

ROBERT WELLS WHITTLESEY

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MC 105-50

PASADENA, CA 91125

EMAIL: ROBERTW @ CALTECH EDU

1 Education

- Pursuing Doctor of Philosophy in Aeronautics, California Institute of Technology
 - July 2008 - *Present*
- Master of Science in Aeronautics, California Institute of Technology
 - September 2008 - June 2009
- Bachelor of Science in Aerospace Engineering, Bachelor of Science in Mechanical Engineering, Illinois Institute of Technology
 - August 2004 - May 2008
 - Graduated Summa Cum Laude

2 Research Experience

- Graduate Student - California Institute of Technology, Pasadena, CA - 2008-*present*
 - Investigating enhanced propulsion mechanisms using inspiration from jellyfish.
 - Advisor: Prof. John O. Dabiri
- Research Assistant - Illinois Institute of Technology, Chicago, IL - 2006-2008
 - Investigated a three-dimensional analysis of separation control in an axial flow compressor with aim to delay rotating stall.
 - Conducted research alongside graduate student for use in her master's thesis.
 - Worked independently to bring compressor back into full-working order and carried out experimental techniques

3 Publications

1. **R W Whittlesey**, S Liska, J O Dabiri “Fish schooling as the basis for vertical axis wind turbine farm design,” 2010, *Biospiration and Biomimetics*, to appear; arXiv:1002.2250 [physics.flu-dyn]

4 Patent Application

- “A Two-Dimensional Array of Turbines,” U.S. 12/644,667; PCT/US2009/069205

5 Invited Presentations

1. “Innovative concepts: Fish Schooling as a Basis for Vertical Axis Wind Turbine Farm Design.” 1st World Summit on Small Wind Turbines, a part of the New Energy Husum show, Husum, Germany, March 2010.

6 Conference Presentations

7. “Fish Schooling as the Basis for Vertical Axis Wind Turbine Farm Design.” 4th Southern California Symposium on Flow Physics, UC:Irvine, Irvine, CA, April 2010
6. “Fish schooling as a basis for wind farm design.” 62nd Annual Meeting of the American Physical Society’s Division of Fluid Dynamics, Minneapolis, MN, November 2009
5. “Corner Separation and the onset of stall in an axial compressor.” AIAA 38th Fluid Dynamics Conference and Exhibit, Seattle, WA, June 2008, AIAA 2008-4299
4. “Corner Separation and the onset of stall in an axial compressor.” Chicago Area Undergraduate Research Symposium (CAURS), Oral and Poster presentation, Illinois Institute of Technology, April 2008
3. “Corner Separation and the onset of stall in an axial compressor.” IIT Research Day Research Poster Competition, Illinois Institute of Technology, April 2008
2. “Corner Separation and the onset of stall in an axial compressor.” IIT MMAE Department 2008 Research Poster Competition, Illinois Institute of Technology, March 2008
1. “Corner Separation and the onset of stall in an axial compressor.” Great Midwestern Regional Space Grant Meeting Poster Competition, Purdue University, September 2007

7 Awards

- Chicago Area Undergraduate Research Symposium (CAURS), Joe Cribari President’s Award (Top Oral and Poster), Illinois Institute of Technology, April 2008
- IIT Research Day Research Poster Competition, First Place, Undergraduate Category, Illinois Institute of Technology, April 2008
- Russell R. Vought Graduate Fellowship, California Institute of Technology, March 2008

- IIT MMAE Department 2008 Research Poster Competition, First Place, Undergraduate Category, Illinois Institute of Technology, March 2008
- IIT MMAE Department 2008 Outstanding Senior Award, Illinois Institute of Technology, March, 2008
- NASA Illinois Space Grant Consortium Undergraduate Scholarship, April 2007
- LaVerne Noyes Scholarship, Illinois Institute of Technology, May 2004

8 Academic Service

- Caltech Classroom Connection Volunteer, Wilson Middle School, Pasadena, CA, 2009-2010
 - Assisted Mr. Darius Hines, a science teacher, develop and execute a robotics class.
 - Curriculum focused on teaching students programming as well as creating a better understanding of technology.
- Undergraduate Representative, Dean of Engineering Search Committee, Illinois Institute of Technology, 2007-2008

9 Memberships in Professional Societies

- 2009 - *present*: American Physical Society
- 2005 - 2009: American Society of Mechanical Engineers
- 2005 - 2009: American Institute of Aeronautics and Astronautics

10 Other Skills

- Computer and Programming Skills
 - MATLAB, L^AT_EX, Perl, Python, some C++ and C
 - Well-versed in Linux (RHEL, Ubuntu), Windows 7, and Mac OS X
- SCUBA
 - Open Water Certified, NAUI, February 2010
 - American Academy of Underwater Sciences Certified, April 2010

11 Employment

- Research Assistant - Mechanical, Materials, & Aerospace Engineering Department at the Illinois Institute of Technology, Chicago, IL - 2006-2008
- Learning Assistant - Illinois Institute of Technology, Chicago, IL - 2007-2008
 - Lived on a freshman floor and was responsible for encouraging academic success.
 - Worked with individual students to discuss academic goals and resources available to help them meet those goals.
 - Provided tutoring during finals and throughout the semester to individual students.
- Summer Internship - The Boeing Company, Everett, WA - 2006
- Summer Internship - Wireless Applications Corporation, Bellevue, WA - 2005, 2006, and 2008