Registration Form

TEAM INFORMATION

Team Name/Project Title: Detect vibrations and generate power using piezoelectric materials.

Department: Electrical Engineering

Faculty Advisor: Brian Atkinson

Team Members: Abdulaziz Alkaabi, Ahmad Darwish, Eduardo Mier, Jeffrey Rascon

PROJECT INFORMATION

Description:

Using piezoelectric materials to detect earthquake level vibrations and generate power.

Abstract:

We will use piezoelectric strips to detect earthquake level vibrations and sound an alarm. The atmega328p microcontroller will be used as the “brain” of the system. The analog to digital converter will convert the piezoelectric analog output into digital values for processing.

We will also produce energy using circular piezoelectric patches arranged in a 10 x 14 rectangle. The patches will convert kinetic energy into electrical energy. We will use a diode rectifier to convert the piezo AC energy into DC which will go into a capacitor for storage. The piezoelectric board will be able to light up a LED for proof of energy generation.