

BIO-INSPIRED AIRPLANE CONTROL

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Abstract. The paper presents state of the art in emerging bio-inspired airplane control field of interest. The work is focused on small airplanes which are not equipped with an autopilot. The main review part of the paper gives overview of flow sensors and haptic feedback applications. Additionally, animal-borne flow sensors are discussed as they are an important data source for insects and birds. The paper also deals with haptic feedback and presents recent vibrotactile actuators and their applications in warning and navigation function. Recent projects touching pilot-airplane interaction are also mentioned in the text. The last part of the paper discusses pilot's perception psychology and suggests some requirements on bio-inspired airplane control system with a goal to improve the quality and safety of flight.