

APPROVAL FORM

THESES/DISSERTATION and INSTITUTIONAL REVIEW BOARD APPROVAL

This is to certify that the thesis entitled:

AERODYNAMIC ANALYSIS OF VERTICAL AND HORIZONTAL AXIS WIND TURBINES

presented by Anwelli Soala Okpue

has been accepted towards fulfillment of the requirements for the

master's degree in Mechanical Engineering

University and federal policies and procedures require that all research involving human or animal subjects receive prior approval from the appropriate review board. [See Faculty Handbook (<http://www.hr.msu.edu/documents/facacadhandbooks/facultyhandbook/index.htm>) and the Academic Programs book (<http://www.reg.msu.edu/AcademicPrograms/>).

HUMAN SUBJECTS

Does the thesis or dissertation you are submitting include research involving human subjects or materials of human origin? (Research involving human subjects includes surveys and telephone interviews used for research; materials of human origin include human blood and /or tissue.)

☐ Yes IRB Log Number: _____
☒ No

If **yes**, indicate Institutional Review Board (IRB) log number for the approved protocol and attach the Institutional Review Board approval letter for that protocol to this form.

ANIMAL SUBJECTS

Does the thesis or dissertation you are submitting include research involving vertebrate animals in any way?

☐ Yes AUF Number: _____
☒ No

If **yes**, and an animal use form was submitted to the Institutional Animal Care & Use Committee (IACUC), please list the approval number below and attach a copy of the IACUC approval letter to this form.

If **yes**, but your project did not need an animal use form, provide a copy of the letter from the IACUC which cites the relevant exclusionary policy.

This thesis/dissertation and the information presented above are approved by the faculty advisor/major professor.

☒ Yes ☐ No

Student's Name (print): ANWELLI SOALA OKPUE

Student's Signature: 

Date: 12/19/2011

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Major Prof. Signature: 



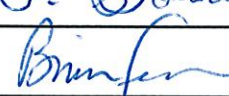
Date: 12/19/2011

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Office Use Only: _____ Semester Submitted _____ Degree List _____

Record of Thesis/Project Defense For MS Degree

Name: **Okpue, Anwelli Soala**PID: **A36960948**First Semester in Master's Program: **FS09**Major: **Mechanical Engineering**Title of Thesis or Project: **Computational fluid dynamics to analyze wind shear effects and how they the change in angle of attack seen by the blades of a wind turbine, in order to better predict the aerodynamic loads.**Plan: **Plan A (Thesis)**

Examiner	Dept	Signature	Exam Date	Result
Jaberi, Farhad	ME		9/16/2011	[<input checked="" type="checkbox"/>] Pass [] Fail
Pourboghraat, Farhang	ME		9/16/2011	[<input checked="" type="checkbox"/>] Pass [] Fail
Feeny, Brian	ME		9-16-2011	[<input checked="" type="checkbox"/>] Pass [] Fail

Overall Performance: [☒] Pass [] FailGrade: [**4.0**]

Comments:

*Good Job!**Need to work on his thesis before submitting it to graduate school.*

Guidance Committee Chairperson

9/16/2011
Date

Dept Chair / Grad Coordinator

Date

Associate Dean

Date