Xi Gu

Date of Birth: 1990 Jul 04 Email: xigu@fudan.edu.cn
Address: Department of Aeronautics and Astronautics, Fudan University, 220 Handan Road, Yangpu District, Shanghai, 200433, China

EDUCATION

Doctor of Philosophy (Mechanical Engineering) Sep 2015 – Jul 2019

The University of New South Wales, Australia

- Research Project: Heat Generation in Irradiated Gold Nanoparticle Solutions for Hyperthermia Applications
- Awarded Graham de Vahl Davis Best Paper
- Awarded a Dean's Award for Outstanding PhD Theses

Master of Engineering by Research (Mechanical Engineering) Jul 2013 – Sep 2015

The University of New South Wales, Australia

- Research Project: Large Eddy Simulation of Blood Flow Coupled with Elastic Boundary (Fluid Structural Interaction)

Bachelor of Engineering (Mechanical and Manufacturing Engineering) Sep 2008 – Jun 2012

Central South University, China (Project 985)

PROFESSIONAL EXPERIENCE

Postdoctoral Researcher Jun 2020 – Present

Fudan University, China

- Research Project: Droplet Freezing Features on a cold substrate

Postdoctoral Research Assistant (Casual) Jul 2019 – Feb 2020

The University of New South Wales, Australia

- Establishing, calculating and validating numerical models
- Making risk assessment and creating safe work procedure to carry out experiments
- Ordering chemicals and experimental equipment
- Analysing measured and predicted results

Academic Demonstrator (Casual) Jul 2016 – Jul 2018

The University of New South Wales, Australia

- Marking project proposals and tutoring for course **Computational Fluid Dynamics**
- Demonstrating tutorials and laboratory sessions for course **Solar Thermal Energy Design**
- Marking journal article reviews and teaching research writing for course Engineering Postgraduate Essentials
- Marking writing assignments for course Introduction to **Engineering Design and Innovation**
- Marking undergraduate students' theses

PUBLICATIONS

SCI Journal Articles:

Gu, X., Timchenko, V., Heng Yeoh, G., Dombrovsky, L. and Taylor, R., 2018. The Effect of Gold Nanorods Clustering on Near-Infrared Radiation Absorption. Applied Sciences, 8(7), p.1132.
IF: 2.217 (2018) SJR: Q1

Li, D.D., **Gu, X.**, Timchenko, V., Chan, Q.N., Yuen, A.C. and Yeoh, G.H., 2018. Study of morphology and optical properties of gold nanoparticle aggregates under different pH conditions. Langmuir, 34(35), pp.10340-10352.
IF: 3.683 (2018) SJR: Q1

Yeoh, G.H., **Gu, X.**, Timchenko, V., Valenzuela, S.M. and Cornell, B.A., 2016. High order accurate dual-phase-lag numerical model for microscopic heating in multiple domains. International Communications in Heat and Mass Transfer, 78, pp.21-28. (The first author is my supervisor)
IF: 3.718 (2016) SJR: Q1

Gu, X., Yeoh, G.H. and Timchenko, V., 2016. Three-dimensional modelling of flow and deformation in idealized mild and moderate arterial vessels. Computer methods in biomechanics and biomedical engineering, 19(13), pp.1395-1408.
IF: 1.909 (2016) SJR: Q2

Conference Papers:

Gu, X., Timchenko, V., Clift, Z., Jackson, M., Liu, J. and Rao, W., 2018, Heat generation in irradiated solutions containing magnesium nanoparticle aggregates, In the 16th International Heat Transfer Conference (IHTC), Beijing, PR China, presented at the 16th IHTC, Beijing, PR China, 10 - 15 August 2018.

Gu, X., Timchenko, V., Yeoh, G.H., Dombrovsky, L.A. and Taylor, R.A., 2017. Heat generation in gold nanorods solutions due to absorption of near-infrared radiation. In ICHMT Digital Library Online. Begel House Inc.. (Awarded Graham de Vahl Davis Best Paper)

SKILLS

- COMSOL
- ANSYS Fluent
- C Language
- FEA/FVM
- English
- SolidWorks
- CFX
- Fortran
- MS Office
- Chinese – Mandarin