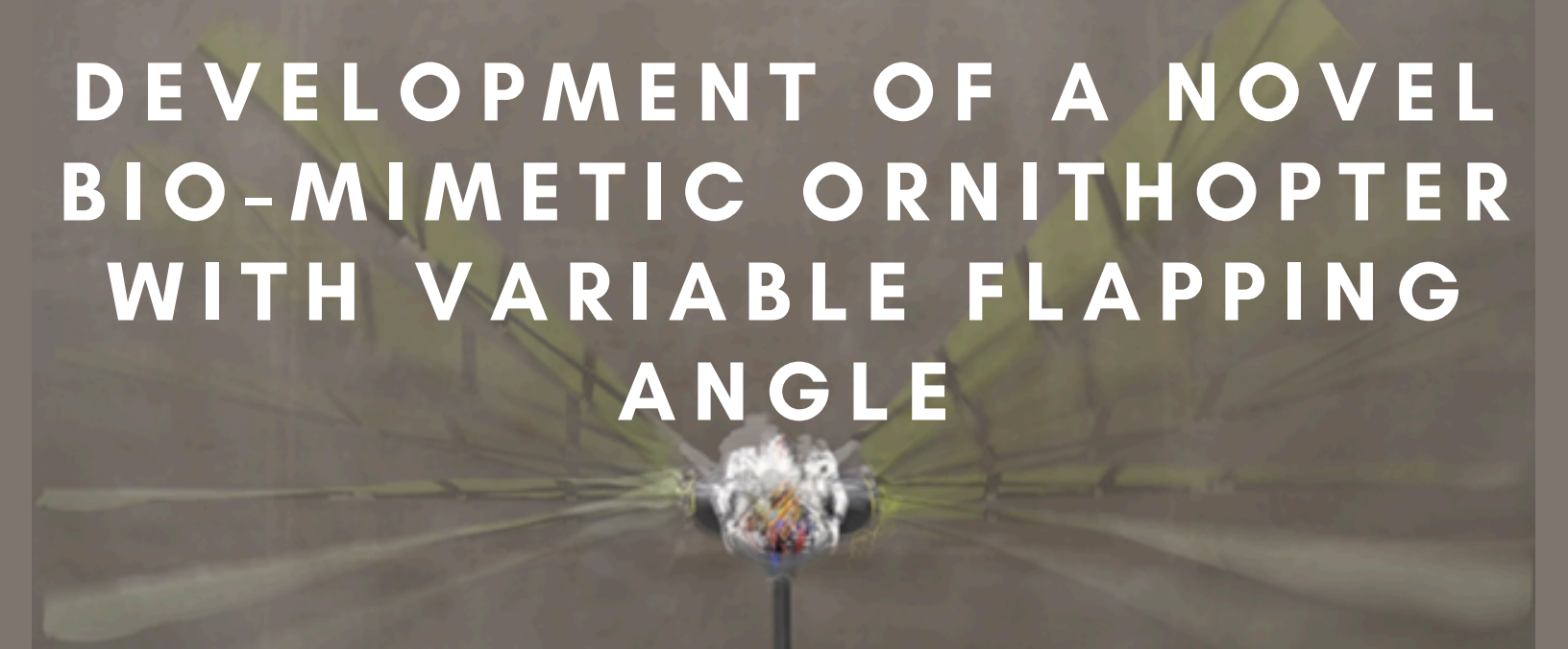
DEVELOPMENT OF A NOVEL BIO-MIMETIC ORNITHOPTER WITH VARIABLE FLAPPING ANGLE



FLAPPING-WING AERIAL VEHICLES DRAW INSPIRATION FROM BIRDS' EFFICIENCY AND MANEUVERABILITY BUT OFTEN RELY ON FIXED-AMPLITUDE GEARED MECHANISMS, LIMITING ADAPTABILITY ACROSS TAKEOFF, CRUISING, AND LANDING. A NOVEL BIO-MIMETIC FIELD-ORIENTED CONTROL CABLE-DRIVEN VARIABLE AMPLITUDE FLAPPING SYSTEM HAS BEEN INTEGRATED ON THE ORNITHOPTER K1, ENABLING DYNAMIC ADJUSTMENT OF BOTH FREQUENCY AND AMPLITUDE—PUSHING FWAV ARTICULATION CLOSER TO BIRDLIKE FLIGHT.

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ENGINEERING IV, ROOM 321