

THE WILLIAM E. BOEING DEPARTMENT OF **AERONAUTICS & ASTRONAUTICS**

... welcomes ...

LARS BLACKMORE SPACEX

Landing SpaceX's Reusable Rockets



SpaceX's reusable rocket program aims to reduce the cost of space travel by making rockets that can land, refuel and reflly, instead of being thrown away after every flight. Precise landing of a rocket is a unique problem, which has been likened to balancing a rubber broomstick on your hand in a windstorm. Rockets do not have wings (unlike airplanes) and they cannot rely on a high ballistic coefficient to fly in a straight line (unlike missiles).

In the past year, SpaceX has successfully landed five rockets, two of which were on dry land at Cape Canaveral, and three of which were on a floating platform in the Atlantic. This talk will discuss the challenges involved, how these challenges were overcome, and next steps towards rapid reusability.

The William E. Boeing Chair's Distinguished Seminar Series brings scholars of national and international reputation who have made an impact in the field of aerospace engineering and beyond. This seminar series will cover a diversity of topics of current interest to those in academia, industry and the general public. It is our hope that these monthly seminars will encourage an exchange of ideas and bring aerospace engineering and science to the forefront.



WILLIAM E. BOEING
DEPARTMENT OF AERONAUTICS & ASTRONAUTICS
UNIVERSITY of WASHINGTON

Monday, February 13, 2017 @ 4:00pm
Electrical Eng. Bldg. Rm 105 | UW Seattle

Visitor RSVP: contact@aa.washington.edu

THE WILLIAM E. BOEING DEPARTMENT OF
AERONAUTICS & ASTRONAUTICS

... Distinguished Guest Speaker ...



LARS BLACKMORE
SPACE X

Principal Rocket Landing Engineer

Lars Blackmore is responsible for Entry, Descent and Landing of SpaceX's Falcon 9 Reusable (F9R) rocket. His team developed the precision landing technology required to bring F9R back to the launch site. Previously, Lars was with the NASA Jet Propulsion Laboratory, where he was co-inventor of the G-FOLD system for precision landing on Mars, and was a member of the control team for the SMAP climate change observatory. Lars was recently named one of MIT Tech Review's "35 under 35" innovators. Lars has a PhD in Guidance, Navigation and Control from the MIT Department of Aeronautics and Astronautics, where he was a Kennedy Scholar, and recipient of the AIAA Guidance Navigation and Control Graduate Student Award.



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