative with local business and economic development partners in five counties. Her experience also includes senior management in a regional economic development business incentive practice with two major international firms. Ms. Turner is a graduate of the University of California, Santa Barbara.

Beverly Young, PhD

Assistant Vice Chancellor, Teacher Education and Public School Programs California State University

Dr. Beverly Young is Assistant Vice Chancellor for Teacher Education and Public School Programs for the California State University (CSU) system. She works with the campus Presidents, Vice Presidents, and Deans of Education in order to facilitate changes in teacher preparation within the 23-campus system. Prior to her work at the Chancellor's Office of the CSU, Dr. Young was a faculty member in Teacher Education at California State University, Fullerton.