

Selected Public Presentations (2009-2019)

Speaker, Commercial Spaceflight Federation (CSF), “Microgravity Research in the Age of Commercial Access to Space”, February, 2019

Speaker, NCSE Annual Conference “Transforming How Companies Operate in a New Carbon Economy: Industry Leading Innovation” NCSE 2019 Annual Conference: Sustainable Infrastructure & Resilience, January, 2019

Speaker, Washington State University, “A Recipe for Growth: Building the ASU Enterprise”, May, 2018

Speaker, Future Tense | New America “How Autonomous Vehicles Will Help Us Reimagine Our Cities”, March, 2018

Speaker, Dawn of Private Space Science Conference “Innovative Funding Mechanisms for Space Science Missions: A National Lab and Public University Perspective”, June, 2017

Moderator, “Partnership Models in the Western Region” at Western Region Innovation Partnership Workshop: Mission Innovation and Clean Tech Acceleration, February, 2017

Speaker, DOE Webinar, Clean energy Technology Innovation, Water-Energy Nexus in the Southwest, September, 2016

Speaker, The McCain Institutes Next Generation Leaders Conference, April, 2016

Keynote, AzTE’s Inventor Recognition Event, March, 2016

Speaker, APLU Institutional Strategies Session: Global Learning, Research, & Engagement, 2015

Keynote, 2nd Annual Smart City Hack Finale: Arizona Institute for Digital Progress, June, 2016

Speaker, Innovation Tri-Valley Forum, LLNL and Regional Innovation Ecosystem, July, 2014

Speaker, Recapturing a Future for Space Exploration: Research for a New Era, as part of the session “Science From the International Space Station.” AAAS Annual Meeting, Boston MA, February, 2013

Speaker, Asia-Pacific Center for Security Studies (APCSS), The Interface of Science, Technology & Security, Emerging Energy S&T: Understanding Issues with Potential Security Impacts, November, 2012

Speaker, ESA ISS Space Symposium, The Importance of Research on ISS: A Perspective from the US National Academies Decadal Survey, 2012

Presentation, NASA Advisory Council, Recapturing a Future for Space Exploration: Life and Physical Sciences Research for a New Era, April, 2011

Speaker, Pacific Operational Science & Technology Conference, Defining a Need for Soft Power Tools, March, 2010

Speaker, Resource Assurance – Balancing the Resource Equation, EUCOM/AFRICOM S&T Conference, June, 2009

Major Policy Engagements

America’s Human Presence in Low Earth Orbit, Before the Committee on Science, Space, and Technology United States House of Representatives, May 17, 2018

Life and Physical Sciences in Low Gravity; the Scientist Perspective, Brief to OSTP and US Space Council, January 19, 2019

Lead or Major Contributor (2006 – 2017)

Chair, Decadal Study: Recapturing a Future for Space Exploration, Life and Physical Sciences Research for a New Era National Academies Press, 2011

Co-Chair, 3D Printing in Space, National Academies Press, 2014

Reviewer, *Building a New Carbon Economy – an Innovation Plan*, New Carbon Economy Consortium (NCEC), 2018

Reviewer, Achieving Science with CubeSats, Thinking Inside the Box, National Academies Press, 2016

Reviewer, NASA Space Technology Roadmaps and Priorities, Restoring NASA's Technological Edge and Paving the Way for a New Era in Space, National Academy Press, 2012

Reviewer, Severe Space Weather Events Understanding Societal and Economic Impacts: A Workshop Report, National Academies Press, 2008

Committee member, Report 1 on Tracking and Assessing Governance and Management Reform in the Nuclear Security Enterprise, 2017

Committee member, Predictive Theoretical and Computational Approaches for Additive Manufacturing, Proceedings of a Workshop National Academies Press, 2016

Committee member, Pathways to Exploration, Rationales and Approaches for a U.S. Program of Human Space Exploration National Academies Press, 2014

Committee member, Sharing the Adventure with the Public The Value and Excitement of 'Grand Questions' of Space Science and Exploration: Summary of a Workshop, National Academies Press, 2011

Committee member, A Constrained Space Exploration Technology Program: A Review of NASA's Exploration Technology Development Program, National Academies Press, 2008

Committee member, Review of NASA Plans for the International Space Station, NRC Committee on Review of NASA Strategic Roadmaps Space Station Panel, National Academies Press, 2006

Committee member, A Risk Reduction Strategy for Human Exploration of Space, IOM Committee on Review of NASA's Bioastronautics Roadmap, National Academies Press, 2006

Participant, Leverage. Phase I Sector Study: Water & Manufacturing U.S. Council on Competitiveness, 2016

Participant, Tri-Valley Rising – Its Vital Role in the Bay Area Economy, Bay Area Council Economic Institute, 2014

Selected Publications (1988-2010)

W-Y Jang, B. Paskaleva, M.M. Hayat, S. C. Bender, **E. R. Cantwell**, and S. Krishna, "Algorithmic Spectrometry and Matched Filtering for Bias Tunable Quantum Dots in a Well Infrared Photodetectors" IEEE Sensors Journal, V 10, N3, 2010

W-Y. Jang, M. M. Hayat, J. S. Tyo, R. S. Attaluri, T. E. Vandervelde, Y. D. Sharma, R. Shenoj, A. Stintz, **E. R. Cantwell**, S. Bender and S.Krishna, "Demonstration of bias controlled algorithmic tuning of quantum Dots in a well (DWELL) mid-infrared detectors," *IEEE J. Quantum Electronics*, V46, N.6, 2009

Edmunds, T., **Cantwell, E.**, Sholl, P, Yao, Y., Gansemer, J., and Donald Prosnitz, "Simulation Analysis of Inspections of International Travelers at Los Angeles International Airport for US-VISIT", UCRL-TR-20273, February, 2004

Cantwell, E., "Commercialization Opportunities in Homeland Security", International Conference on Advanced Technologies for Homeland Security, Univ. of Connecticut, December, 2003

Cantwell, Elizabeth, Boulanger, R., Barta, D. and Kortenkamp, D, "Integrated Controls for Advanced Life Support Systems", An Introductory Paper for the Plenary Session of the Advanced Controls for Life Support Systems Workshop, Monterey, CA, August, 2003

Cantwell, E., Coleman, S., Defour, J., Dooher, B.P., Lopez, B., McKinley, S. and Woodward, R. (2002). Vulnerability Assessment for Pueblo Dam and Reservoir and Fountain Valley Conduit, Pueblo, Colorado. Lawrence Livermore National Laboratory, Livermore, CA. UCRL-151560.

"Early Warning Monitoring To Detect Hazardous Events in Water Supplies", ILSI Risk Sciences Committee Report, December, 1999

Ahlf, P, **Cantwell, E.**, Ostrach, L, and A. Pline, IAF/IAA-99-G2.03, "Mars Scientific Investigations as a Precursor for Human Exploration", 50th International Astronautical Congress, 4-8 Oct 1999/Amsterdam, The Netherlands

Cantwell, E., "Environmental Applications for Chemical Microsensors", UCRL-AR-134508, June, 1999

Cantwell, E., "National Ignition Facility Pollution Prevention and Waste Minimization Plan", UCRL-AR-131194, September 1, 1998

Dooher, B.P., & **Cantwell, E.R.**, "Setting Reasonable Remediation Goals Using Risk and Cost/Benefit Considerations to Prioritize Efforts", 8th Ann. Conf. On Contaminated Soils in Groundwater, Oxnard, CA March, 1998

Cantwell, E.R., "Design for Environment Study for the National Ignition Facility (NIF)", UCRL-AR-124791, December, 1997

Cantwell, E.R., "Evaluating the Benefits of a Reliable Groundwater System", Paper #ST3-5, AWWA Water Quality Technology Conference, Denver, CO, November, 1997

Cantwell, E.R., Clark, M., Bennett, T., Minsky, B. and Stern, G., "Benefits to the Groundwater Disinfection Regulation from Increased Reliability and Availability of Drinking Water Systems", Report to the Groundwater Disinfection Regulation EPA Workshop, Irvine, CA, March, 1997

Cantwell, E. and Macler, B.A., "Risk Analysis for Setting Drinking Water Standards for Long-Term Space Missions", SAE 1993 Transactions - Journal of Aerospace, Section 1, 734-746, 1993

Macler, B.A. and **Cantwell Dunskey, E.**, "Assessment of Environmental Contaminant-Posed Risks to Human Health in Closed Life Support Systems", IAF/IAA-92-0283, The World Space Congress, Washington, DC, September, 1992

Bilardo, V.J., **Cantwell Dunskey, E.**, Schlater, N., Forsberg, K., and Mooz, H., "Case Study: Tailoring a Generic System Engineering Process for the Development of Research and Technology Projects", Presented at the 2nd National Committee on System Engineering International Symposium, Seattle, Wa, July, 1992

Cantwell, E.R., and Fernandez-Pello, C., "Smoldering Combustion Under Low Gravity Conditions", AIAA-1990-648, Aerospace Sciences Meeting, 28th, Reno, NV, Jan 8-11, 1990

Cantwell, E.R., Robinson, P., Shenk, T. and Upadhye, R., "Automated Simulation as Part of a Design Workstation", NASA TM 102852, August, 1990 (this paper was awarded a NASA Tech Brief)

Mehta, Rabindra D, and **Elizabeth R Cantwell.** "Mean Flow and Turbulence Measurements in a Half-delta Wing Vortex." Fluid Dynamics Research 4.2 (1988): 123-37