Suzanne Weaver Smith
University of Kentucky

(a) Professional Preparation

Clemson University	Clemson, SC	Mechanical Engineering	B.S., 1978
Clemson University	Clemson, SC	Engineering Mechanics	M.S., 1980
Virginia Tech	Blacksburg, VA	Engineering Mechanics	Ph.D., 1988

(b) Appointments

2013 – present	Director, Unmanned Systems Consortium, University of Kentucky
2010 – present	Director, NASA Kentucky Space Grant and EPSCoR Programs, UK
2004 – present	Donald and Gertrude Lester Professor of Mechanical Engineering, UK
2008 – present	Full Professor, Mechanical Engineering, University of Kentucky
1999 – 2000	Sabbatical Research, Aerospace and Mechanics, U. of Texas, Austin TX
1997 – 2008	Associate Professor, Mechanical Engineering, University of Kentucky
1990 – 1997	Asst/Assoc Professor, Engineering Mechanics, University of Kentucky
1988 – 1990	Visiting Assistant Professor, Engr Science and Mechanics, Virginia Tech
1986 – 1988	NASA Graduate Student Research Fellow, ESM Dept, Virginia Tech
1985 – 1986	Graduate Teaching Assistant, ESM Department, Virginia Tech
1980 – 1984	Senior/Lead Engineer, Harris Corp Govt Aerospace Sys, Melbourne, FL

(c) Products

Related Products

1. Thamann, M., E.B. Doepke, S. Ashcraft, S.CC. Bailey and **S.W. Smith**, "Modeling and Flight Testing of Wing Shaping for Autonomous Flight Control," AIAA 2013-1926, 14th AIAA SDM Gossamer Spacecraft Forum, Boston, MA, April 2013.

2. Loh, B., P. Gaddam, J.D. Jacob, **S.W. Smith**, L. Asheghian, "Stowed Unmanned Air Vehicle Engineering (SUAVE): Deployable Wing Design and Testing," AIAA-2012-1986, 53nd AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference, April 2012.

3. Jacob, J.D. and **S.W. Smith**, "Design of HALE Aircraft Using Inflatable Wings," AIAA-2008-167, 46th Aerospace Sciences Meeting, Reno, Nevada, Jan. 7-10, 2008.

4. Jacob, J.D., A.D. Simpson, and **S.W. Smith**, "Design and Flight Testing of Inflatable Wings with Wing Warping," *SAE Trans J of Aerospace*, 2005, 2005-01-3392, pp. 1306-1315.

5. Simpson, A.D., M. Usui , **S.W. Smith** and J.D. Jacob, "Aeromechanics of Inflatable Airfoils," AIAA-2004-2233, AIAA 34th Fluid Dynamics Conference, Portland, OR, June 2004.

Other Significant Products

1. Black, J.T., **S.W. Smith** and J. Leifer, "Global Static Testing and Model Validation of Stiffened Thin Film Polyimide Panels," *AIAA J. Spacecraft and Rockets*, Vol. 45, No. 6, Nov-Dec 2008, pp 1318-1323.

2. Song, H., J.A. Main and **S.W. Smith**, "Dynamic Testing of a Self-Stiffened Inflatable Torus Using Non-Contact Modal Data Acquisition," *AIAA J. Guidance, Control and Dynamics*, Vol. 29, No. 4, July-Aug 2006, pp. 839-845.

3. **Smith, S.W.** and J.A. Main, "Modeling the Deployment of Inflating Space Structures," *Gossamer Spacecraft: Membrane/Inflatable Structures Technologies for Space Applications*, Ed. C.H. Jenkins, AIAA, Washington, DC, 2001, pp. 203-241.

4. **Smith, S.W.,** ``Iterative Matrix Approximation for Model Updating,'' *Mechanical Systems and Signal Processing*, Vol. 12, No. 1, 1998, pp. 187-201.

5. Balachandran B., A.H. Nayfeh, **S.W. Smith**, and R.S. Pappa, "On Identification of Nonlinear Interactions in Structures," *J. Guidance, Control and Dynamics*, Vol. 17, No. 2, March-April 1994, pp. 257-262.

(d) Synergistic Activities

1. Co-I/Institutional (UK) Lead for $6M NSF Track II, "Collaboration Leading Operational UAS Development for Meteorology and Atmospheric Physics (CLOUD-MAP)," involving 17 multi-disciplinary faculty researchers at four institutions led by Dr. Jamey Jacob, PI, Oklahoma State University, 2015-2019.

2. "The Role of Optimization in Systems Engineering," additional content #8 (with J.D. Jacob), Space Systems Engineering, 2010, http://spacese.spacegrant.org/index.php?page=new-content#8

3. Kentucky High School Wing Design Competition 2011-2014 Videos (with J. Hoagg, S. Bailey): "Unbridled: Young Women Taking Flight," 2014 Kentucky Wing Design Competition Video, NASA KY, https://vimeo.com/111575540 ; "The Kentucky High School Wing Design Competition," 2011-2014 Summary Video, NASA KY, https://vimeo.com/113530069; "New Horizons," 2013 Wing Design Competition Video, NASA KY, https://vimeo.com/71890970; "Ready to Fly," 2012 Wing Design Competition Video, NASA KY, https://vimeo.com/46368625

4. **Smith, S.W.**, J. Hoagg, S.C. Bailey and W.T. Smith, "An Aircraft Design Competition for High School STEM Improvement," AIAA-2014-0063, AIAA Science and Technology Forum and Exposition (SciTech 2014), National Harbor, MD, 13-17 January 2014.

5. "Rise Above: A New Generation of Aeronautics Research," Kentucky Educational Television, KET2 and KETKY, 10 air dates between 5 Jan – 23 Jan 2014, 26 minutes, produced by UK Research Communications and the UK Center for Visualization and Virtual Environments (with J. Hoagg, S, Bailey, M. Seigler), http://reveal.uky.edu/rise_above