



ECE-GIRLS: Girls Explore Electrical and Computer Engineering

Date: December 8th, 10th, 12th, 2014

North Dakota State University

IEEE CAS Outreach Initiative 2014 Report





ECE-GIRLS: Girls Explore Electrical and Computer Engineering

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1. Brief description of ECE-GIRLS activity

ECE-GIRLS (**Girls Explore Electrical and Computer Engineering**) was a three-day program to introduce high school female students to the attractive fields of Electrical and Computer Engineering (ECE). The goal of this program was to instill an interest in ECE and to increase the number of high school graduates majoring in this field. It was held on December 8th, 10th, and 12th, 2014 on North Dakota State University main campus.

The activity was announced NDSU ECE Department webpage, NDSU ECE facebook page, NDSU IEEE website, and NDSU IEEE facebook page. Posters were put on in all high schools in the Fargo-Moorhead area and emails were sent to all high schools students. Finally, seven female high school students were selected to participate in ECE-GIRLS. During ECE-GIRLS, a variety of activities were incorporated, exposing girls to ECE hands-on experiences and role models. The three-day program activities are detailed as follows. Student surveys were conducted at the end of the program. The participants rated the ECE-GIRLS favorably. All of them agree that ECE-GIRLS helped them have an understanding of ECE topics and they would encourage other girls to participate in ECE-GIRLS in the future.

ECE-GIRLS 2014 Activity	
Dec. 8, 2014, Monday	
4:15 pm	Orientation (Long-Sleeve Shirt and Flash Driver Pick-up)
4:30 pm – 5 pm	Meeting Department Chair Dr. Scott C. Smith
5 pm – 5: 40 pm	Meeting Female Professors in Engineering
5:40 pm – 6:45 pm	Demonstration and Discussion of Senior Design Project by Dr. Mark Schroeder and Dr. Jacob Glower
Dec. 10, 2014, Wednesday	
4:15 pm – 5: 30 pm	Meeting Female Graduate and Undergraduate Female Students
5:30 pm – 6: 45 pm	Hands-on Project: FPGA Board Based Piano
Dec. 12, 2014, Friday	
4:15 pm – 6:00 pm	Tour NDSU Center for Nano-Scale Science and Engineering
6:00 pm – 6: 45 pm	Survey

2. Budget Spending

\$1800 was provided from IEEE CAS for ECE-GIRLS. A summary of event expenses is included below.

Expenses	Amount
ECE-GIRLS long-sleeve shirt	\$447
ECE-GIRLS flash drive	\$200
Printing (Posters for high schools, program booklet, survey form)	\$369
refreshments, food and drinks	\$358
Advertise fee and miscellaneous	\$426
Total Amount	\$1800
Sponsors	
Amount Provided by IEEE CAS	\$1800

3. Photos of ECE-GIRLS



Girls met NDSU ECE Department Chair
Dr. Scott C. Smith



Dr. Mark Schroeder and NDSU ECE students
were demonstrating senior design project



Dr. Jacob Glower introduced the projects to girls



NDSU ECE students were introducing the robot
they designed to the girls



Girls met female professors in engineering: Dr. K.Katti, Dr. Y. Wang, and Dr. N. Gong



Girls met NDSU Female Graduate and Undergraduate Female Students



Girls were discussing FPGA-Based piano project



Girls were playing their FPGA-Based piano



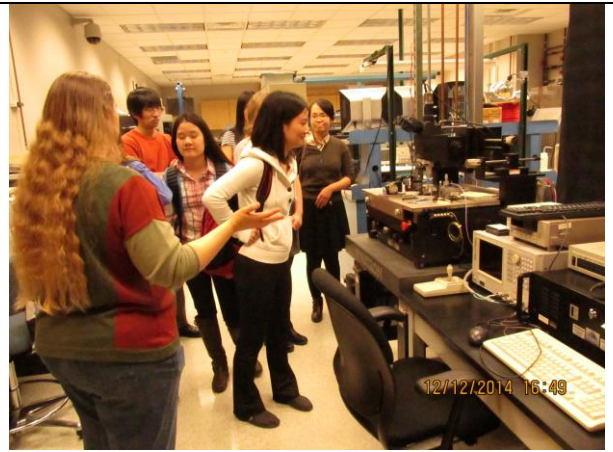
NDSU ECE students Valdemar Hernandez and Riya Sharma were giving presentations on digital system design to the girls



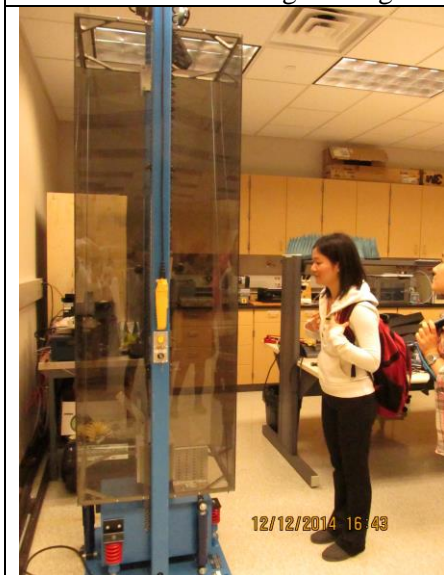
NDSU ECE senior student Mariana Lopez Jaimez was introducing her project



Tour NDSU Center for Nano-Scale Science and Engineering



Girls learned various facility at the center



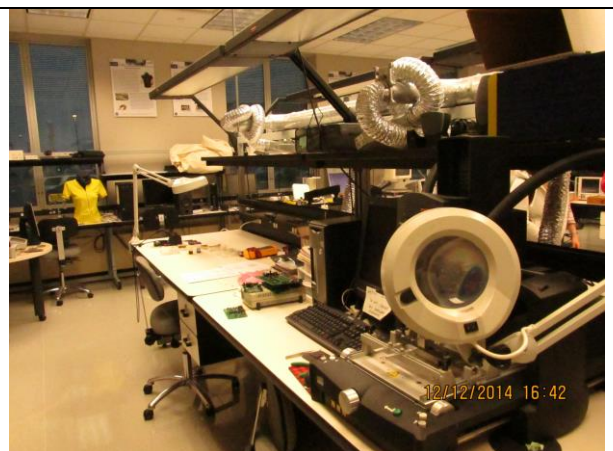
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