



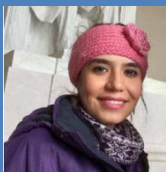
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| TOPIC | Device to Device Communication in Software Defined Network 5G |
| ORGANIZERS | Student Leadership Council and Faculty of ACIT Institute and TECHLAV Center |
| AREA | Communication Systems |
| SPEAKER | Niloofer Bahadori |
| DATE | Friday, March. 17, 2017 |
| TIME | 3:00 – 3:30 PM (EST) |
| VENUE | Fort IRC 410, North Carolina A&T State University, UTSA and SIPI will be joining through video-conferencing |
| FEES | No Charge |

SYNOPSIS

5G cellular networks promise an increase in bandwidth, as well as enhanced network architecture that is tailored to the services expected from today's cellular infrastructure, i. e. support of the Internet of Things (IoT) and the giant leap in the number of connected devices. There are several techniques to improve wireless networks' performance. Device-to-Device (D2D) communication has been approved and adopted as a viable solution to improve network performance. One of the main problems arising in the practical implementation of D2D technology is the interference it causes to the cellular users while the scarce communication frequencies are shared.

In this presentation, I elaborate on the integration of two key technologies in 5G: millimeter wave (mmWave) and D2D communications. The characteristics of D2D and mmWave are complementary. While D2D facilitates the communication of nearby mobile nodes, mmWave provides high throughput short-range links by using higher carrier frequencies and reducing interference with the help of directional communication. This directly addresses two critical issues in cellular networks, namely, an increased in the number of users and high throughput requirements.

ABOUT THE SPEAKER



Niloofer Bahadori received her M. Sc. and B. Sc. in Electrical Engineering from Isfahan University. She is currently a PhD student at NC A&T State University since December 2014 and is working on the TECHLAV project on 5G networks technologies, D2D communication and mmWave communication.