

CURRICULUM VITAE OF HAIBO DONG

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Professional Preparation

Ph.D. in Aerospace Engineering - UCLA, Los Angeles, CA, December 2002.

M.S. in Mechanical Engineering - USTC, China, July 1994.

B. S. in Mechanical Engineering - CUST, China, June 1991.

Appointments

2006-present Assistant Professor, Department of Mechanical and Materials Engineering,
Wright State University.

2003-2006 Research Scientist, Department of Mechanical and Aerospace Engineering, The
George Washington University.

2001-2003 Lecturer, Mechanical and Aerospace Engineering Department, UCLA

Selected Publications

- 1) Webb, C., H. Dong, and M. Ol, "Effects of Unequal Pitch and Plung Airfoil Motion Frequency on Aerodynamic Response", *AIAA paper* 2008-0582.
- 2) Dong, H., M. Harff, and R. Mittal, "Vortex Structures and Aerodynamic Performance of Finite-Aspect-Ratio Flapping Wings in Hovering Motion", *AIAA paper* 2007-4210.
- 3) Nicholson, B., S. Page, H. Dong, and J. Slater, "Design of a Flapping Quad-Winged Micro Air Vehicle", *AIAA paper* 2007-4337.
- 4) Mittal, R., H. Dong, M. Bozkurtas, A. Vegas, and F. Najjar "A Versatile Sharp Interface Immersed Boundary Method for Incompressible Flow with Complex Boundary", *Journal of Computational Physics*, 2007, in press.
- 5) Ghias, R., R. Mittal, and H. Dong, A Sharp Interface Immersed Boundary Method for Compressible Viscous Flows, *Journal of Computational Physics*, 2007, in press.
- 6) Dong, H., R. Mittal, and F. Najjar, "Wake Topology and Hydrodynamic Performance of Low Aspect-Ratio Flapping Foils", *Journal of Fluid Mechanics*, 566(2006), 309-343.
- 7) Narasimhan, M., H. Dong, R. Mittal, and S. Singh, "Optimal Yaw Regulation and Trajectory Control of Bio-robotic AUV Using Pectoral Fins Based on CFD Parameterization", *Journal of Fluids Engineering*, 128(2006), 687-698.
- 8) Lauder, G. V., Madden, P., Mittal, R., Dong, H., and Bozkurtas, M., Locomotion With Flexible Propulsors I: Experimental Analysis of Pectoral Fin Swimming in a Sunfish. *Bioinspiration & Biomimetics*, Volume 1 No 4, 2006.
- 9) Mittal, R., Dong, H., Bozkurtas, M., Lauder, G. V., and Madden, P., Locomotion With Flexible Propulsors II: Computational Modeling and Analysis of Pectoral Fin Swimming in a Sunfish. *Bioinspiration & Biomimetics*, Volume 1 No 4, 2006.
- 10) Tangorra, J., Davidson, S., Hunter, I., Madden, P., Lauder, G., Dong, H, Bozkurtas, M, Mittal, R., The Development of a Biologically Inspired Propulsor for Unmanned Underwater Vehicles, *Journal of Fluids Engineering*, 2007, in press.
- 11) Dong, H., M. Bozkurtas, A. Loebbecke, and R. Mittal "Analysis of Flying and Swimming in Nature Using an Immersed Boundary Method" *AIAA paper*. 2006-2867.
- 12) Ghias, R., R. Mittal, H. Dong and T. Lund, Large-Eddy Simulation of the Flow of a Rotor in Hover: Validation of Experimental Results and Preliminary Analysis. *AIAA paper* 2005-1280.

Synergistic Activities

1. Served as a CFD scientist in ONR-MURI project “Development of an Integrated Artificial Muscle, High-Lift, Bio-Hydrodynamic Mechanism for Bio-robotic Autonomous Undersea Vehicles” in collaboration with Lauder’s Organismic and Evolutionary Biology Lab at Harvard University and Bio-Instrumentation Laboratory at MIT.
2. Served as a principal research scientist in collaboration with US Olympic swimming team on the project “Full Body Analysis of Competitive Swimming”.
3. Served as CFD consultant for Alpha Mechanical Engineering Company on computational design and analysis of compressors.
4. Served as reviewer for AIAA Journal, Journal of Fluid Mechanics, Physics of Fluids, Journal of Computational Physics, Computer and Fluids, AIAA conferences.
5. Served session chair in session “Immersed Boundary and Cartesian Grid Methods” of the 18th AIAA Computational Fluid Dynamics conference, session co-chair in the session “Biological and Biologically Inspired Flows I: Flapping Foils” of the 37th AIAA Fluid Dynamics conference.
6. Developed and supervised Senior Design projects at Wright State entitled “Design of a Flapping Micro Air Vehicle”, and “Design and Analysis of a Hydraulic Dynamometer”. The first one won the honor of best paper of the session “Biological and Biologically Inspired Flows II” at the 37th AIAA Fluid Dynamics conference, Miami, FL, 2007.
7. Served as judge for “2nd Annual Greene County Science Day” for grade 6-12 students within Green County, OH. Served as instructor for Mechanical Engineering section in “Women In Engineering Day” for girls at grade 6-12. Served as department consultant in “Wright from the Start” for undergraduate student recruitment.