

Baromorphing: Playing the piano on the trailing edge of an aerofoil

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Provided by City University London



Credit: City University London

City MEng final year student, Aleksandra Court provides a peek into the future of aviation and variable morphing wing designs.

Court's 'playing the piano' video, part of the Final Year project, was supervised by Professor Christoph Bruecker, BAE Systems and Royal Academy of Engineering Chair in Nature-inspired Flow Sensing and Manipulation.

This project explores the exciting area of radically morphing wing concepts, using distributed pneumatic control technology, utilizing the rapidly emerging area of Baromorphing.

Despite the limitations of the pandemic, the model was manufactured with the kind support of Keith Pamment in City's Handley Page Aeronautical Engineering Laboratory. The pneumatic control unit was developed in cooperation with Professor Uwe Schnakenberg of RWTH Aachen University in Germany.

The [aviation industry](#) needs to improve environmental and efficiency factors to meet targets set in Flightpath 2050 (European Commission, 2011) and welcomes such innovative technologies.

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