國立清華大學第 25 屆新進人員研究獎得獎人簡介

動力機械工程學系　黃琮暉助理教授

黃琮暉教授分別於 2012 年取得國立台灣大學機械工程學士學位，2014 年於美國明尼蘇達大學雙城分校取得機械工程碩士學位，以及在 2020 年於美國加州大學聖地牙哥分校取得結構工程博士學位，並自 2020 年起於國立清華大學動力機械工程學系服務擔任助理教授；黃教授研究領域包含計算力學研究、極限工程分析、流固耦合模擬、以及多尺度現象研究，尤善於開發新型數值方法或電腦計算程式來處理傳統商業軟體之計算瓶頸。其過往開發之演算法曾被應用至美國陸軍工程研發中心、美國加州大學極端工程研究中心、美國太平洋地震工程研究中心以及美國桑迪亞國家實驗室等研究單位之模擬軟體上，並曾在計算力學頂尖期刊及知名國際會議著有不少發表；黃教授過去兩年於清華大學主要貢獻於開發穩定且有效之無網格法應用於板殼結構破壞模擬、利用機器學習協助克服多尺度材料分析之維度詛咒現象、以及進行鯊魚盾鱗流場阻力模擬分析；黃教授優異表現使其獲得數個國際會議旅行獎，以及包括美國加州大學聖地牙哥分校校長獎章提名（2021）、科技部 2030 跨世代新秀學者計畫得主（2021）、國立清華大學工學院新進人員研究獎（2022）在內等多項重要學術殊榮。

Prof. Tsung-Hui Huang received his B.S. degree from the Department of Mechanical Engineering at National Taiwan University in 2012, M.S. degree from the Department of Mechanical Engineering at University of Minnesota Twin Cities, USA, in 2012 and Ph.D. degree from the Department of Structural Engineering at University of California San Diego (UCSD), USA in 2020. He served as an assistant professor in the Department of Power Mechanical Engineering at National Tsing Hua University (NTHU) since 2020. Prof. Huang's research focuses on Computational Mechanics, Extreme Event Analysis, Fluid Structure Interaction Modeling, as well as multiscale problem research. Especially, his expertise includes developing novel numerical methods or effective computational platform to overcome the bottleneck of conventional commercial software. The methodologies and algorithms he developed have been applied to the research code of US Army Engineer Research and Development Center, UCSD Extreme Event Research Center, Pacific Earthquake Engineering Research Center, and Sandia National Laboratories. Prof. Huang also published a few papers in top-ranked international journals of computational mechanics, as well as international conferences. After joining NTHU, Prof. Huang has made remarkable contribution in developing effective meshfree simulation for shell/plate-like structure failures, overcoming the curse of dimensionality due to multiscale analysis by the aid of machine learning, and performing flow-drag modeling of shark denticles. Prof. Huang's outstanding achievement has won him several international conference travel awards, and several research awards including the nomination for the UCSD Chancellor Medal (2021), MOST Cross-Generation Young Scholars Program (2022), and New Faculty Research Award from NTHU School of Engineering (2022).