

CURRICULUM VITAE
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June 2015

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INTERESTS

My primary interest is leading project teams in applying information sciences to solve complex problems and challenges found in the mission-critical operational environment. Of particular interest is the combining of information sciences (e.g., machine learning, pattern detection) with the social sciences (e.g., behavior models) to develop behavior-driven decision systems that aid human decision makers. I specialize in immersing into the operational environment; developing proposed technical solutions to stakeholder challenges/problems; creating and leading multi-disciplined teams from academia, government and industry; developing working and deployable proof-of-concept prototypes and transitioning the technology to industry for product commercialization.

I often act as the liaison between the research and stakeholder communities, translating operational requirements into research objectives and communicating research results and delivering working systems to the stakeholder community. I also specialize in taking on existing projects and leading them to successful conclusion. The projects I lead cross many domains, including food and agriculture security, physical infrastructure protection, military command and control, cyber-security, intelligence analysis, smart grids and smart buildings.

In addition to managing research projects, I am also engaged in new business development where I meet with the stakeholder community to discuss their needs and develop and submit proposals to various US Government funding agencies and industry. I mentor students and researchers in career development, proposal writing, research project management and technology transition. In my role as a Research Associate Professor, I serve on Ph.D. committees both within and outside the Viterbi School of Engineering and lecture to a broad array of students

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and professionals from diverse backgrounds, including engineering, business, law enforcement and government. I also give media interviews and develop public informational announcements (videos) that cover topics that range from cyber-security to smart grid technologies.

EDUCATION

- Ph.D., Computer Science, University of California, Los Angeles, CA, 1992 - 1999
 - Advisor: Walter Karplus
- M.S., Computer Science, University of Colorado, Boulder, CO, 1987 - 1991
- B.S., Mathematical Engineering (honors), Colorado School of Mines, Golden, CO, 1979 - 1983

SECURITY CLEARANCES

- DoD Top Secret, SCI (SI/TK), 2006 to present
 - Security Classification Date: August 17, 2006
 - Briefing Date: November 14, 2006
 - Latest Background Investigation Date: 5 July 2011
 - Sponsoring Agency: NRO
- DoD Top Secret, SCI/SSBI, 1990-1994
 - Sponsoring Agency: NSA

POSITIONS AND APPOINTMENTS

- **Research Associate Professor**, Sonny Astani Department of Civil and Environmental Engineering, University of Southern California, August 2013 - Present
- **Assistant Division Director**, Information Sciences Institute, University of Southern California, January 2012 – Present
 - Lead, Decision Systems Group
 - Directly supervise 5 research scientists & 1 senior software engineer
 - Investigator, USC Center for Risk and Economic Analysis of Terrorism Events (CREATE)
 - Supervise/mentor research: 3 post-docs, 2 MS students, 1 summer intern (MS), 1 DHS Scholar
 - Oversee: \$20M+ in research funding at USC-ISI and on USC Campus
 - Projects:
 - NIST Biomedical Devices and Equipment Consortium Organization to Roadmap Industry (BIOCOR) – P/I
 - NSF Understanding and Influencing Security and Privacy Decision-Making (UISPD) – P/I
 - DoE/LADWP Smart Grid Regional Demonstration Project (SGRDP)
 - USC Project P/I
 - Co-P/I Customer Behavior (SGRDP-CB) unit
 - Interim Co-P/I of Electric Vehicle (SGRDP-EV) unit (2012/2013)
 - DoE Building Level Energy Management System (BLEMS) – Co-P/I
 - Behavior-driven energy management systems for existing buildings
 - ONR Geospatial Analysis of Motion-Based Intelligence and Tracking (GAMBIT) – P/I

- Movement intelligence analysis technology (pattern recognition, anomaly detection)
 - DHS Port (PortSec) and Infrastructure (InfraSec) Security Risk Management and Resource Allocation (PortSec) - P/I
 - Dynamic risk assessment and infrastructure security counter-measure resource allocation technology
 - DHS Integrated Suspicious Activity Reporting and Decision Support (iSARs) – P/I
 - HUMINT analysis and decision-support technologies: data mining, pattern detection and resource allocation
- **Supervising Computer Scientist/Project Leader**, USC-ISI, July 2003 - December 2011
 - Lead, Decision Systems Group, January 2010 – December 2011
 - P/I or Co-P/I: \$16.5M+ in research funding at USC
 - Investigator, USC Center for Risk and Economic Analysis of Terrorism Events (CREATE)
 - Direct research: Post-docs and summer interns
 - Investigator, Texas A&M National Center for Foreign Animal and Zoonotic Diseases Defense (FAZD Center)
 - Science Leader, Information Analysis Group (Texas A&M, University of California – Davis, Georgetown University, University of Maryland, University of Minnesota)
 - Research oversight: Animal disease spread models, economic consequence models, national security decision-support analytics
 - Investigator, University of Minnesota National Center for Food Protection and Defense (NCFPD)
 - Livestock movement (transportation) predictions based on market and environmental factors (FASTRANS)
 - Projects:
 - Smart grid customer behavior (LADWP/DoE) – behavior studies and surveys, multi-modal messaging and outreach approaches, customer behavior modification approaches
 - Behavior-driven energy management systems (DoE) - command/control, sensor analysis and decision-making, control/feedback systems, real-time operations
 - Operational prototype on USC campus
 - Movement intelligence analysis (ONR) – data mining, pattern detection, anomaly detection
 - Infrastructure security (DHS port and infrastructure protection) – risk analysis, resource allocation, decision-systems, real-time operations
 - Operational prototypes at Port of Los Angeles
 - Food and Agriculture security (DHS chem-bio) – modeling of food commodity movements and markets
 - Law enforcement counter-terrorism (FBI, LA Sheriff): Human Intelligence (HUMINT) analysis – data mining, pattern detection and resource allocation
 - Space exploration Ops (NASA) – planning, scheduling & execution decision-support
 - USMC aviation command/control (ONR) - Multi-aircraft planning, scheduling and execution system, real-time flight Ops decision-support (combat and training)
 - Transitioned to F-35 Joint Strike Fighter Program

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- Program office established at MARCORSSYSCOM
- Prototype technology deployed to Iraq, Afghanistan and Horn of Africa, ship board and domestic garrison operations
- **Co-Founder & Chief Scientist/Engineer**, Enhanced Personal Audiovisual Technologies (EPAT), LLC, March 2005 – Present
 - System and Method of Adjusting Audiovisual Content to Improve Hearing, US Patent No. 8,239,768. Co-holder
 - Develop multi-modal human computer interface technology to assist hearing impaired with reception and understanding of information. Targeted venues: movie theaters, home entertainment, live entertainment, special Ops, military Ops
- **Computer Scientist**, USC-ISI, July 2001 – June 2003
 - Human/computer interfaces in mission-critical environments
 - USMC aviation command/control/mission management in combat/training environments
 - Planning, scheduling and execution technology
 - Resource allocation optimization
 - Deployed: Iraq, Afghanistan, Horn of Africa, Japan, US
- **Research Assistant Professor**, Computer Science Department, University of California, Los Angeles, July 1999 – June 2002
 - Multi-modal human computer interfaces in mission-critical environments (fighter cockpit, air traffic control Ops)
 - Managed UCLA multi-media laboratory (Director: Dr. Walter Karplus) – 3 students
 - Transitioned technology to JPL R&D for Space Shuttle and International Space Station research
- **Consultant/Principal Engineer**, Sony Pictures Studios & Sony Cinema Products Corporation, January 1994 – May 2002
 - Co-key member of development team responsible for development of software, firmware and hardware for Academy Award winning (1996) Sony Dynamic Digital Sound (SDDS)
 - DFP-D2000, DFP-D2500, DFP-D3000 digital film decoders
 - DCP-1000 Digital Cinema Processor
 - SSU-1000 SDDS Setup Unit
 - Error detection and diagnostics (pattern/anomaly detection)
 - Auto-tuning
 - Installed in 10K+ theatres, sound stages, film labs around the world
 - 100M+ feet of SDDS encoded film
 - Initial step to digital cinema
 - Developed prototype Sony PlayStation 3-D virtual audio technology (1996)
- **Graduate Research Assistant**, Computer Science Department, UCLA July 1995 – June 1999
 - Research: Virtual 3-D audio enhanced human computer interfaces in mission critical environments
 - Aircraft cockpit and air traffic control multi-modal communications – NASA and US Air Force Ops (work undertaken at NASA/Dryden Aircraft Research Center - Edwards, CA)
- **Graduate Research Assistant**, Department of Physiological Sciences, UCLA, July 1993 – June 1995
 - Cat (feline) locomotion and central pattern generation modeling
 - Research: Human color vision modeling (color constancy)

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- **Senior Member of Technical Staff**, TRW Space & Defense (Northrop Grumman), March 1990 – July 1994
 - Software systems (ground station operations and analysis technology) – National Assets (Classified)
- **Senior Software Engineer**, Auto-trol Technologies, Inc, October 1987 – February 1990
 - Vectorpipe: Process plant 3-D design & analysis software (food & agriculture, petrochemical, pharmaceuticals, paper-pulp)
- **Staff Engineer/Systems Manager**, EMC Engineers, Inc, June 1983 – September 1987
 - Energy management systems and operational efficiencies – DoD applications
 - Steam generation optimization
- **Technician**, Colorado School of Mines Research Institute, January 1980 – May 1983
 - Mineral (gold, silver, uranium) extraction and processing
 - Heavy equipment, explosives and chemical processing operations

LEADERSHIP POSITIONS

- Member, DoE/LADWP Smart Grid Regional Demonstration Project Executive Committee, August 2011 - Present
- Member, Planning Committee, USC Center for Risk and Economic Analysis of Terrorism Events (CREATE) Executive Program on Counter-Terrorism, March 2006 – Present
 - DHS-funded Center of Excellence
- Member, Steering Committee, USCG/USC CREATE Maritime Risk Symposium, March – August 2012
- Member, Cyber Track Committee, 2015 IEEE International Conference on Technologies for Homeland Security HST '15, Oct 2014 – April 2015
- Member, Cyber Track Committee, 2013 IEEE International Conference on Technologies for Homeland Security HST '13, May – November 2013
- Member, TSA Pre-Check Background Check Assessment Panel, US Department of Homeland Security Transportation Security Administration (TSA), October - December 2013
- Member, Cyber Track Committee, 2012 IEEE International Conference on Technologies for Homeland Security HST '12, May – November 2012
- Member, Cyber Track Committee, 2011 IEEE International Conference on Technologies for Homeland Security HST '11, May – November 2011
- Science Leader, Information Analysis Systems (IAS) Group, National Center for Foreign Animal and Zoonotic Diseases Defense (FAZD), Texas A&M University, October 2006 – September 2009
 - DHS-funded Center of Excellence
 - \$3M+ in funding
- Member, FAZD Center Executive Committee, FAZD Center, Texas A&M University, October 2006 – September 2009

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- Member, Planning Committee, DHS Science & Technology Directorate Workshop on Future Directions in Critical Infrastructure Modeling & Simulation, Spring 2008
- Member, SMPTE Digital Cinema Standards Committee, January 1998 – June 2001

RESEARCH SUPPORT

- “Biomedical Devices and Equipment Consortium Organization to Roadmap Industry (BIOCOR),” National Institute of Standards and Technology (Award number: 70NANB15H063), 1 June 2015 – 31 May 2017, **Michael Orosz (P/I), \$500K**
- “DPS_Deploy – USC Department of Public Safety Risk Assessment and Resource Management,” Department of Homeland Security (DHS-10-ST-061-001A), 2014-2015 (via USC CREATE), **Michael Orosz (P/I), \$32.5K**
- “Customer Behavior – Phase 5.2, “Los Angeles City – Department of Water and Power,” CB-USC-5.2, May 2014 – April 2015, **Michael Orosz (P/I), \$200K**
- “Customer Behavior – Phase 5.1,” Los Angeles City – Department of Water and Power,” CB-USC-5.1, Dec 2013- April 2015, **Michael Orosz (Co-P/I), \$300K**
- "SBE: Medium: Understanding and Influencing Security and Privacy Decision-Making (UISPD),” National Science Foundation (Award number: SES-1314644), 15 Sept 2013 – 31 August 2015, **Michael Orosz (P/I), Tanya Ryutov (Co-P/I), Heather Rosoff (Co-P/I) \$600K**
- “Los Angeles Department of Water and Power Smart Grid Regional Demonstration Project (SGRDP),” Department of Energy and Los Angeles Department of Water and Power (DE-OE0000192), 2010 – 2015, **Michael Orosz (overall P/I), \$18.5M**
 - Co-P/I for Customer Behavior
 - Interim Co-P/I for Electric Vehicles (2011-2013)
- “GAMBIT: Geospatial Analysis of Motion Based Intelligence and Tracking,” Office of Naval Research (N00014-12-1-0121), 2011-2015, **Michael Orosz (P/I), \$2.52M**
- “Building Level Energy Management Systems (BLEMS),” Department of Energy (DE-EE0004019), 2010-2013, **Michael Orosz (P/I: Preston Marshall), \$2,207,805 - Co-P/I and Project Director**
- “InfraSec – Infrastructure Security,” Department of Homeland Security (DHS-10-ST-061-001A), 2011-2014 (via USC CREATE), **Michael Orosz (P/I), \$65K**
- “PortSec – Port Security Project,” Department of Homeland Security (DHS-10-ST-061-001A), 2010-2014 (via USC CREATE), **Michael Orosz (P/I), \$220K**
- “Development of Livestock Movement and Marketing Tracking System (FASTRANS),” Department of Homeland Security (2010-ST-061-AG002), 2010-2011 (via FAZD Center), **Michael Orosz (P/I), \$90K**
- “SAFERlab: Using DETER for Test and Evaluation of SAFER Technologies,” DARPA (N66001-11-C-4021), 2010-2014, Terry Benzel (P/I), \$6,442,177

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- Project Manager
- “CREATE Risk Analysis Workbench (RAW),” Department of Homeland Security (N00014-05-1-0630), 2004-2010 (via USC CREATE), **Michael Orosz** (with Terry Benzel, Robert Neches), **\$1,250,000 - Co-P/I and Project Leader**
- “IAS Theme Leadership and Decision Support System (DSS) Extension,” Department of Homeland Security (2007-ST-061-000002), 2007-2009 (via FAZD Center), **Michael Orosz** (P/I), **\$725,940**
- “Risk Analysis and Models of Plans for Attacks to Recognize Terrorist Schemes (RAMPARTS),” IARPA (FA8750-07-0177), 2007-2008, Robert Neches, \$780K
 - Project Leader
- “Food and Agriculture Sector National Transportation Model and FASTERANS,” Department of Homeland Security (X9106030103), 2007-2009 (via University of Minnesota), **Michael Orosz** (P/I), **\$119,036**
- “System Design & Development for an Integrated Risk Analysis Tools (FAZD),” Department of Homeland Security (N00014-04-1-0660), 2005-2007 (via FAZD Center), **Michael Orosz** (with Terry Benzel, Robert Neches), **\$595,405 – Co-P/I and Project Leader**
- “Comprehensive, Analytic, Real-Time Execution in Joint Air Operations (CARTE),” Office of Naval Research (N00014-03-C-0222), 2003-2007, **Michael Orosz** (with Robert Neches), **\$4,490,887 – Co-P/I and Project Leader**
- “Coordinated Multi-Source Maintenance on Demand (CMMD),” NASA (NNA05CS29A), 2005-2006, Robert Neches, \$1,793,715
 - Project Leader
- “Comprehensive Analytic Computing Environment (CACE),” Office of Naval Research, 2001-2003, Robert Neches, \$6.6M
 - Computer Scientist

PUBLICATIONS and PRESENTATIONS

Refereed Papers

- Sintov, N., Dux, E., Tran, A. and **Orosz, M** (2015), “What Goes On Behind Closed Doors? How College Dormitory Residents Change to Save Energy During a Competition-based Energy Reduction Intervention,” *International Journal of Sustainability in Higher Education*, in review.
- Jazizadeh, F., Ghahramani, A., Becerik-Gerber, B., Kichkaylo, T., and **Orosz, M.**, “Human-Building Interaction Framework for Personalized Thermal Comfort Driven Systems in Office Buildings,” *ASCE Journal of Computing in Civil Engineering*, Special Issue: Computational Approaches to Understand and Reduce Energy Consumption in the Built Environment, Vol. 28, No.1, pp: 2-16, 2014.

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- Jazizadeh, F., Ghahramani, A., Becerik-Gerber, B., Kichkaylo, T., **Orosz, M.**, “User-Led Decentralized Thermal Comfort Driven HVAC Operations for Improved Efficiency in Office Buildings,” <http://dx.doi.org/10.1016/j.enbuild.2013.11.066>, *Energy and Buildings*, 70 (2014), February 2014, pp 398-410
- Yang, Z., Li, N., Becerik-Gerber, B., and **Orosz, M.**, “A Systematic Approach to Occupancy Modeling in Ambient Sensor Rich Office Environments,” *Simulation: Transactions of the Society for Modeling and Simulation International*, Special Issue: Simulation for Architecture and Urban Design., Vol 90(8), March, 2013, pp: 960-977.
- Yang Z, Li N, Becerik-Gerber B, and **Orosz M.** “A Non-Intrusive Occupancy Monitoring System for Demand Driven HVAC Operations,” (<http://cedb.asce.org/cgi/WWWdisplay.cgi?289937>), *Proceedings, CRC 2012: Construction Research Congress: Construction Challenges in a Flat World*, ASCE, Reston, VA 21-22 May 2012, 828-837
- Kichkaylo, T, Ryutov, T., **Orosz, M.**, and Neches, R. “Planning to Discover and Counteract Attacks,” *Informatica*, 34 (2010) pp 159-168.
- **Orosz, M. D.**, Southwell, C., Barrett, A., Bakir, O., Chen, J., and Maya, I., “PortSec: Port Security Risk Management and Resources Allocation System,” in *Proceedings of the 12th IFAC Symposium on Control in Transportation Systems, (CTS'09)*, Redondo Beach, CA, 2-4 Sept 2009
- Kichkaylo, T., Van Buskirk, C., Singh, S., Neema, H., **Orosz, M.**, and Neches, R., “Mixed-initiative planning for space exploration missions,” in *Proceedings of the ICAPS'07 Workshop on Moving, Planning and Scheduling, International Conference on Automated Planning and Scheduling*, Providence, RI, 22-26 September 2007
- **Orosz, M.**, Kichkaylo, T., Balaban, E., Goforth, A., Sweet, A., and Neches, R., “Tracking Logistical Constraints Across Missions and Organizations: A Multipurpose Information Infrastructure,” in *Proceedings of 2nd Annual IEEE Conference on Space Mission Challenges for Information Technologies (SMC-IT 2006)*, Pasadena, CA, 17-20 July, 2006, pp 306-313
- Balaban, E., **Orosz, M.**, Kichkaylo, T., Goforth, A., Sweet, A., and Neches, R., “Planning to Explore: Using a Coordinated Multisource Infrastructure to Overcome Present and Future Space Flight Planning Challenges,” in *Proceedings of AAAI 2006 Spring Symposium on Distributed Plan and Schedule Management, Technical Report SS-06-04, 2006*, Stanford University, Palo Alto, CA, 27-29 March 2006, pp. 9-16
- Goforth, A., Karsai, G., **Orosz, M.**, Neches, R., Szekely, P., and Ashish, N., “Attaining program affordability through integration of logistical operations and health maintenance,” in *Proceedings of 2005 AIAA 1st Space Exploration Conference: Continuing the Voyage of Discovery*, Orlando, FL. 30 Jan – 1 Feb 2005
- MacDonald, J., Balakrishnan, J. D., **Orosz, M. D.**, and Karplus, W. J., “Intelligibility of speech in a virtual 3D environment: optimal design of auditory information displays”, *Journal of Human Factors Research*, (derived from Ph.D. Thesis), February, 2002.
- **Orosz, M. D.**, Karplus, W. J., and Balakrishnan, J. D., “Using virtual 3-D audio in multi-speech channel and multimedia environments,” in *Cockpit Display VII: Displays for Defense Applications*, Darrel G. Hopper, Editor, *Proceedings of SPIE Vol. 4022*, (derived from Ph.D. Thesis), 2000, pp 166-176

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- **Orosz, M. D.**, “A methodology for developing and controlling human/computer interfaces,” *Ph.D. Dissertation*, Computer Science Department, University of California, Los Angeles, June, 1999
- Chambers, S., **Orosz, M. D.**, and Bradley, N.S., “Kinematic analysis of wing and leg movements for type I motility in E9 chick embryos,” *Experimental Brain Research*, Vol. 103, 1995
- **Orosz, M. D.**, Chambers, S., and Bradley, N.S., “Correcting two-dimensional kinematic errors for chick embryonic movements *in ovo*,” *Computers in Biology and Medicine*, Vol. 24, No. 4, 1994.
- Wolfe, W. J., MacMillian, J. M., Brady, G., Mathews, R. Rothman, J. A., Mathis, D., **Orosz, M. D.**, Anderson, C., and Alaghband, G., “Inhibitory grids and the assignment problem,” *IEEE Transactions on Neural Networks*, Spring 1993.

Non-Refereed Papers

- **Orosz, M.**, Chen, J., Maya, I., Salazar, D., Chatterjee, S. and Wei, D., “Protecting our Nation’s Ports with the Port Security Risk Analysis and Resource Allocation System (PortSec 3.0),” in Proceedings of 2013 IEEE International Conference on Technologies For Homeland Security (IEEE HST 2013), 12-14 November, 2013, Waltham, MA, pp 38-42
- Lennon, E., **Orosz, M.**, Kichkaylo, T., Maya, I., Wei, D., “PortSec2.0: The Next Generation,” in Proceedings of 2012 IEEE International Conference on Technologies For Homeland Security (IEEE HST 2012), 13-15 November, 2012, Waltham, MA, pp 255-259
- Yang Z, Li N, Becerik-Gerber B, **Orosz M.** “A Multi-Sensor Based Occupancy Estimation Model for Supporting Demand Driven HVAC Operations,” in Proceedings of *Simulation for Architecture and Urban Design (SimAUD)* (<http://toc.proceedings.com/14527webtoc.pdf>), Orlando, FL, 26-30 March 2012, pp. 100-107
- **Orosz, M. D.**, Southwell, C., Barrett, A., Chen, J., Ioannou, P., Afshin, A., and Maya, I., “PortSec: A Port Security Risk Analysis and Resources Allocation System,” in Proceedings of the *IEEE International Conference on Technologies for Homeland Security* <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5655048>, Waltham, MA, 8-10 November 2010
- **Orosz, M. D.**, Karplus, W. J., and Balakrishnan, J. D., “A test bed for prototyping human/computer interfaces used in mission critical environments,” in Proceedings of *1st Annual IEEE International Conference on Multimedia and Expo (ICME2000)*, New York, NY, (derived from Ph.D. Thesis), 30 July – 2 August 2000
- **Orosz, M. D.**, “Tuning VAX/VMS for a large application,” *Proceedings US Spring DECUS Symposium*, Atlanta, GA, 1989.
- **Orosz, M. D.**, “Programming with the VAX/VMS screen management routines,” *Proceedings US Fall DECUS Symposium*, San Francisco, CA, 1986.
- **Orosz, M. D.**, “Using programming tools for computer program development,”

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Proceedings Fifth New Mexico DECUS Symposium, Albuquerque, NM, fall 1985

Presentations/Invited Talks

- Sintov, N. D., **Orosz, M. D.**, and Schultz, P.W., “Personalized Energy Reduction Cyber-Physical System (PERCS): A Gamified End-User Platform for Energy Efficiency and Demand Response,” to be presented at the 2015 HCI International Conference, Los Angeles, CA, 2-7 August 2015.
- **Orosz, M.**, “Cyber Security,” invited talk, USC Price School Executive Education Forum, Los Angeles, CA, 17 April 2015
- **Orosz, M.**, “Smart Grid Research at USC,” Innovation with Impact Panel, USC Trustees 2015 Conference, La Quinta, CA, 29 March 2015
- **Orosz, M.**, “Cyber Security and the Sony Pictures Hack,” invited talk, Los Angeles World Affairs Council, Culver City, CA, 13 January 2015
- **Orosz, M.**, Ryutov, T., Blythe, J., Rosoff, H., John, R. and von Winterfeldt, D., “Modeling Values and Trade-offs Among Players in a Three-way Adversarial Cyber-Security Game,” presented at the National Science Foundation SaTC Principal Investigators Meeting, Arlington, VA, 5-7 January 2015
- **Orosz, M.**, “Maritime Cyber Policy,” presented at the 5th Annual Maritime Risk Symposium, USC Campus, Los Angeles, CA, 18 November 2014
- **Orosz, M.**, “Open Source Intelligence and Social Media: Their use in Emergency Management,” presented at the 2014 Annual City of Los Angeles Emergency Management Workshop, Skirball Cultural Center, Los Angeles, CA, 7 October 2014.
- **Orosz, M.**, Jazizadeh, F., Becerik, B., “Building Level Energy Management Systems (BLEMS),” presented at the 2014 ARPA-E Energy Innovation Summit Technology Showcase, 24-26 February, 2014, National Harbor, MD
- **Orosz, M.**, “Addressing Human Behavior in Cyber Security,” presented at the 2014 AFCEA West Conference, 11-13 February 2014, San Diego, CA
- **Orosz, M.**, Maya, I., Morgan, Y., “PortSec: Risk Assessment and Resource Allocation,” presented at the DHS University Centers of Excellence Innovation Showcase First Responder Technology Demonstration, 11 February 2014, Washington, DC
- **Orosz, M.**, Salazar, D., Chatterjee, S., Wei, D., Zhao, Y., “Using PortSec for Policy-Making and Risk-Benefit Balancing,” in Proceedings of 2013 Annual Meeting of the Society of Risk Analysis (SRA), 8-11 December, 2013, Baltimore, MD
- Lennon, E., Sintov, N. and **Orosz, M.**, “Current On-Campus Attitudes toward Energy Usage, Efficiency, and Emerging Technologies,” presentation, *AASHE Conference and Expo, Resiliency and Adaptation*, October 6-9, 2013, Nashville, TN
- Li, N, Yang, Z., Becerik-Gerber, B. and **Orosz, M.**, “Towards Energy Savings from a Bimodal Occupancy Driven HVAC Controller in Practice,” presented at the 30th CIB W78 International Conference 2013, Beijing, China, 9-12 October 2013
- **Orosz, M.**, “The Intelligence Community,” presented at the *Bi-Annual USC CREATE Executive Program in Counter-Terrorism*, Los Angeles, CA, 30 July 2013.
- **Orosz, M.**, “Drones: A Wave for Future Safety and Security,” presented at the 2013 National Sports Safety and Security Conference and Exhibition, Orlando, FL, 16-18 July 2013

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- Jazizadeh, F., Ghahramani, A., Becerik-Gerber, B., Kichkaylo, T., and **Orosz, M.**, “Personalized Thermal Comfort Driven Control in HVAC Operated Office Buildings,” to be presented at the 2013 ASCE International Workshop on Computing in Civil Engineering (IWCCE) Conference, June 2013.
- **Orosz, M.**, “Future Air Border Security: Intelligent Randomization,” presented at the International Border Security: Air, Land and Sea Borders (IBS) Workshop, Rovaniemi, Finland, 21-24 March 2013.
- **Orosz, M.**, Kichkaylo, T., Lennon, E., Maya, I., Wei, D., Chatterjee, S., Salazar, D., “Seaport Security (PortSec): The Next Phase – Incidents, Special Events and Risk,” in Proceedings of 2012 Annual Meeting of the Society of Risk Analysis (SRA), 9-12 December 2012, San Francisco, CA
- **Orosz, M.**, “The Need for Operationally-Informed Model Developers – Do We Need Renaissance Researchers?,” Keynote address presented at The Society for Modeling & Simulation International, AUTUMNSIM 2012, Autumn Simulation Multi-conference 2012, October 28-31, 2012, San Diego, CA
- **Orosz, M.**, Lennon, L., “Innovations in Port Security with UICDS,” invited speakers, SAIC Unified Incident Command and Decision Support (UICDS), Webinar, 27 September 2012.
- **Orosz, M.**, Maya, I., “USC CREATE Port Security Risk and Resource Management System (PortSec),” presented at the at the *World Conference on Transport Research Society (WCTRS), Special Interest Group 2 - Key Developments in the Port Maritime Sector*, Antwerp, Belgium, 21-22 May 2012
- **Orosz, M.**, “Infrastructure threats, vulnerabilities & intelligence challenges,” invited speaker, *National Center for Food Protection and Defense, Webinar*, 2 April 2012.
- Southers, E and **Orosz, M.**, “Transportation threats, vulnerabilities & intelligence challenges”, presented to *Venture Sheriff’s Department*, Camarillo, CA, 6 March 2012
- **Orosz, M. D.**, “Economic and Mission Impacts of Malicious Cyber Activity,” presented at *The Cyber Adversary: Impacting Your Mission, CREATE/ISI Cyber Seminar Series, University of Southern California*, Los Angeles, 24 January 2012
- Southers, E and **Orosz, M.**, “Air transportation threats, vulnerabilities & intelligence challenges,” presented at the *7th Annual Sacramento InfraGard Members Alliance Security Symposium*, Sacramento, CA, 9 December 2011.
- **Orosz, M. D.**, Southwell, C., Chen, J., Chatterjee, S., Salazar, D., Southers, E. and Maya, I., “PortSec: A port security risk analysis and resource allocation system – from tactical to strategic,” presented at the *2011 SRA Annual Meeting*, Charleston, SC, 4-7 December 2011
- **Orosz, M.**, Roesler, R., Becerik-Gerber, B., Kichkaylo, T., Ryutov. T., Touch, J., Maheswaran, R., Chang, Y., Marshall, P., “Building Level Energy Management System (BLEMS) Behavior Driven Building Energy Management,” poster presented at the *Annual SERDP/ESTCP Partners in Environmental Technology Technical Symposium & Workshop*, Washington, DC, 29 November – 1 December 2011.
- **Orosz, M. D.**, “PortSec: Port Security Resource Allocation and Cost-Benefit Analysis,” presented at the *2nd Annual Maritime Risk Symposium*, Rutgers University, Piscataway, NJ, 7-9 November 2011.

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- **Orosz, M. D.**, “PortSec: Application of a General Purpose Physical Infrastructure Risk Analysis and Resource Allocation System,” presented at the *Ohio Homeland Security Technology Review*, Strategic Analysis Information Center, Ohio Department of Homeland Security, Columbus, OH, 9 September 2011
- **Orosz, M.**, “Intelligence Driven Security: Challenges and the Need for Standards, Open Source and Research,” presented at the *5th Annual USC CREATE Executive Program in Counter-Terrorism* (keynote speaker), Los Angeles, CA, 5 August 2011.
- Southwell, C., Maya, I., and **Orosz, M.**, “PortSec: A Port Security Risk Analysis and Resource Allocation System,” presented at the *79th Military Operations Research Symposium (MORS)*, Naval Postgraduate School, Monterey, CA, 20-23 June 2011.
- **Orosz, M.**, Hoffman, J., and Beckham, T., “FASTRANS: Food and Agriculture Sector Movement and Marketing Analysis System,” presented at the *Fifth Annual DHS University Network Summit*
http://www.homelandsecurity.org/DHSUnivSummit2011/Orosz_Hoffman_Beckham_WhitePaper_06May11.pdf, Washington, DC, 30 March – 1 April 2011.
- **Orosz, M. D.**, “PortSec: A Port Security Risk Analysis and Resources Allocation System,” presented at the *First Annual USC CREATE/USCG Maritime Workshop*, Los Angeles, CA, 15-17 November 2010.
- **Orosz, M.**, Beckham, T., and Hoffman, J., “FASTRANS: Food and Agriculture Sector Movement and Marketing Model – Project Status,” presented to the *DHS Critical Infrastructure Partnership Advisory Council (CIPAC) Food and Agriculture Sector Joint Quarterly Meeting*, (invited speaker), Arlington, VA, 28 October 2010.
- **Orosz, M.**, “PortSec: A Port Security Risk Analysis and Resource Allocation System,” presented at the *World Port Security Summit (WPSS)*, (invited speaker), Los Angeles, CA, 10 September 2010.
- **Orosz, M.**, Barrett, A., Chen, J., Blair, A., and Maya, I., “PortSec: A Framework for Modeling Complex Port Infrastructures,” presented at the *Workshop on Grand Challenges on Modeling, Simulation, and Analysis for Homeland Security (MSAHS-2010)*, George Mason University School of Law, Washington, DC, 17-18 Mar 2010.
- **Orosz, M.**, “Challenges in Suspicious Activity Reporting (SARs),” presented at the *4th Annual DHS University Network S&T Summit*, Washington DC, March 10-12, 2010
- **Orosz, M.**, “National Center for Risk and Economic Analysis of Terrorism Events (CREATE),” presented to the *Los Angeles Breakfast Club*, Los Angeles, CA, 27 January 2010 (keynote speaker)
- **Orosz, M.**, Barrett, A., Bakir, O., Southwell, C., Chen, J., and Maya, I., “Port Security (PortSec) Risk Management and Resource Allocation II: Application,” presented at the *2009 Society of Risk Analysis (SRA) Annual Conference*, Baltimore, MD, 9 Dec 2009.
- Barrett, A., **Orosz, M.**, Bakir, O., Southwell, C., Chen, J., and Maya, I., “Port Security (PortSec) Risk Management and Resource Allocation I: Methodology,” poster presented at the *2009 Society of Risk Analysis (SRA) Annual Conference*, Baltimore, MD, 7 Dec 2009.
- **Orosz, M.**, “National Center for Risk and Economic Analysis of Terrorism Events (CREATE),” presented to the *Military Officers of America Association (MOAA)*,

Orosz, Michael, D.

Glendale, CA, 17 October 2009 (keynote speaker)

- Kichkaylo, T., Ryutov, T., **Orosz, M.D.**, and Neches, R.T., “Planning to Discover and Counteract Attacks,” presented at the *Quantitative Risk Analysis for Security Applications (QRASA) Workshop, IJCAI 2009*, Pasadena, CA, 11-17 July 2009
- **Orosz, M.** “FASTRANS – Food and Agriculture Sector Movement and Marketing Model,” presented at the *2009 Los Alamos National Laboratory Risk Symposium*, Santa Fe, NM, 7-9 April 2009
- **Orosz, M.** “PortSec: Port Operations Modeling for Security Risk Management and Resource Allocation,” presented at the *3rd Annual DHS University Network S&T Summit*, Washington DC, 17-19 March 2009
- **Orosz, M.**, Hoffman, J., Clarke, N., Kennedy, S., “National Food and Agriculture Sector Transportation and Movement Model and FASTRANS,” presented at the *2008 IEEE International Conference on Technologies for Homeland Security HST '08*, Waltham, MA, 12-13 May 2008
- Ryutov, T., Kichkaylo, T., Neches, R. & **Orosz, M.**, “SFINKS: Secured Focus Information, News, and Knowledge Sharing,” presented at the *IEEE International Conference on Technologies for Homeland Security HST '08*, Waltham, MA, 12-13 May 2008
- **Orosz, M.** “FASTRANS: Modeling the Interstate Movement of Animals and Commodities – A Necessary Step in Disease Spread Modeling,” presented at the *2nd Annual DHS University Network S&T Summit*, Washington DC, 19-20 March 2008
- **Orosz, M.** and Clarke, N. “Overview of Risk Analysis Research at the National Center for Foreign Animal and Zoonotic Diseases (FAZD) Defense,” presented at the *2008 Los Alamos National Laboratory Risk Symposium*, Santa Fe, NM, 11-13 March 2008
- Kichkaylo, T. **Orosz, M.** and Neches, R. “Semantic Information Channeling,” presented at the *Undersea Distributed Networked Systems Conference*, NDIA, Newport, RI 13-15 February 2007
- Kichkaylo, T., Neches, R., **Orosz, M.**, & Yao, K-T., “Making Sense of Adversaries’ Plans,” *Collaborative Sensemaking Workshop*, University of Maryland, College Park, MD, 1 June 2007
- **Orosz, M.** “CREATE Risk Analysis Workbench and FAZD Center Activities,” presented at the *1st Annual DHS University Network S&T Summit*, Washington DC, 16 March 2007
- **Orosz, M.** and Neches, R., “Smart Attention Management Aided by Negotiation Technology to Heighten Alertness (SAMANTHA).” Presented at *DARPA Augment Cognition Conference*, Austin, TX, December 2001
- **Orosz, M. D.**, Karplus, W. J., and Balakrishnan, J. D., “Virtual 3-D audio and the flight control room: implementation,” presented at the *2001 UCLA-NASA Annual Research Review*, NASA-Dryden Flight Systems Research Center, Edwards, CA, 14 May 2001.
- **Orosz, M. D.**, “Methods for controlling human/computer interfaces,” Poster presented at the *UCLA Computer Science Department Research Review*, Los Angeles, CA, 8 April 1999.
- Balakrishnan, J. D., **Orosz, M. D.**, and Karplus, W. J., “Virtual three-dimensional audio and the mission control room,” presented at the *1999 UCLA-NASA Annual Research*

Orosz, Michael, D.

Review, NASA-Dryden Flight Systems Research Center, Edwards, CA, 28 March 1999

- **Orosz, M. D.**, “Three-dimensional audio in the human computer interface,” Poster presented at the *UCLA Computer Science Department Research Review*, Los Angeles, CA, 7 April 1998.
- **Orosz, M. D.** and Bradley, N.S., “An algorithm to correct errors in 2D kinematic data due to movement out-of-plane,” poster presented at the *Society of Neuroscience Annual Meeting*, Washington DC, November 1993.

DISSERTATION/THESIS COMMITTEES

- Member Dissertation Committee, Mayaguez Salinas, School of International Relations, USC Dornsife College of Letters, Arts and Sciences (January 2015 – Present)
- Member Dissertation Committee, Zheng Yang, Department of Civil and Environmental Engineering (July 2014 – Present)
- Member Dissertation Committee, Ali Ghahramani, Department of Civil and Environmental Engineering (August 2013 – Present)
- Member Thesis Committee. Erroll Southers, DPPD, USC Price School of Policy and Planning (August 2011 - August 2013)

PATENTS

- Human-Building Interaction (HBI) Framework for Personalized Comfort Driven System Operations in Office Buildings, Disclosure filed, Application Number 61/789,810, USC File Number 13-308, Patent application submitted, March 2014
- Probabilistic risk assessment and management system for critical infrastructure protection, Disclosure filed, USC File Number 2014-143, December 2013
- System and Method of Adjusting Audiovisual Content to Improve Hearing, **Patent No. 8,239,768**. Co-holder, 7 August 2012

MEDIA INTERVIEWS

5 Feb 2015	USC Annenberg TV – Alyssa Nakamoto (audio interview) Topic: Anthem Data Breach
22 Dec 2014	Associated Press – Tami Abdollah, Law Enforcement Reporter Topic: Sony Picture Studios Hack and Attribution to North Korea
17-18 Dec 2014	KCAL-9, KCBS-2, FOX-11, KNX-1070 Talk Radio and KPCC Take Two Topic: Sony Picture Studios decision to pull showing of “The Interview” – terrorism threat
1 August 2014	ARD German Radio (Wolfgang Stuflesser – Correspondent) Topic: Views on challenges with the US-EU Safe Harbor Act
17 July 2014	NBC/Universal (Mary Harris - Producer)

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Topic: Downing of Malaysia Airlines MH17

30 June 2014

KPCC Interview (Sanden Totten)

Topic: Smart Grid Regional Demonstration Project (SGRDP)

25 April 2014

KPCC Interview (Erica Aguilar)

Topic: USC/LAPD/LASD Cyber Certificate for detectives

4 March 2014

KTLA Interview

Topic: Phishing attacks

LECTURES

26 May 2015

Course IR 440 (USC-SMU Joint Course)

Institution, University of Southern California, School of International Relations

Title: Cyber Security and USC-Asian Policy Considerations

3 November 2014

Course: PPD 683 (Annual Lecture)

Institution: University of Southern California, Sol Price School of Public Policy

Title: Intelligence Community

9 Sep 2014

Course: ISE 651

Institution: University of Southern California

Title: USC Smart Grid Project

5 Aug 2014

Course: Executive Program In Counter-Terrorism

Institution: University of Southern California

Title: Intelligence Community – What, When, Where, How and Why?

17 July 2014

Course: Basic Cybercrime Investigation

15 May 2014

Institution: University of Southern California, Los Angeles Police Department and Los Angeles Sheriff's Department

Title: Social Media Investigation Basics

28 October 2013

Course: PPD 683 (Annual Lecture)

Institution: University of Southern California, Sol Price School of Public Policy

Title: Intelligence Community

31 July 2013

Course: Executive Program In Counter-Terrorism

Institution: University of Southern California

Title: Intelligence Community

31 October 2012

Course: PPD 683 (Annual Lecture)

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Institution: University of Southern California, Sol Price School of Public Policy
Title: Intelligence Community

25 October 2012

Course: CE 515
Institution: University of Southern California, Viterbi School of Engineering
Title: Demand Response & Customer Behavior – Research in Sustainability and Energy Management

BOOKS REVIEWED

Dec 2012 “Beyond the Storms, Strengthening Security & Resilience in the 21st Century”, by Dane S. Egi, Johns Hopkins University, Applied Physics Laboratory

VIDEOS

May 2015 LADWP Smart Grid Series (Vol: 1-6):
https://www.youtube.com/results?search_query=ladwp+smart+grid

BRIEFINGS

Available on request, but I speak frequently to government and academic audiences

PROFESSIONAL SOCIETIES

- Institute of Electrical and Electronics Engineers (IEEE), 1990 to present
- Society of Risk Analysis (SRA), 2009 to present
- Association for Computing Machinery (ACM), 1990 to 2002
- Audio Engineering Society (AES), 1995 to 2000

PROFESSIONAL HONORS AND AWARDS

- Meritorious Service Award, Information Sciences Institute, University of Southern California, Marina del Rey, CA, 2003
- Member of R&D Sony Pictures Entertainment Team that won Academy Award for Scientific Achievement for Sony Dynamic Digital Sound (SDDS), Los Angeles, CA, 1996
- President, Student Chapter of the Society of Automotive Engineers, University of California, Los Angeles, CA, 1995-1996
- Outstanding Graduating Senior in Engineering Mathematics, Colorado School of Mines, Golden, CO, 1983
- Colorado School of Mines Board of Trustees Scholarship, Colorado School of Mines, Golden, CO, 1979 – 1983

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PROPOSALS/PROJECTS REVIEWED

- US Department of Energy, Energy Efficiency & Renewable Energy, Building Technologies Office – Peer Review, Washington, DC, 14-16 April 2015
 - Member of review panel
- National Center for Food Protection and Defense (NCFPD), February 2014
 - Member of Research Evaluation and Advisory Panel (REAP)
 - DHS Center of Excellence
 - University of Minnesota
 - Three proposals
- National Center for Risk and Economic Analysis of Terrorism Events (CREATE), May 2012
 - DHS Center of Excellence
 - University of Southern California
 - Three proposals
- National Center for Foreign Animal and Zoonotic Diseases (FAZD), January 2011
 - Member of Research Evaluation and Advisory Panel (REAP)
 - DHS Center of Excellence
 - Texas A&M University
 - Eight proposals
- National Center for Food Protection and Defense (NCFPD), June 2010
 - Member of Research Evaluation and Advisory Panel (REAP)
 - DHS Center of Excellence
 - University of Minnesota
 - Eight proposals
- National Center for Food Protection and Defense (NCFPD), August 2009
 - DHS Center of Excellence
 - University of Minnesota
 - Six proposals
- National Center for Food Protection and Defense (NCFPD), August 2007
 - DHS Center of Excellence
 - University of Minnesota
 - Two proposals

UNIVERSITY SERVICE

2006 – Present Member, Planning Committee, CREATE Executive Program on Counter-Terrorism

2006 Member, ISI project management committee

COMMUNITY SERVICE

- Volunteer, Compton HS Science Day, 2014 to present
- Volunteer, LAUSD Career Day, 2008 to present
 - STEM outreach initiative to 5th/6th grade minority students

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- Member and Co-founder WPC PATH (People Assisting The Homeless) **Adopt-A-Meal Program**, Westwood Presbyterian Church, Los Angeles, 2005 – Present
 - 40K+ meals prepared and served
- Member, Westwood Presbyterian Church Investment/Endowment Task Force, 2015 to Present
- Member, Westwood Presbyterian Church Nominating Committee, 2014-present
- Chair, Westwood Presbyterian Church Finance Committee (11 members), 2011 to 2014
 - Treasurer and Chief Financial Officer
 - Chair, Investment sub-committee
 - Member of the Session (Board of Directors)
 - \$11M+ investment portfolio (real estate and equities)
 - \$1M+ annual budget
- Volunteer, UCLA Masters Swimming, 1999 to present
 - Timer at swim events
- Co-Chair, Westwood Presbyterian Nominating Committee (9 members), 2009 to 2010
- Chair, Westwood Presbyterian Church Pastor Transition Committee (14 members). Los Angeles, California 2009 to 2010
- Chair, Congregational Life Committee, Westwood Presbyterian Church, Los Angeles, California, 2008 to 2010
- Co-Chair, Westwood Presbyterian Church Homecoming Planning Committee, Los Angeles, California, 2008
- Church Elder, Westwood Presbyterian Church, Los Angeles, California, 2007 to present
- Community Outreach Committee, Westwood Presbyterian Church, Los Angeles, 2007 to 2009
- Congregational Life Committee, Westwood Presbyterian Church, Los Angeles, 2007 to 2009
- Member Pastoral Succession Committee, Westwood Presbyterian Church, Los Angeles, 2007
- Moderator, Board of Deacons, Westwood Presbyterian Church, Los Angeles, 2005 – 2006
- Member, Board of Deacons, Westwood Presbyterian Church, Los Angeles, 2004 - 2006