BIOINSPIRED LOW NOISE AIRCRAFT DESIGN

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ABSTRACT

Nature can serve as an inspirational resource for scientists and engineers, leading to unconventional and novel solutions to engineering problems. A group of engineers and a biologist teamed up in the Costa Rica rainforest to find inspiration for noise reduction in aircraft. The Biomimicry Method from the Biomimicry Guild in Montana, USA, was used to identify inspiring organisms and biological materials, ranging from bees to chameleon tongues, from spiders to human heels. The functions of interest are correlated with the structure, in Nature as well as in the envisaged various parts of the aircraft.

Index Terms*—Aerospace industry, Biomimetics, Biomedical acoustics, Biological materials, Biological systems.*