

**Design and Prototyping of Darrieus Vertical Axis  
Wind Turbines Using Helical Blade**

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BACHELOR'S DEGREE  
in

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## STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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## ABSTRACT

### Design and Prototyping of Darrieus Vertical Axis Wind Turbines Using Helical Blade

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This paper explains about development of a Darrieus type vertical axis wind turbines with the target to generate 500W. The wind turbines design with software solidworks, optimization using software OpenFOAM and Paraview for viewing the post processing process. With condition of the wind speed around SGU at 4 m/s. The change at the optimization was at the change of length and thickness of the blade design.

*Keywords: Vertical Axis Wind Turbines, Small scale wind turbines, Helical Blade, Darrieus, H blade*



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## **DEDICATION**

This paper is dedicated for the world to keep our planet from using the fossil fuel and to stop the global warming by using renewable and clean energy. Also to my family and friends.

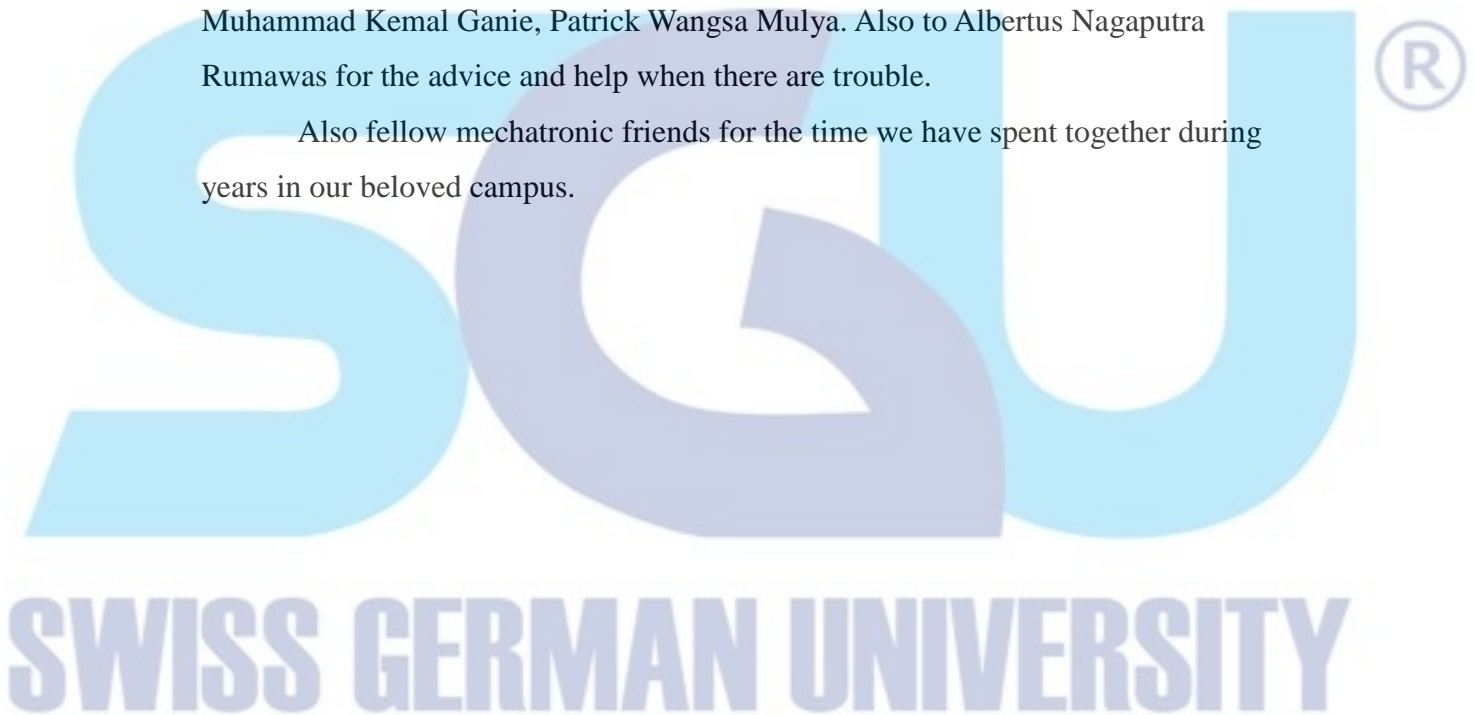


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