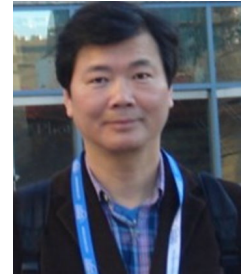


# Chien-Cheng Chang

## Position

Professor, Institute of Applied Mechanics and Department of Math., NTU



## Research Fields

Fluid Mechanics, Biomedical Imaging, Micro-scale Materials, Nano and Micro-Fluidics, Scientific Computing

## Research Interests

Our research group mainly focuses on development of theory and computational techniques for problems in multi-scale mechanics. In some subjects, we also carry out laboratory experiments to confirm the theoretical predictions or to design/fabricate new devices for covering a wider range of applications. The research topics we are currently investigating include

- *Two-Phase and Interface Problems—solid-fluid systems, sedimentation suspension, droplets and clouds in atmosphere (theory and simulations)*
- *Theory and Application of Microstructures (graphene, carbon nanotube, periodic structures)—mechanics, heat transfer of microstructures (theory, computation and experiments)*
- *Energy Research in Wind Energy, Solar Energy, Lithium Battery—vibration and fluid mechanics of wind turbines, solar panel design by plasmonics resonance, electrode  $\text{LiFePO}_4$  for transport of  $\text{Li}^+$  (theory, computation and experiments)*
- *Biomimetics Research Inspired by Locomotion of Birds, Fish and Microorganisms— aerodynamics of small insects, hydrodynamics of fish swimming (theory, computation and experiments)*
- *Electrokinetics Theory and Fabrication Techniques in Nano and Microfluidics—transport, mixing and separation (theory, computation and experiments)*

## Research Group

- *Prof. Chin-Chou Chu, Institute of Applied Mechanics, National Taiwan University*
- *Prof. Chiung-Nien Chen, College of Medicine, National Taiwan University*
- *Prof. Tsorng-Whay Pan, Department of Mathematics, University of Houston*
- *Prof. Chang-Yi Wang, Department of Mathematics, Michigan State University*
- *Dr. Chih-Yu Kuo, Research Center for Applied Sciences, Academia Sinica*
- *Dr. Chun-Wei Pao, Research Center for Applied Sciences, Academia Sinica*
- *Dr. Po-Hsiang Tsui, Department of Medical Imaging and Radiological Sciences, Chang Gung University*
- *Dr. Yu-Chen Shu, Department of Mathematics, National Cheng-Kung University*