SDSU
San Diego State University

Palm Inspired Wind Turbine

Meet the Sponsor

Dr. Beyene, a faculty member at SDSU since 1989 with a Ph.D. from Warsaw University of Technology, focuses on renewable energy research and has received grants from notable organizations like the US Department of Energy.

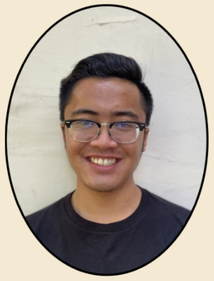
Project Overview

Problem Statement: Current wind turbines are limited to a wind speed range of 3.6 to 22 m/s; beyond this, damage occurs, requiring shutdowns.

Solution: Adopting a palm tree-inspired design with rigid blades and flexible joints could improve durability and allow operation at higher wind speeds.

Team Exeggutor

Robert Johnson
Team Leader

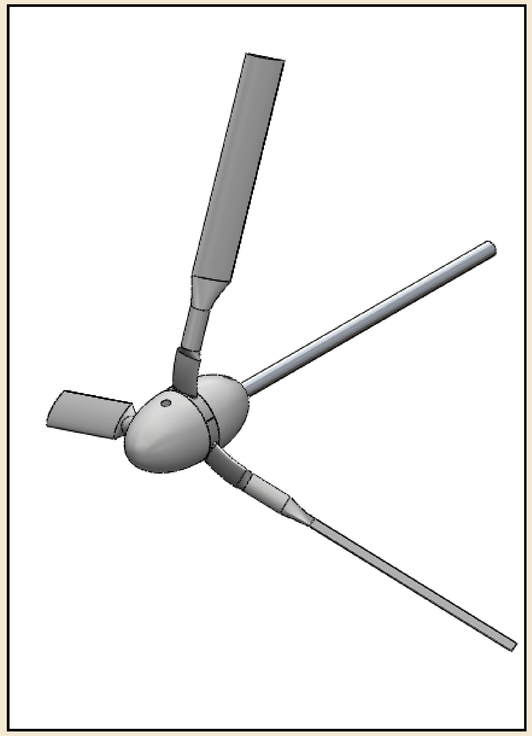


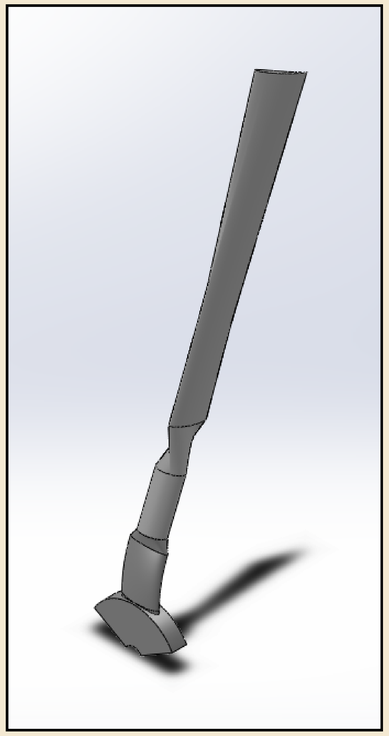
Wences Banting

Bradley Rittmann

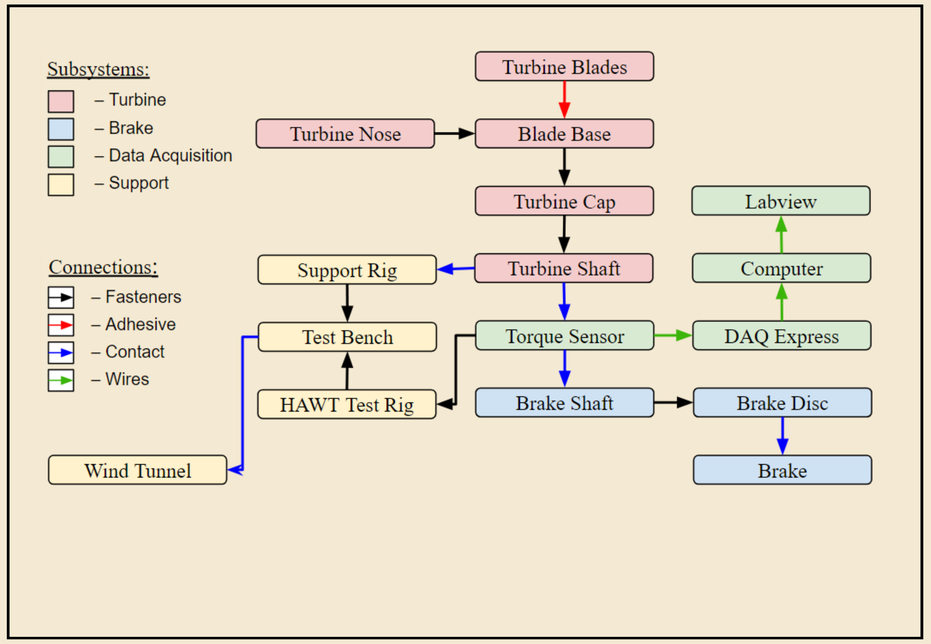
Arman Sarkoob

CAD Model

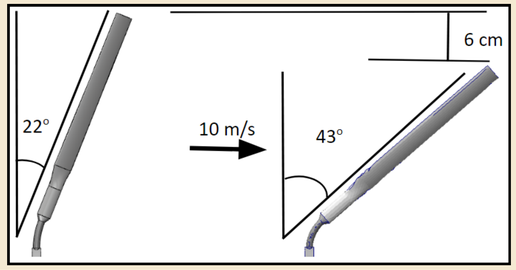


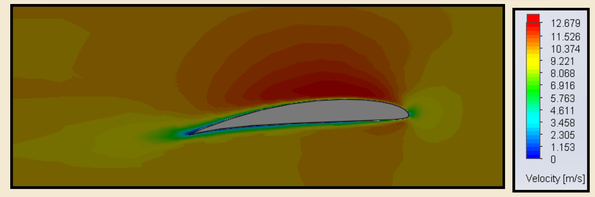


System Level Diagram

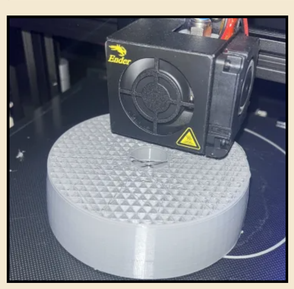


FEA and Ansys Simulations

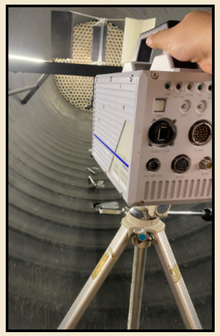


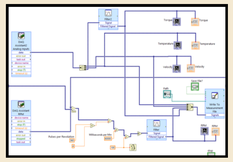


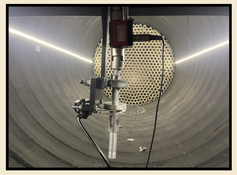
Manufacturing and Assembly



Testing







Acknowledgments

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Spring 2024