

## A NEW APPROACH TO ENABLE THE BLIND PEOPLE TO "SEE"

**Jose H. Miranda, (Advisor: Eliza Du, Ph. D.),** Department of Electrical and Computer Engineering, Purdue School of Engineering and Technology, Indiana University-Purdue University Indianapolis, Indianapolis, IN 46202

Eyes are one of the most important sensors for human beings to know the world. Unfortunately, people who are blind are detached from this capability. The focus of this research is to design a device containing an imaging system for these people. This device will contain a touch-based temperature image system to represent pixels of an image. We use Light-Emitting Diode (LED) lights as sensors. Certain LED lights will be turned on with the interactions of switches and resistors to create each image. Based on the temperature that these lights distribute, the sensory array would provide a touchable image for users. In addition, throughout the project, we will maintain a focus on maximizing user friendliness.

Funding provided by the Diversity Scholar Research Program (DSRP) from the Center of Research and Learning at Indiana University-Purdue University Indianapolis (IUPUI).