

## **Gary C. Cheng**

Associate Professor

Mechanical Engineering Department, University of Alabama at Birmingham

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### **EDUCATION:**

10/87 - 12/90 Ph.D. Aerospace Engineering University of Kansas

08/84 - 10/87 M.S. Aerospace Engineering University of Kansas

10/77 - 05/81 B.S. Aeronautic Engineering Tamkang University, Taiwan

### **APPOINTMENTS:**

10/06 – present Associate Professor, Mechanical Engineering Dept., UAB

08/01 – 09/06 Assistant Professor, Mechanical Engineering Dept., UAB

01/91 – 07/01 Senior Research Engineer, SECA, Inc., Huntsville, Alabama.

### **AWARDS/HONORS:**

2004 & 2005 *Engineering School Excellence in Teaching Award*, UAB

2002 NASA Summer Faculty Fellow

2002 Awarded by NASA Marshall Space Flight Center for a technical innovation, entitled “Three- Dimensional, Three-Phase Combustion Computational Fluid Dynamics Code”

1995 Awarded by NASA Marshall Space Flight Center for a technical innovation, entitled “Inducer Analysis/Pump Model Development”

### **RESEARCH INTERESTS:**

-Develop numerical models for problems with complex physics such as chemical reactions, multi-phase flow, fluidstructure interaction, flows through porous media, etc.

-Develop the high-fidelity time accurate Navier-Stokes solver for transient flow simulations, such as aeroacoustics, turbulence transition.

-Develop a hybrid DSMC/Navier-Stokes solver to analyze problems with disparate length scales

- Utilize overset chimera grid topology with the CFD flow solver for moving body simulations