

# ***Grants Awarded Report***

**From:** 12/1/08 to 12/31/08

***Project Title:*** Tennessee Small Business Development Center 2009-10

***Activation Amount:*** \$55,223.00

***Agency:*** Tennessee Small Business Development Center

***Personnel:***

PI - Vicki Henley, Small Business Development Center

Support Personnel - Claire Cowan,

***Abstract:***

# *Grants Awarded Report*

**From:** 12/1/08 to 12/31/08

**Project Title:** Energize TN Marketing Campaign

**Activation Amount:** \$24,000.00

**Agency:** Oak Ridge Associated Universities

**Personnel:**

PI - Kevin Liska, Business Media Center

**Abstract:**

The purpose of this project is to implement a successful statewide marketing campaign for ORAU.

# *Grants Awarded Report*

**From:** 12/1/08 to 12/31/08

**Project Title:** Performance Optimization and Extended Speed Control of Multi-Phase Open Winding Induction and Interior Permanent Magnet Machines Actuated with Dual Multi-Phase, Multi-Level Converters

**Activation Amount:** \$179,093.00

**Agency:** Office of Naval Research

**Personnel:**

PI - Joseph Ojo, Electrical and Computer Engineering

**Abstract:**

Multi-phase electric machines actuated with multi-phase converters hold promise for high power applications in electric ship propulsion, electric and hybrid electric vehicles and high power industrial applications. They provide high reliability and high quality torque production.

This project investigates the extended-high speed operation of this converter-machine system using converter reconfigurations and open-ended machine connection. Control of the multi-level converters at the ends of the machine provides the opportunity for system optimization-efficiency improvement, greater converter utilization and power factor correction.

# *Grants Awarded Report*

**From:** 12/1/08 to 12/31/08

**Project Title:** Modeling of Face Sheet Wrinkling of Cylindrical Sandwich Shells

**Activation Amount:** \$24,000.00

**Agency:** United Launch Alliance

**Personnel:**

Co-PI - John Peddieson, Mechanical Engineering

PI - Jane Liu, Civil and Environmental Engineering

**Abstract:**

Tennessee Tech University (TTU) and the United Launch Alliance (ULA) intend to submit a GOALI proposal to the National Science Foundation (NSF) to request support to develop a comprehensive model of face sheet wrinkling of cylindrical sandwich shells containing localized imperfections. The GOALI program is intended to foster university/industry collaboration. In support of this effort, a comprehensive literature review will be conducted and commentary on the state-of-the-art will be prepared. Based on these, an appropriate NSF program will be identified and a draft of the GOALI proposal will be developed. The draft will be sent to ULA to review.