



## BIOGRAPHICAL SKETCH

Fang Hu

### SUMMARY:

Dr. Fang Q. Hu is a professor in the Department of Mathematics and Statistics at the Old Dominion University. He graduated from Zhejiang University with Bachelor's and Master's degrees in 1982 and 1985 respectively, and from the Florida State University with a Ph.D degree in Applied Mathematics in 1990. From 1992 to 1997, Dr. Hu was a resident consultant for the Institute for Computer Applications in Science and Engineering (ICASE) at the NASA Langley Research Center.

Dr. Hu's research interests are in the development and applications of computational methods for aeroacoustics. His research has been funded by the NASA and the National Science Foundation (NSF). Dr. Hu is an Associate Fellow of the American Institute of Aeronautics and Astronautics (AIAA).

### A. EDUCATION:

B.S., Mathematics, Zhejiang University, CHINA, 1982.  
M.S., Engineering, Zhejiang University, CHINA, 1985.  
Ph.D., Mathematics, Florida State University, 1990.

### B. APPOINTMENTS:

Aug. 2014 to present Associate Chair for Research  
Aug. 2002 to present Professor  
Aug. 1996 to July 2002 Associate Professor  
Aug. 1990 to July 1996 Assistant Professor  
Department of Mathematics and Statistics  
Old Dominion University  
Norfolk, VA 23529

### C. PUBLICATIONS (*Selected Ten Relevant Publications*):

1. L. Liu, Xiaodong Li and F. Q. Hu (2014), Nonuniform-Time-Step Explicit Runge-Kutta Scheme for High-Order Finite Difference Method, *Computers & Fluids*, Vol 105,166-178.
2. F. Q. Hu, Xiaodong Li, Xiaoyan Li and Min Jiang (2014), Time Domain Wave Packet method and suppression of instability wave in aeroacoustic computations, *Journal of Fluid Engineering*, Vol. 136, Page 060905-1 to 060905-12.

3. F. Q. Hu (2013), An efficient solution of time domain boundary integral equations for acoustic scattering and its acceleration by Graphics Processing Units, AIAA paper 2013-2018.
4. A. M. Fernando and F. Q. Hu (2011) DGM-FD: A finite difference scheme based on the discontinuous Galerkin method applied to wave propagation, *Journal of Comp. Phy.*, 230,4871-4898
5. F. Q. Hu (2008), Development of PML absorbing boundary conditions for computational aeroacoustics: A progress review, *Computers & Fluids*, Vol. 37, 336-348.
6. F. Q. Hu (2005), A Perfectly Matched Layer absorbing boundary condition for linearized Euler equations with a non-uniform mean flow, *Journal of Comp. Phy.*, 208, 469-492.
7. F. Q. Hu and H. L. Atkins (2002) Eigensolution analysis of discontinuous Galerkin method. Part I, One space dimension, *Journal of Computational Physics*, Vol. 182, 516-545.
8. F. Q. Hu, (2001) A stable, Perfectly Matched Layer for linearized Euler equations in unsplit physical variables, *Journal of Computational Physics*, 173, 455-481.
9. F. Q. Hu, M. Y. Hussaini and P. Rasetarinera (1999), An analysis of the discontinuous Galerkin method for wave propagation problems, *Journal of Comp. Phy.*, Vol. 151, 921-946.
10. F. Q. Hu, M. Y. Hussaini and J. L. Manthey (1996) Low-dissipation and –dispersion Runge-Kutta schemes for computational acoustics. *Journal of Comp. Phy.*, 124 177-191.

#### **D. SYNERGISTIC ACTIVITIES (*Selected*):**

- Co-organizer of mini-symposium “Hot Topic: Aeroacoustics I & II”, 163rd Meeting of Acoustical Society of America, Hong Kong, China, May 13-18, 2012.
- US Department of Energy INCITE proposals review panelist, Sept., 2008
- NASA Langley Research Center Acoustics Peer Review panelist, Nov., 2008
- Co-organizer of mini-symposium “High-order numerical methods and boundary conditions for computational aeroacoustics”, International Conference On Spectral and High Order Methods, Beijing, China, June 18- 22, 2007.
- Served on AIAA Aeroacoustics Technical Committee, 2004-2007.
- Associate Fellow of American Institute of Aeronautics and Astronautics (AIAA) since 2007.