



VFF Scholar Spotlight: Kanika Gakhar

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.

2017 is 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.

Kanika Gakhar, the winner of the 2017 VFF Bell Helicopter Vertical Flight Scholarship, is a rising senior aerospace engineering major at Texas A&M University, located in southeastern Texas. She is working on the development of a meso-scale, hover-capable robotic hummingbird for Professor Moble Benedict's research group.

"Kanika approached me during her sophomore year and said that she would like to work on one of the novel VTOL concepts we were developing at the Advanced Vertical Flight Lab. She was specifically interested in the robotic hummingbird project. Since then, she has been working with me in my group and has made enormous progress in less than a year's time. Some of her results were presented at the 2017 AHS Forum," Prof. Benedict recounted earlier this year.

Specifically, Kanika's current work focuses on exploiting the unsteady aerodynamic phenomena associated with biomimic flapping wings at low Reynolds numbers. During her freshman year, Kanika had worked on a project that examined shape memory alloys for the design of deployable solar panels for satellites. Attracted by the excitement of vertical flight, Kanika is parlaying this research experience into improving the controllability and efficiency of the robotic hummingbird's flexible flapping wings at high frequencies and amplitudes. The Texas A&M research team hopes to greatly enhance the hummingbird's agility, endurance, maneuverability, gust tolerance and forward speed.

Kanika credits the VFF scholarship for spurring her on with her studies: "Receiving the [VFF] Bell Helicopter Scholarship has been a humbling reminder of the appreciation the AHS community has for aspiring engineers like me. I am very grateful to AHS for introducing me to this opportunity and giving me a chance to refine and present my research work to the prestigious VFF Committee. By encouraging young undergraduate researchers like me to pursue topics of interest in the field of vertical takeoff and landing, the VFF Scholarship [program] is truly doing a remarkable job at helping students recognize their passions and the significance of their work in a global research community."

After graduation, Kanika plans to continue studying vertical flight technology, according to Prof. Benedict, who is also her academic advisor: "She is one of the most passionate and enthusiastic students I have met, and it is incredible how she manages her time between her academics, research and extracurricular activities, and does an excellent job with everything. She plans to continue working in our lab on novel bio-inspired flying concepts, and pursue a PhD focused on the development of revolutionary VTOL concepts".

Please go to www.vtol.org/vff today to read more about the impressive backgrounds of Kanika 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!

