



VFF Scholar Spotlight: Henry Zhongqi Jia

Thanks to the generosity of members like you, AHS International has awarded more than 500 VFF scholarships since 1977 to promising undergraduate and graduate engineering students planning to pursue careers in vertical flight.

This year marks the 50th anniversary of the founding of the Vertical Flight Foundation, Inc., and we are initiating the VFF50 Capital Campaign to increase our endowment to reach even more promising scholars. In order to show the impact that the scholarship program is having, AHS is highlighting the impressive backgrounds of some of our recent winners.

Henry Zhongqi Jia, the winner of the 2017 Richard M. Carlson Scholarship, is a doctoral student at Prof. Seongkyu Lee's Aeroacoustics Lab at the University of California, Davis. His research, which focuses on the aerodynamics and aeroacoustics of coaxial rotors, began with his participation in a Vertical Lift Research Center of Excellence (VLRCOE) project led by US Army Aviation Development Directorate (ADD) researchers at the Ames Research Center in Mountain View, California, and Prof. Kenneth Brentner's research group at Pennsylvania State University.

Currently, Henry is investigating the high-speed impulsive (HSI) and blade vortex interaction (BVI) noise of the 1970s Sikorsky XH-59 advancing blade concept (ABC) rigid rotor coaxial compound in high-speed forward flight, after having refined his study of the XH-59 rotor during a NASA Ames internship this summer.

During the previous summer, Henry was selected to join the NASA Multidisciplinary Aeronautics Research Team Initiative program to work on NASA's Safe Autonomous Flight Environment (SAFE50) project at the NASA Ames Research Center. Tasked with understanding the performance and safe trajectory of small vertical takeoff and landing (VTOL) unmanned aerial vehicles (UAVs) under local wind conditions, Henry developed an aerodynamic model of a small quadcopter, and validated his computational simulations with experimental testing. During this time, he had the opportunity to examine Black Hawk and Kiowa helicopters up close and learn the fundamentals of rotorcraft aviation, which fueled his enthusiasm for rotorcraft aerodynamics.

As he pursues his doctoral degree at UC Davis, Henry commutes two hours to Ames twice per week to learn computational fluid dynamics (CFD) mesh simulation techniques and Helios — the US Army's next-generation high-fidelity CFD/computational structural dynamics (CSD) rotorcraft simulation code — from the experts at Ames.

Prof. Lee, his academic advisor, believes that Henry's commitment and eagerness to learn will make him "a very successful and outstanding researcher in the rotorcraft field in the future."

Henry hopes to present the latest developments of his research at the upcoming AHS Forum 74 in Phoenix, Arizona. Upon the completion of his studies, Henry plans to "look for a research position at a rotorcraft research laboratory or company to promote green and safe aviation."

Please go to www.vtol.org/vff today to read more about the impressive backgrounds of Henry and our many other stellar VFF recipients. While there, please consider supporting the 50th Anniversary Capital Campaign and help to foster the next generation of vertical flight talent!

