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BI-ANNUAL MEETING PROGRAM

NOVEMBER 14, 2017 • USC TUTOR CENTER • LOS ANGELES, CA

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AMP SoCal Bi-Annual Meeting

8:00 AM  Registration and Continental Breakfast

9:00 AM  Opening Remarks and Overview
   Libby Williams, USC Center for Economic Development - AMP SoCal

9:15 AM  Bi-Annual Meeting Welcome Presentations
   Wilfred Marshall, California Regional Economic Development Representative, U.S. Economic Development Administration
   Al Muratsuchi, Assemblymember, 66th Assembly District
   Jack H. Knott, Ph.D., Dean, USC Sol Price School of Public Policy

9:30 AM  Keynote Address
   Robert M. Atkins, Lt Colonel, USAF

10:00 AM Panel 1: Next Generation - The Future of Aerospace
   Moderator: Robert M. Atkins, Lt Colonel, USAF
   Gaia Dempsey, DAQRI
   Shane Fleming, Rocket Lab
   Talbot Jaeger, NovaWurks

11:15 AM Break

11:30 AM The Uniquely Abled Academy: An Answer to the Shortage of CNC Operators
   Ivan Rosenberg, Ph.D., The Uniquely Abled Project
   Björn N.P. Paulsson, Ph.D., Paulsson Inc.

12:00 PM Networking Lunch

12:50 PM Sponsor Introduction: California Association for Local Economic Development (CALED)
   Jason Crawford, Chair, CALED

1:00 PM Panel 2: Technology of the Future
   Moderator: Michael Orosz, PhD, USC Viterbi School of Engineering
   Melissa Orme, Morf3D
   John Malinzak, Aerojet Rocketdyne
   Ray Elledge, Verisurf

2:15 PM Break

2:30 PM From Startup to Upstart: Growing Your Company for Tomorrow’s Industry
   David Tearse, Starburst Accelerator
   Tim Ellis, Relativity Space

3:00 PM Closing Remarks

3:15 PM Adjourn
DEAR ATTENDEES,

It is my pleasure to welcome you to the third Advanced Manufacturing Partnership for Southern California (AMP SoCal) Bi-Annual Meeting. On behalf of the Price School - USC Center for Economic Development (CED), and AMP SoCal partners, I want to thank you for joining us today.

We are excited to present an outstanding line-up of speakers and panelists who are representing the future of aerospace and defense in Southern California. Cutting-edge technology such as virtual reality, metrology, additive manufacturing and innovative approaches to the commercial space industry are opening the door to new investment and opportunities. Lewis Group of Companies has generously sponsored today’s evening reception. We hope that you will join us following the Economic Development Workshop where we will explore how local agencies can support manufacturing in their communities.

The collaboration has grown and developed over the past three years, but we know that there is still much to be done. That’s why it is so instrumental to have the participation of business and industry leaders like you. It is my hope that you leave with valuable information and the knowledge that you have AMP SoCal as an asset, advocate and resource for the success of your company and community.

Sincerely,

Leonard Mitchell
Executive Director of USC Center for Economic Development
Principal Investigator for AMP SoCal

Special thanks and acknowledgment to our friends and supporters at EDA

WELCOME

ECONOMIC DEVELOPMENT WORKSHOP

3:30 PM  Welcome and Introduction
    Wilfred Marshall, California Regional Economic Development Representative,
    U.S. Economic Development Administration

3:40 PM  Presentation: The State of the Aerospace & Defense Industry in SoCal
    Sol Price School of Public Policy - USC Center for Economic Development

4:00 PM  Panel 1: Growing Successful Manufacturers Locally through Public-Private Partnerships
    Featuring economic developers and manufacturers from across the region

5:00 PM  Networking Reception
    Sponsored by Lewis Group of Companies

6:30 PM  Adjourn
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CO-APPLICANTS
Leonard Mitchell, J.D., M.B.A., M.A.
Professor of the Practice of Economic Development
Executive Director, USC Center for Economic Development
Director, the National Center for Eco-Industrial Development
Lead Co-Applicant & Principal Investigator, AMP SoCal

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Lydia Moreno
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Marissa Rivera
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SPEAKERS

Opening Remarks and Overview

Libby Williams, Project Manager & Economic Development Specialist
USC Center for Economic Development-AMP SoCal

Elizabeth “Libby” Williams has more than 20 years of economic development experience working in Southern California which includes among other things, over 10 years at the Los Angeles County Economic Development Corporation with the Business Assistance Program. In 2007, Ms. Williams became the Executive Director of the Los Angeles Economy and Jobs Committee, a private-sector advisory board created by Los Angeles Mayor Antonio Villaraigosa to work with him on key issues of economic development and quality job creation in Los Angeles. Ms. Williams coordinated the committee’s activities to evaluate business attraction and retention efforts in Los Angeles and develop recommendations for action and improvement. Ms. Williams has a BA and an MPA from California State University at Long Beach and a Master in Leadership from the University of Southern California.

Partner Welcome


Wilfred L. Marshall has served more than 30 years in public service in policy development and management at the Executive Level in both federal and local governments. He performed during the past 12+ years as Economic Development Representative (EDR) for Southern and Central California and most recently added to his area of responsibility the state of Nevada which combined represents approximately 30+ million people.

Having spent eleven years as Deputy Mayor for Small Business and Economic Development, working with Mayor Tom Bradley, Mayor of Los Angeles, Mr. Marshall managed and operated programs that promoted and assisted industrial and commercial development activity and created contract opportunities for small and minority firms throughout the Los Angeles area. Mr. Marshall fostered the development of the Director 1B, a special program that mandated greater participation in business activity for small and minority businesses throughout Los Angeles. A form of this program still exists today in the Los Angeles city government.

District Welcome

Al Muratsuchi, Assemblymember
California’s 66th Assembly District

Assemblymember Al Muratsuchi (D-Torrance) represents California’s 66th Assembly District, located in the South Bay of Los Angeles County. He is a former prosecutor and Deputy Attorney General with the California Department of Justice and a former Torrance School Board member.

As Chairman of the Assembly Select Committee on Aerospace, Mr. Muratsuchi has authored laws like AB 777 and AB 2389 to help aerospace leaders like SpaceX and Northrup Grumman grow and create jobs. Mr. Muratsuchi also wrote AB 2188, a law that streamlines bureaucratic regulations to help small businesses. Mr. Muratsuchi has received the California Legislator of the Year Award from the California Solar Energy Industries Association, Alliance of Automobile Manufacturers, and Global Automakers.

Mr. Muratsuchi lives in the South Bay with his wife, Dr. Hiroko Higuchi, and his daughter. He is a graduate of the University of California, Berkeley, and the UCLA School of Law.
Jack H. Knott took the reins of the USC Sol Price School of Public Policy in August 2005 as the C. Erwin and Ione L. Piper Chair and Professor. Before joining USC, Dean Knott served from 1997 until 2005 as professor of political science and director of the Institute of Government and Public Affairs at the University of Illinois at Urbana-Champaign and Chicago. From 1987 to 1997, Dean Knott was a professor in the Department of Political Science at Michigan State University, where he served as departmental chair and director of Michigan State's Institute for Public Policy and Social Research.

Dean Knott is a leading scholar in the fields of political institutions and public policy, health policy, and public management. He has published three books, including Reforming Bureaucracy: The Politics of Institutional Choice, and numerous journal articles and book chapters. He received his Ph.D. in political science from the University of California, Berkeley, his M.A. in comparative political economy from the School of Advanced International Studies at The Johns Hopkins University, and his undergraduate degree in history from Calvin College.

Robert M. Atkins, Lt Colonel, Deputy, Generation and Ops Division, Launch Enterprise Directorate US Air Force

Lieutenant Colonel Robert M. Atkins has over 19 years of space system experience in every Air Force Space Command (AFSPC) mission area. He is responsible for the procurement, acquisition, and integration of the Atlas V, Delta IV, and Falcon 9 launch vehicles. Col Atkins first served in the strategic nuclear alert mission area performing duties as a Minuteman III ICBM Missile Combat Crew Commander, Instructor, and Evaluator. Following his ICBM assignment, Col Atkins was selected for an Education with Industry (EWI) fellowship working with Lockheed Martin. In this capacity he focused on program management, systems engineering, manufacturing, and supply chain management. He developed and led an Independent Audit Team to validate the engineering, structures, and ground systems leading to the first-ever Evolved Expendable Launch Vehicle Interplanetary launch of the Pluto New Horizons mission.

Following his EWI assignment, he was Chief of several departments within launch, satellite, and National Reconnaissance Office (NRO) programs. In 2012, he deployed to Director of Space Forces, USAFCENT in a NRO/National Geospatial Intelligence Agency (NGA) capacity where he designed assessment tools to enable the largest Space Control deployment ever. Col Atkins created a Joint “Find, Fix, Kill” strategy for the Arabian Gulf defense plan and pulled together diverse teams throughout Central Command to enhance satellite electro-magnetic interference tracking. Following his deployment, he served as Chief of space situational awareness and space control assets at Headquarters AFSPC. He led the disassembly, transportation and fielding of the C-Band Space Surveillance Radar, and ownership change of the DARPA-built Space Surveillance Telescope (SST), and formed an agreement between US and Australia for relocation to the Naval Communications Station Harold E. Holt, Western Australia. The C-Band and SST will be dedicated sensor nodes for the Space Surveillance Network.

Additionally, Col Atkins founded Space Innovation Academy as a non-profit organization designed to build a bridge between education and the space arena by inspiring bright minds to pursue a career in the space industry. The program has had rocketing success with the course being taught by 16 space professional volunteers, at seven Los Angeles high schools to over 650 students. Col Atkins earned his undergraduate in Business Administration from the University of Oklahoma and received graduate degrees in Management Information Systems and Space Systems Operations from the University of Maryland and Naval Postgraduate School respectively.
Panel 1: Next Generation - The Future of Aerospace

Featuring companies that are disrupting the industry's status quo while finding a new way to do business

Gaia Dempsey, Co-Founder & Vice President
DAQRI

Gaia Dempsey is the Co-Founder and VP of Corporate Affairs at DAQRI. An entrepreneur and activist in the field of augmented reality, Ms. Dempsey's role is focused on driving the adoption of DAQRI's augmented reality and holographic technologies worldwide. Ms. Dempsey led DAQRI's international expansion and opened DAQRI's first European office in Dublin, Ireland. Ms. Dempsey currently leads business excellence, establishing global, scalable business processes, drives revenue by securing new partnerships and government projects, and evangelizes the company through public speaking and thought leadership.

Shane Fleming, Vice President, US Operations
Rocket Lab

Shane Fleming is responsible for the management operations of Rocket Lab's headquarters in Huntington Beach, California. Previously, Shane managed the operations at Rocket Lab's Auckland, New Zealand facility, as well as Launch Complex 1. With a decade of experience developing and commercializing innovative and disruptive technologies, Mr. Fleming is accustomed to leading diverse teams and navigating complex international projects.

Prior to Rocket Lab, Mr. Fleming spent seven years at biotechnology firm LanzaTech, leading the Global Engineering Operations and managing teams of engineers, scientists, and technicians at five production facilities in four countries across China, Taiwan, Japan, and the US. Mr. Fleming has a background in mechanical engineering from the University of Colorado Boulder.

Talbot Jaeger, Founder & Chief Technologist
NovaWurks

Talbot Jaeger is the founder and chief technologist at NovaWurks™ Inc., a provider of high technology space products and services. Mr. Jaeger leads the NovaWurks team and is responsible for business development and all projects at the company. With more than 30 years of experience in the aerospace industry, Jaeger has managed and directed project concepts, systems engineering, ground and 10 spaceflight operations. In addition, he led the development of the Mayflower CubeSat, a highly-integrated building block, delivering product from initial design to the launch integrator in just six months.

Prior to establishing NovaWurks, Mr. Jaeger began his career at TRW (later Northrop Grumman) as an electrical engineer. He held increasingly complex positions within the company, including Director of Novaworks, a sub-division of Northrop Grumman. Mr. Jaeger has bachelor degrees in biochemistry and information computer science with a minor in electrical engineering from the University of California, Irvine. He also holds a professional graduate certificate in optical sciences from the University of Arizona. He resides in Los Alamitos, Calif. with his wife and nine children.
Ivan Rosenberg, Ph.D., Founder & President, Uniquely Abled Project

Dr. Ivan M. Rosenberg, the Founder and President of the Uniquely Abled Project (UAP), is also Managing Partner of the management consulting firm InVista Associates, Inc., and is Co-Founder and Executive Director of the Aerospace & Defense Forum. He has been the Industry Representative on the AMP SoCal Executive Council since its inception.

Dr. Rosenberg has led the UAP since its founding 5 years ago, supporting the development and growth of Uniquely Abled Academies, which teach and place those with high functioning autism in jobs as CNC machinists.

He has over 30 years experience as a management consultant and change agent, supporting leaders who are committed to achieving breakthrough results in organizational and individual performance. He has consulted with a number of commercial A&D companies and civil space organizations, including NASA HQ, JPL, Langley, and 19 robotic space missions.

Dr. Rosenberg received Bachelor and Masters degrees in Electrical Engineering and Computer Science from Cornell University and M.S. and Ph.D. degrees in Management from the University of Rochester.

Björn N.P. Paulsson, Ph.D., Paulsson, Inc.

Dr. Björn N.P. Paulsson received a Fil.Kand. Degree in Geology from U. of Gothenburg, Sweden, in 1976 and a Ph.D. in Geophysics and Rock Mechanics from the University of California at Berkeley in 1983. For his Ph.D. thesis he developed a time lapse seismic technique to characterize and monitor a fractured rockmass for the storage of high level nuclear waste.

He founded Paulsson, Inc. (PI) in 2009 to continue his work developing and applying his unique borehole seismic technology onto the reservoir imaging problems in the oil and gas industry. He founded Paulsson Geophysical Services, Inc. (P/GSI) in 1997 as a spinoff company from Chevron Oil Field Research Company to commercialize a unique downhole seismic source he developed while at Chevron. At Paulsson Geophysical Dr. Paulsson invented and developed large seismic receiver array technology for boreholes. Paulsson Geophysical was the first company to introduce large, over 100 3C levels, borehole seismic arrays to the geophysical industry for the recording of large 3D VSP and cross well surveys. Between 1984 and 1997 Dr. Paulsson was a Senior Research Geophysicist with Chevron Oil Field Research Company (COFRC) introducing borehole and time lapse seismic technology to Chevron Corporation.

California Association for Local Economic Development (CALED)

Sponsor Introduction

Jason Crawford, Chair
California Association for Local Economic Development (CALED)

Jason Crawford is the Economic Development and Marketing Manager for the City of Santa Clarita. In 2008, Mr. Crawford was named as the “New Economic Developer of the Year” by the International Economic Development Council. Mr. Crawford holds a Bachelor’s degree in Film from CalArts, a Master’s degree in Public Administration from California State University Northridge, and an American Institute of Certified Planners (AICP) certification. Mr. Crawford is currently the Chair for the California Association for Local Economic Development (CALED).
Panel 2: Technology of the Future

Exploring how manufacturers are applying cutting-edge technology for improved efficiency

Michael Orosz, Ph.D., Research Director, Decision Systems, Information Sciences Institute, USC Viterbi School of Engineering, University of Southern California

Dr. Michael Orosz directs the Decision Systems Group at the University of Southern California's Information Sciences Institute, is a Research Associate Professor in USC's Sonny Astani Department of Civil and Environmental Engineering, and a member of the USC Center for Advanced Manufacturing (CAM). Dr. Orosz has over 30 years of experience in commercial and government software development, basic and applied research and development, project management, academic research, and has developed and deployed several commercially successful products. His research interests include decision systems, data analytics, machine-learning, cyber-physical systems and security, and intelligent human-computer interfaces.

Dr. Orosz received a B.S. in Engineering from the Colorado School of Mines, a M.S. in Computer Science from the University of Colorado, and a Ph.D. in Computer Science from the University of California, Los Angeles. Prior to joining USC, Dr. Orosz worked in the aerospace, defense, motion picture entertainment, engineering consulting, and natural resource extraction (mining) industries.

Melissa Orme, Ph.D., Chief Technology Officer, Morf3D, Inc.

Melissa Orme, Ph.D. was born and raised in Southern California. She earned her doctorate degree in Aerospace Engineering at the University of Southern California. Her career has been divided between academia and small business. On the academic front, she worked as a Professor at UCI for twelve years, where she rose to the rank of Full Professor.

She was an early pioneer in the field of 3D printing of metallic parts resulting in 15 US patents and 3 pending. Her cutting-edge research on net-form manufacturing of metallic components received international recognition and numerous awards, among which include the N.S.F. Young Investigator Award and the AAUW Judith Resnick Fellowship Award.

Dr. Orme currently serves as CTO of Morf3D, Inc., a start-up company that is focused on Additive Manufacturing of metallic components primarily for the Aerospace and Defense Industry.

John Malinzak, Director of Quality & Mission Assurance, Aerojet Rocketdyne

John Malinzak serves as Director of Quality & Mission Assurance (Q&MA) for Aerojet Rocketdyne Los Angeles facility. Mr. Malinzak joined Aerojet Rocketdyne in 1988 and is responsible for the improvement and Quality Management of the Los Angeles site products, processes and maintenance. He works closely with the sites programs to continuously improve Q&MA systems and processes.

He has held various leadership positions during his 28-year career with the company, most recently as director for the Los Angeles manufacturing engineering and program integration function. Mr. Malinzak holds a Bachelor of Science in Mechanical Engineering from The University of Akron.
Tim Ellis, Co-Founder & Chief Executive Officer
Relativity Space

Tim Ellis is the Co-founder and CEO of Relativity Space, the first autonomous factory and launch service for rockets. Relativity recently created the largest metal 3D printer in the world. He previously was responsible for bringing metal 3D printing to Jeff Bezos’ Blue Origin, and was a propulsion development engineer on BE-4, BE-3, crew capsule RCS thrusters, and New Glenn. He is an alumni of USC, where he played a leadership role in launching a fully student designed and built rocket into near space. Mr. Ellis has spoken at TEDx and has testified to the US Senate on commercial space policy. Relativity is backed by Social Capital, Y Combinator, and Mark Cuban.

Ray Elledge, Education Program Manager
Verisurf Software Inc.

Mr. Ray Elledge 40 years of advanced manufacturing experience is wide and varied. He joined Verisurf 3D Measurement Solutions in 2014 as Sales & Education Manager. Additionally he serves AMP SoCal as Chair of the Workforce Development pillar. His experience with Dimensional Metrology involves the measurement science of large objects to close tolerances spans over 30 years. He has supported major airframe, rocket, missile, satellite and automotive manufacturers in the USA including the US Marines and Navy with inspection, measurement, alignment, analysis and tooling fabrication.

Mr. Elledge is a recipient of the U.S. Department of Commerce, NIST- MEP Award for MAIM High Performance; and the U.S. Department of Defense, Mentor Protégé Nunn-Perry National Award with Boeing & CMTC. He holds a BA and MBA in Business & Management from the University of Phoenix with further studies at Purdue University and USC Marshall.

From Startup to Upstart
Growing Your Company for Tomorrow’s Industry

David Tearse, Tech and Industry Analyst
Starburst Accelerator

David Tearse joins the Starburst Accelerator as a Tech and Industry Analyst in the Los Angeles office upon his completion of his B.S. in Aerospace Engineering from the University of Southern California. Prior to joining the Starburst team, Mr. Tearse was the Director of Operations at Global Intelligence Trust, a startup company that provided original research on worldwide topics. Mr. Tearse started out as a Finance and Innovation Specialist for Global Intelligence Trust before being promoted to Director of Operations in August of 2016.

All presentations are recorded throughout the day.
Videos from the event will be available for viewing on the AMP SoCal website at ampsocal.usc.edu/presentations
ABOUT AMP SoCal

The Advanced Manufacturing Partnership of Southern California (AMP SoCal) is a collaboration of government, academia and industry united in the common goal of strengthening the industrial ecosystem for aerospace and defense manufacturers throughout the 10-county Southern California region. The Price School-USC Center for Economic Development leads the AMP SoCal effort, in partnership with the City of Los Angeles, and more than 150 companies and organizations. Together the AMP SoCal network leverages the combined knowledge, innovation and support of its members to grow and sustain the A&D industry and its supply chain. To learn more about how AMP SoCal is building a better future for the A&D industry, visit AMPSoCaL.org.

Thank you to our sponsors:

- **Platinum Sponsor** - California Association for Local Economic Development (CALED), California Enterprise Development Authority (CEDA), March Joint Powers Authority
- **Gold Sponsor** - California State University, Northridge
- **Reception Sponsor** - Lewis Group of Companies
- **Silver Sponsor** - City of Perris
- **Special Thanks** - Elsevier, County of Riverside

UPCOMING EVENTS

**California Aerospace and Aviation Days 2018**
March 12, 2018
California State Capitol
Sacramento, CA

**CALED’S 38th Annual Training Conference: Engage**
March 14-16, 2018
Monterey Marriott
Monterey, CA

**AERODEF Manufacturing Conference**
March 26-29, 2018
AMP SoCal Booth, Long Beach Convention Center
Long Beach, CA

**AMP SoCal Innovation Forum: Lasers & Photonics**
Spring 2018
March Joint Powers Authority
Riverside, CA

**AMP SoCal Bi-Annual Meeting**
Spring 2018
TBD
Los Angeles, CA
California Aerospace and Defense

Value Added: $18.7 Billion
Average Wages: $100,000
17% National Employment: 102,630

SoCal Industry Cluster Employment

- A&D: 91,387
- Agriculture: 76,374
- Medical Device: 31,490
- Biopharma: 20,755

Northern California

- DoD A&D Spending: $9.79 Billion
- Home to 15% of U.S. A&D Manufacturing Firms
- 1,411 AS9100 Certified Firms

Southern California

- #1 Industry for Trade Value
- Los Angeles County: $7.3 Billion
- San Diego County: $1.2 Billion

USC Price
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Center for Economic Development
PROUDLY SUPPORTING A&D MANUFACTURERS IN THE SOUTHERN TEN COUNTIES OF CALIFORNIA