

# STEPHEN KERN ROBINSON

*Curriculum Vitae - 2014*

**Current Position:** Professor of Mechanical and Aerospace Engineering, University of California at Davis

## Research Interests:

Enhancement of human/machine performance in hazardous environments  
Cockpit human factors, applied cognitive psychology, cockpit resource management  
Immersive virtual environments  
Physiological and perceptual/adaptive responses to microgravity  
Neuro-vestibular adaptation to environmental changes  
Optimized learning/training for aerospace operations, complex-simulation psychology  
Safety engineering, risk management, failure science  
Fundamental and applied fluid physics, especially boundary layers, turbulence, transition, and vortex-dynamics  
Turbulence modeling  
Applied aerodynamics: drag reduction, high-lift, separation control, stall/spin, hypersonic combustion, vortex-generation  
Computational Fluid Dynamics (CFD), Large-Eddy Simulation (LES), Direct Navier-Stokes Simulation (DNS)  
Scientific visualization of complex datasets  
Applications of stereo-vision for characterization, measurement, and manual control, and photogrammetry  
Human eyeball dynamics  
EVA (spacewalk) dynamics  
Multidisciplinary Design Optimization

## Education:

Stanford University:	Ph.D. Mechanical and Aero/Astro Engineering	1990
Dissertation:	<i>"The Kinematics of Turbulent Boundary Layer Structure"</i>	
Stanford University:	M.S. Mechanical Engineering	1985
University of California, Davis:	B.S. (dual) Mechanical and Aeronautical Engineering	1978

## Professional Experience:

University of California, Davis:	Professor, Mechanical and Aerospace Engineering	2012 - present
NASA Johnson Space Center:	Director, JSC Virtual Reality Laboratory	2012
NASA Johnson Space Center:	NASA Astronaut (4 shuttle missions, 3 spacewalks)	1995 - 2012
NASA Langley Research Center:	Head, Aerodynamics Element, General Aviation; also: Research Scientist, Multi-Disciplinary Design Optimization Branch (dual assignment)	1994 - 1995
Massachusetts Inst of Technology:	Man-Vehicle Lab, Visiting Scientist	1993 - 1994
U.S. Dept. of Transportation:	Volpe Research Center, Visiting Scientist	1993 - 1994
NASA Langley Research Center:	Chief, Experimental Flow Physics Branch	1990 - 1994
Princeton University:	Visiting Scientist	1986
R/T Imagery, Mtn. View, CA:	Founder and CEO, engineering/graphics software firm	1982 - 1986
NASA Ames Research Center:	Research Scientist, fluid physics and aerodynamics	1979 - 1990
NASA Ames Research Center:	Co-op intern, 3 periods	1974 - 1978

## Recognition:

UC Davis Excellence in Education Award - College of Engineering	2014
NASA Distinguished Service Medal (NASA's highest honor)	2011
NASA Spaceflight Medal (STS-130 Flight Engineer)	2010
NASA Thorne Safety Excellence Award	2007
NASA Spaceflight Medal (STS-114 Flight Engineer and Spacewalker)	2005
UC Davis Medal	2005
NASA Outstanding Leadership Medal	2000
University of California at Davis Distinguished Engineering Alumni Medal	1998
NASA Spaceflight Medal (STS-95 Payload Commander)	1998
NASA Spaceflight Medal (STS-85 Mission Specialist)	1997
NASA/Space Club G.M. Low Fellowship	1993
AIAA Outstanding Technical Paper Award for Applied Aerodynamics (co-author)	1992
NASA Ames Honor Award: Scientist of the Year	1989

## Personal:

Born:	1955, Sacramento, California
Enjoy:	Flying (3500+ hours), playing music, painting, literature, hiking, kayaking, stereo photography