



Mechanical & Industrial Engineering
UNIVERSITY OF TORONTO

Morphing Wing Design for UAV

The field of shape morphing aircraft has attracted the attention of hundreds of research groups during the past century. Although many interesting concepts have been synthesized, only a handful of such reconfigurable planes have been ever produced (all of them supersonic and consisted of pivoting wings). In the range of low speed, small aircraft no commercial product exists to our knowledge. Although several conceptual designs of small or low speed aircraft has made it to the wind tunnel testing stage, only very limited number of such shape morphing prototypes have ever been fabricated or flight tested. In this project, we are trying to copy birds in the design of unmanned aerial vehicles. This project involves design, prototyping using intelligent materials such as shape memory alloys, and proof on concept via testing.

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