

# Chris L. Pettit, Ph.D., P.E.

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## Education

Degree	Discipline	Institution	Year
Ph.D.	Civil Engineering	The Johns Hopkins University	1998
M.S.	Aerospace Engineering	University of California, Los Angeles	1993
B.S.	Aerospace Engineering	University of California, Los Angeles	1991

## Academic Experience

Institution	Rank	Title	Dates	Full or Part Time
U.S. Naval Academy	Associate Professor		2009 - present	Full
U.S. Naval Academy	Assistant Professor		2004 - 2009	Full
Wright State University	Adjunct Asst. Professor		1999 - 2004	Part

## Non-Academic Experience

- *Senior Research Aerospace Engineer*, US Air Force Research Laboratory (Air Vehicles Directorate – Structures Division), 2003 – 2004.
- *Research Aerospace Engineer*, US Air Force Research Laboratory (Air Vehicles Directorate – Structures Division), 1991 – 2003 (including time in graduate school supported by USAF Palace Knight Program).

## Certifications and Professional Registrations

- Professional Engineer (Ohio, 2002. License transferred to Maryland in 2008.)
- Level 2 Certification in the Systems Research, Development, and Engineering (SPRDE) functional area of the U.S. Department of Defense Acquisition Professional Development Program (APDP).

## Current Membership in Professional Organizations

- American Institute of Aeronautics and Astronautics (Associate Fellow)
- American Society of Mechanical Engineers (Member)

## Honors and Awards

- n/a

## Service Activities

- USNA
  - ABET Coordinator for Aerospace Engineering Department (2010 – present)
  - Engineering and Weapons Division Curriculum Committee (2010 – present)
  - Aerospace Engineering Faculty Honor Liaison (2009 – present)
  - Aerospace Engineering Liaison to Mathematics Department (2008 – present)
  - Aerospace Engineering Representative to Faculty Senate (2007 – 2009)
- External

- AIAA: Chair of *Non-Deterministic Approaches Technical Committee* (2007 - 2009); Member of *Structures Technical Committee* (2002-2007); Technical Chair (2005) and General Chair (2006) of *AIAA Non-Deterministic Approaches Conference*; frequent conference session chair and organizer, and abstract reviewer.
- ASME: Member of DOD Task Force.
- Manuscript referee for *Journal of Aeroelasticity and Structural Dynamics*, *Journal of Aircraft*, *Journal of Sound and Vibration*, *International Journal of Uncertainty Quantification*, *Nonlinear Dynamics*, *Probabilistic Engineering Mechanics*, and others.

### **Selected Publications and Presentations (Last Five Years)**

1. Vecherin, S.N., Wilson, D.K., and Pettit, C.L. “Optimal Sensor Placement with Signal Propagation Effects and Inhomogeneous Coverage Preferences”, *International Journal of Sensor Networks*, Vol. 9, No. 2, 2011, pp. 107-120.
2. Ghommen, M., Hajj, M.R., Pettit, C.L., and Beran, P.S., “Stochastic Modeling of Incident Gust Effects on Aerodynamic Lift”, *Journal of Aircraft*, Vol. 47, No. 5, 2010, pp. 1720-1727.
3. “Cluster-Weighted Models and Dimension Reduction for Global Sensitivity Analysis,” Invited presentation at Sandia National Laboratories, Albuquerque, NM, Apr 2010.
4. Pettit, C.L., and Wilson, D.K., “Full-Field Sensitivity Analysis through Dimension Reduction and Probabilistic Surrogate Models”, *Probabilistic Engineering Mechanics*, Vol. 25, 2010, pp. 380-392.
5. Pettit, C.L., Hajj, M.R., and Beran, P.S., “A Stochastic Approach for Modeling Incident Turbulence Effects on Flow Quantities”, *Probabilistic Engineering Mechanics*, Vol. 25, 2010, pp. 153-162.
6. Brown, L., Pettit, C.L., and Moran, A., “An Innovative Approach to Teaching Binary Phase Diagrams and the Use of the Lever Rule”, *Journal of Materials Education*, Vol. 30, No. 1-2, 2008, pp. 29-40.
7. Pettit, C.L. and Wilson, D.K., “Proper Orthogonal Decomposition and Cluster Weighted Modeling for Sensitivity Analysis of Sound Propagation in the Atmospheric Surface Layer”, *Journal of the Acoustical Society of America*, Vol. 122, No. 3, Sep 2007, pp.1374-1390.
8. Wilson, D.K., Andreas, E.L., Pettit, C.L., Patton, E.G., Sullivan, P.P., and Weatherly, J.W., “Characterization of Uncertainty in Outdoor Sound Propagation Predictions”, *Journal of the Acoustical Society of America Express Letters*, Vol. 121, No. 5, May 2007, pp. EL177-EL183.
9. Shirayayev, O., Slater, J.C., Page, S., and Pettit, C.L., “Parametric Identification and Validation of a Bolted Joint Model”, *Journal of Sound and Vibration*, Vol. 307, No. 3-5, 2007, pp. 680-697, (DOI: 10.1016/j.jsv.2007.06.033).

### **Recent Professional Development Activities**

- n/a