

**Faculty Name:**

Gil Zussman

**Faculty Email:**

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**Lab:**

Wireless and Mobile Networking Lab

**Project Title:**

Joint Sensing and Communication with mmWave and Terahertz Wireless for 6G Networks

**Description:**

6G cellular networks will utilize high-frequency (mmWave and/or terahertz) data transmissions to jointly sense the environment and communicate with users. This project is a collaborative effort with Nokia Bell Labs to evaluate the feasibility of 6G wireless sensing. We will be using custom wireless measurement equipment including 28 GHz and 0.14 THz channel sounders to examine responses at a variety of locations within the Columbia campus and wider NYC metro area. Student responsibilities will include developing experiments, collecting measurements using this equipment, and analyzing collected datasets to better understand the sensing capabilities at these frequencies.

**Location of Research:**

On Site

**# of hrs/week:**

40

**Department/Program:**

Electrical Engineering

**Eligibility:**

BS, First Year, BS, Second Year, BS, Third Year, BS, Fourth Year, MS

**To apply, please contact:**

abhishek.adhikari@columbia.edu