

STEPHEN KERN ROBINSON

Curriculum Vitae - 2018

Current Position: Professor and Chair, Dept. of Mechanical and Aerospace Engineering, University of California at Davis
Director, UC Davis Center for Human/Robotics/Vehicle Integration and Performance

Research Interests:

Spacecraft design, CubeSat design, space radiation shielding, human life-support systems, operational space medicine
EVA (spacewalk) suit/glove design, spacesuit exoskeletons, spacewalk dynamics and human energetics
Enhancement of human/machine performance in hazardous environments
Cockpit human factors, applied cognitive psychology, cockpit resource management
Optimized learning/training for aerospace operations, complex-simulation psychology
Immersive virtual and augmented environments
Physiological and perceptual/adaptive responses to microgravity; Neuro-vestibular adaptation to environmental changes
Human eyeball dynamics
Safety engineering, risk management, failure science
Fundamental and applied fluid physics, especially: boundary layers, turbulence, transition, and vortex-dynamics
Turbulence structure and modeling
Applied aerodynamics: drag reduction, high-lift, separation control, stall/spin, vortex-generation/control
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

Education:

Stanford University:	Ph.D. Mechanical and Aero/Astro Engineering	1991
Stanford University:	M.S. Mechanical Engineering	1986
University of California, Davis:	B.S. (dual) Mechanical and Aeronautical Engineering	1978

Professional Experience:

University of California, Davis:	Chair, Dept. of Mechanical and Aerospace Engineering	2016 - present
University of California, Davis:	Professor (tenured), Mechanical and Aerospace Engineering	2012 - present
NASA Johnson Space Center:	Director, NASA JSC Virtual Reality Laboratory	2012
NASA Johnson Space Center:	NASA Astronaut (4 shuttle missions, 3 spacewalks)	1995 – 2012
NASA Langley Research Center:	Director, Aerodynamics Element, General Aviation Research; concurrent: Research Scientist, Multi-Disciplinary Design Optimization Branch	1994 - 1995
Massachusetts Inst of Technology:	MIT Man-Vehicle Lab, visiting neuro-vestibular scientist	1993 – 1994
U.S. Dept. of Transportation:	DOT Volpe Research Center, advanced flight simulation	1993 – 1994
NASA Langley Research Center:	Chief, Experimental Flow Physics Branch	1990 – 1994
Princeton University:	Visiting Scholar, experimental turbulence physics	1986
R/T Imagery, Mtn. View, CA:	Founder and CEO, engineering/graphics software firm	1982 – 1986
Stanford University	Graduate student (MS and PhD)	1981 – 1989
NASA Ames Research Center:	Research Scientist, fluid physics and turbulence modeling	1979 – 1990
NASA Ames Research Center:	Co-op intern, 3 periods; machinist, mechanic, and technician	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	1997, 1998, 2005, 2010
NASA Thorne Safety Excellence Award	2007
American Astronautical Society Neil Armstrong Space Flight Achievement Award	2006
University of California at Davis Medal (UC Davis' highest honor)	2005
NASA Outstanding Leadership Medal	2000
University of California at Davis Distinguished Engineering Alumni Medal	1998
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; dual citizen US/Canada
Enjoy:	Flying (3500+ hours), playing music, painting, literature, stereo photography, exploring, kayaking, farming
Languages	English, Russian (once fluent), French (understanding)