



2018 International Amelia Earhart Fellow

Deliya Kim, citizen of Kazakhstan, is our 2018 Amelia Earhart Fellow. Deliya is studying Mechanical Engineering at LeHigh University in Bethlehem, Pennsylvania.

Ms. Kim's research is inspired by the silent flight of owls. She is working toward updating conventional noise theory by exploring the phenomenon of fluid flow caused by serrations on airfoils. This work could lead to quieter aircraft and turbine blades. Geometric serrations on the edges of wings and turbine blades are known to help with noise but so far there is very little theoretical understanding of how this works or how to maximize the effects.

Ms. Kim's goal is to build a theoretical model, compute the flow distortion around the serrations, and finally validate her mathematical model experimentally. This last step requires her to travel to Australia for wind tunnel tests. Her educational and research career is truly international from the U.K. and Korea to the U.S.A. and Australia.

Ms. Kim is the co-founder of the Advanced Research Group on Space Operations under the Space Generation Advisory Council (UN). She has placed 3rd in city-wide piano competitions and enjoys swing and Latin dancing.