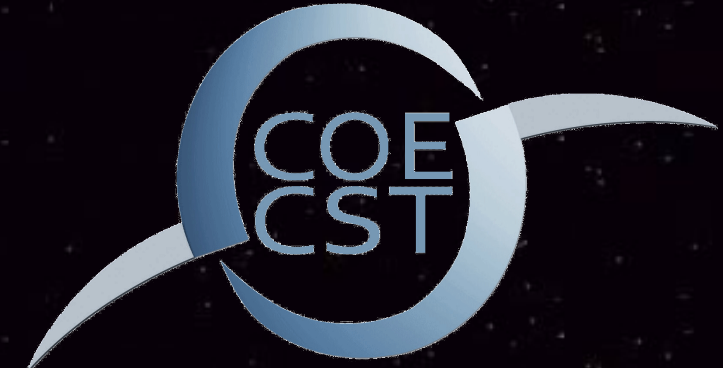


COE CST Tenth Annual Technical Meeting

Commercial Space Research Workshops

Greg Autry



Center of Excellence for
Commercial Space Transportation



Agenda

- Task Description
- Schedule
- Goals
- Research Partners
- Matching Funds
- Speakers
- Results
- Conclusions and Future Work

Principal Investigators / Organizations

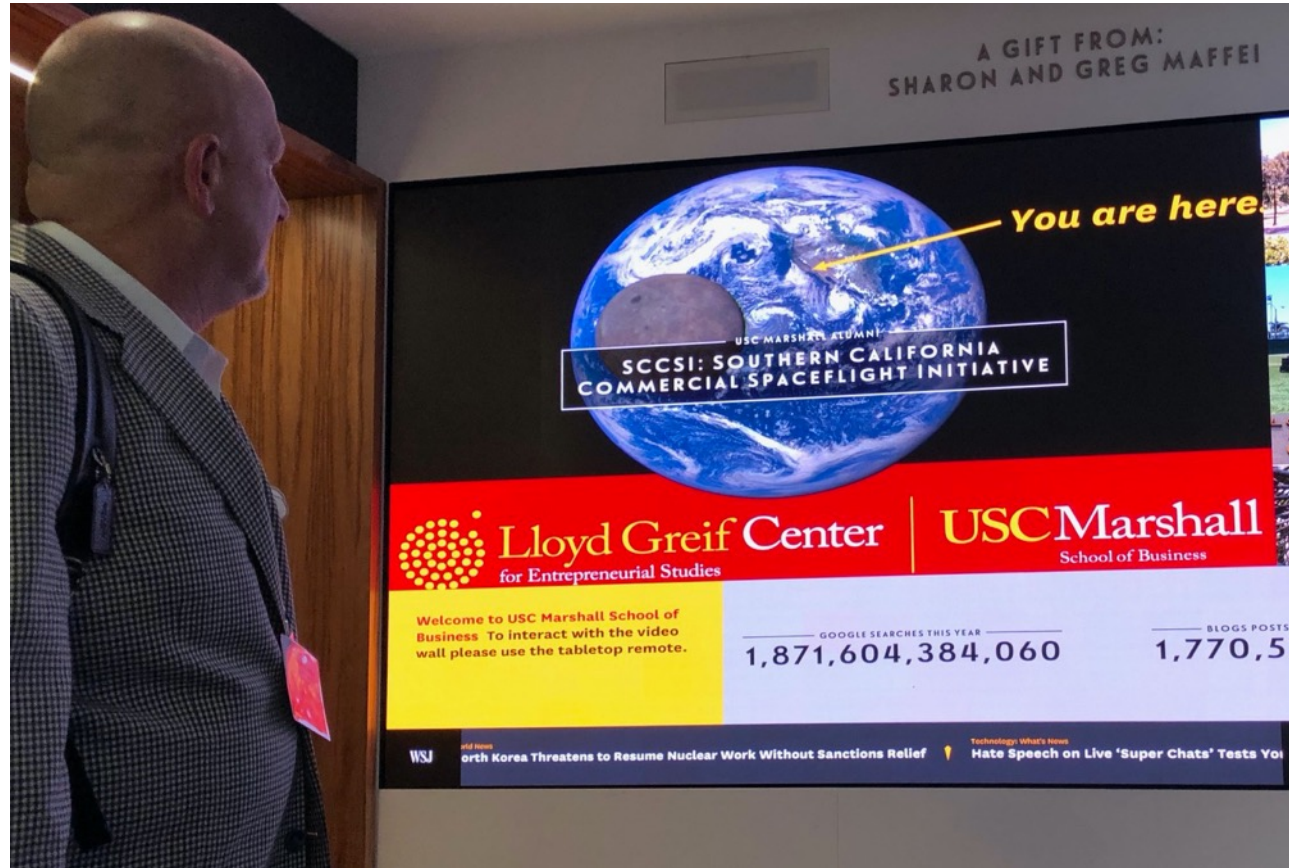
- Greg Autry, USC Marshall
- Andy Aldrin, Florida Tech

USC Marshall
GREATNESS SHARED.



Task Description

- Commercial Space Research Conference



Schedule

- 2018 Workshop: November 2,3 & 4
- 2019 Workshop: October 17 & 18
- 2019 MBDA Workshop: January 27

Goals

- Establish Connections Facilitating Research and Innovation
 - Academics: Engineering and Business
 - Industry Leaders
 - Policymakers
 - Regulators
 - Students
- Host Space nonprofits
 - NSS Space Settlement Summit
 - Moon Village Association Annual Meeting
 - Mars Society Annual Conference
 - Space Foundation, MBDA Workshop

Research Partners



Matching Funds

SPACEX

Relativity



MOJAVE
AIR & SPACE PORT

Deloitte.

2018 Speakers

- Jim Bridenstine, NASA Admin (remote)
- George Whitesides, CEO Virgin Galactic
- Charlie Bolden, Former NASA Admin
- Richard French, JPL
- Paul Wooster, Space
- Scott Macklin, Virgin
- Garrett Reisman, USC
- Dr. Scott Pace, National Space Council
- Ken Davidian, FAA AST
- Ward Hanson, Stanford
- Jeff Mathews, Deloitte
- Jen Rae Wang, former NASA AA
- Dr. Patricia Hynes, NMSU

2019 Speakers

- Kevin O'Connell
- Karina Drees, CEO Mojave Air & Space Port
- Shelli Brunswick, Space Foundation
- Amir Blachman, Axiom
- Jim Muncy, Policy Space
- Jenifer Woolley, Santa Clara University
- Jordan Noone, Relativity Space
- Terry Virts, former Astronaut
- Dr. Robert Zubrin, Mars Society
- Dr. Ken Davidian, FAA AST
- Dr. Feng Hsu, USAF Space Command
- Lt. Gen. Steven Kwast, USAF Ret.
- FBI CI (unnamed)
- Madhu Thangvelu, USC
- Dr. Allision Zuniga
- Dennis Wingo, Skycorp
- Lorretta Whiteside, Yuri's Night

Results



Awards Presented

- Space Entrepreneurship Scholar Award
 - 2018: Dr. Pat Hynes, NMSU
 - 2019: Dr. Andy Aldrin, FIT
- Space Entrepreneur of the Year Award
 - 2018 George Whitesides, Virgin Galactic
 - 2019 Jordan Noone, Tim Ellis, Relativity Space



Publications resulting from workshops

- *Relativity Space: Rocketing Into the Future of Manufacturing* HBSP Catalog July 15, 2020
 - Authored by attendees Bidushi Bhattacharya, Greg Autry, Veronica Perry
 - Protagonist workshop attendee Jordan Noone

Grant Award resulting from workshops

- *Terraforming Mars: A Sustainable Habitation and Development of Humanity's Second Home*, Interdisciplinary Teaching Grant (\$20,000)
- Course proposal and grant app conceived during the workshop by attendee faculty, industry and non-profit leaders
- Workshop attendee PI's: Greg Autry (Marshall School of Business), Dana Milstein (Dornsife College of Letters, Arts and Sciences - Writing Program), and Vahe Perroomian (Dornsife College of Letters, Arts and Sciences - Physics and Astronomy)

Conclusions and Future Work

- The workshops effectively connected academics and students to commercial space actors
- The workshops served the commercial space industry and nonprofits as well
- Two business case studies published in the HBSP catalog emerged from the effort
- Combining workshop with ASI workshop at Florida Tech