

Electrical Engineering Student Wins at Bell Labs Student Research Competition

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Electrical engineering PhD candidate Rabia Tugce Yazicigil won second place at the Bell Labs Future X Days Student Research Competition with her research on “Enabling Cognitive Radio Systems with Compressed-Sampling Rapid Spectrum Sensors”. Only 10 students were invited to present their innovative research at Bell Labs out of 50 applicants, and three of the 10 were electrical engineering students from Columbia. Prizewinners were invited April 8 to attend Bell Labs’ Nobel Prize research colloquium and celebration.

Yazicigil is a student in the [Columbia Integrated Systems Lab](http://www.cisl.columbia.edu/kinget_group/) (http://www.cisl.columbia.edu/kinget_group/) advised by Professor [Peter Kinget](http://www.ee.columbia.edu/~kinget/) (<http://www.ee.columbia.edu/~kinget/>) and Assistant Professor [John Wright](http://www.ee.columbia.edu/john-wright) (<http://www.ee.columbia.edu/john-wright>). Her interdisciplinary research work focuses on developing novel spectrum sensing architectures exploiting compressed sampling for future cognitive radio systems. Past February, she presented her research on “A 2.7–3.7GHz Rapid Interferer Detector Exploiting Compressed Sampling with a Quadrature Analog-to-Information Converter” together with a live demo of the system at the prestigious 2015 IEEE International Solid-State Circuits Conference (ISSCC). The research is in collaboration with fellow PhD student Tanbir Haque, alumnus Michael Whalen, and Jeffrey Yuan, an undergraduate majoring in electrical engineering, and supported by the National Science Foundation EARS program in collaboration with Interdigital Communications.



Three electrical engineering students were finalists in the Bell Labs student research competition. Pictured third from the left, Tolga Dinc, followed by Jin Zhou. Pictured, center: Rabia Tugce Yazicigil.

—Photo courtesy of Bell Labs

Jin Zhou and Tolga Dinc, both students in Associate Professor [Harish Krishnaswamy](http://www.ee.columbia.edu/~harish/) (<http://www.ee.columbia.edu/~harish/>)’s lab, were the two additional SEAS students who presented as finalists at Bell Labs. Zhou was just [named a winner](http://engineering.columbia.edu/electrical-engineering-phd-students-win-qualcomm-innovation-fellowship) (<http://engineering.columbia.edu/electrical-engineering-phd-students-win-qualcomm-innovation-fellowship>) in the highly competitive Qualcomm Innovation Fellowship.

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