



# MTT-S Society News

## ***IMS2014 Project “Connects” Undergraduate Students to the Microwave Field***

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This year, at the 2014 International Microwave Symposium (IMS), the inaugural Project Connect program was held. Twenty undergraduate students were selected and invited to participate in this three-day IMS immersion experience. With support from IMS2014 and the National Science Foundation, Project Connect’s aim is to increase the talent pool in the RF/microwave/wireless fields and establish this as a model program to broaden participation within the IEEE. The students, primarily from under-represented populations, participated in a variety of activities to educate them about educational and career opportunities in the field. Based on the feedback from the participants, this objective was met! The students were well engaged, the energy level was high, academic and industry participation was terrific, and a great deal of momentum was generated to carry Project Connect into IMS2015 and beyond.

### **Exploring Careers in Microwave**

A key component of the Project Connect agenda was to provide students with an



opportunity to learn about career paths in microwave engineering. An additional goal was to help students learn how to prepare to position themselves to succeed in their career of choice. Project Connect realized these goals by arranging three panels, which comprised 1) industry professionals, 2) college professors, and 3) graduate students. The panel members

described their technical interests and roles as well as their career paths and shared professional insights and advice with students. The panelists shared strategies of how to effectively transition from academia to the workplace. The experiences were diverse, as the panelists had backgrounds in areas that included technical marketing, management and product development, and management of funded research programs. The industry panel included participants with senior-level positions in both government and nongovernment engineering organizations. The students were given opportunities after each formal panel session to informally meet with panel members and even network for advice, professional opportunities, and mentorship.

### **Exploring Technology at IMS**

IMS is among the largest IEEE conferences, and the variety of venues for learning is incredibly broad, even for senior professionals in the field. To bring structure to the student engagement, Project Connect designed a Monopoly-style game in which students needed to attend a certain number of events in various categories. Students attended technical talks, poster sessions, design competitions, and social exhibits and

“Stepping out of the classroom and seeing what professionals are doing in the field is exciting. There is so much that is possible, and it gives my study new life when I see where we are headed, and what there is to look forward to.”

—anonymous IMS Project Connect student participant

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# 2015 IEEE International Conference on Microwaves for Intelligent Mobility

The first International Conference on Microwaves for Intelligent Mobility is initiated by the IEEE MTT Society, sponsored by IEEE, EuMA, and VDE-ITG. The conference in Heidelberg will be the first one of this annual event, consisting of invited talks and contributed papers with lunch provided and a great banquet in between. A poster session will receive outstanding visibility at the conference. We intend to bring together worldwide scientists and industrial experts to share and discuss new ideas and future trends. The proceedings of the conference will be published on IEEE Xplore.



## Call for Papers

**Submission Deadline: December 20, 2014**

Authors are invited to submit electronically their contributions for review. We accept papers of 2-4 pages in pdf-format. Papers will be presented in either oral or poster sessions. All papers must be written in clear, idiomatic English. For further details, conditions and templates, see

**[www.icmim-ieee.org](http://www.icmim-ieee.org)**

Suggested Technical Areas:

- Antennas
- Components
- Frontends
- Modulation
- Wave propagation and RCS
- System concepts
- RF-signal processing

In these fields of applications:

- Automotive radar
- Vehicular applications of RF-systems, sensors and communication
- RF based localization and monitoring
- RF for C2C and C2X
- RF for mobile systems, machines, and other industrial applications

**General Chair: Thomas Zwick, Technical Program Chair: Christian Waldschmidt**



Participant Keishly Rosario receives some ham radio help.



Students take a photo before heading to the exhibition floor.



Passing on advice during the Graduate Student Panel Session.



IMS Project Connect students, organizers, and special guest Dimitris Pavlidis.

visited the exhibit hall booths. They documented events that were particularly outstanding and had one-on-one discussions with vendors, student volunteers, academicians, and IMS organizers. According to one student, "Attending the sessions helped to understand how to address and present to an audience. It displayed proper ways to handle being the center of attention and how to make sure all the presented information is coherent and interesting."

At the culmination of the program, student teams created videos that summarized the IMS conference through their own eyes. The energy that students put into this program was evident in the quality of their resulting

videos, in both content and style. Project Connect organizers and panel members attended the presentations, enthusiastically applauding the student achievements.

The student videos provide a vast array of perspectives on the IMS conference. The videos included student interviews with IMS attendees and exhibitors, interactions with other student attendees at the poster sessions and design competitions, and reporting on RF/microwave wireless technologies and applications.

### Selection Process and Participant Data

Students were selected based on a competitive application that included school transcripts, letters of recommendation, and a personal statement video. To qualify, students were expected to be from underrepresented minority groups, including women in the engineering, math, and science fields. Students were required to be enrolled in an undergraduate degree program, though recent graduates enrolled in a graduate program were also considered.

The selected students were highly motivated, and the group was very diverse. The participant demographics included 21% Hispanic students and 58% Black students. In addition, 47% of the participants were women.

The Project Connect organizers were inspired by the number of students for whom this event provided the first opportunity to travel. It was clear that this experience, across the board, opened the students' eyes to a field not well understood from just their classes.

### Impact and Future Plans

The inaugural success of Project Connect has ensured that the program will be offered at IMS2015. The organizers, sponsors, educators, and, most of all, the students felt that Project Connect had a tangible impact. As summed up by one student, Project Connect was a "once-in-a-lifetime experience! Definitely worth it!"

As the bright future of wireless technology unfolds, this program and others like it cultivate an inclusive community and enhance opportunities for innovation and technical excellence.

"Having a group of people on your academic level to navigate the conference with was far more comfortable, especially as a first-timer, than trying to go it alone, so I was grateful for the experience."

—anonymous IMS Project Connect student participant