



**AUTONOMOUS  
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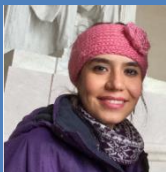
**TECHLAV**

<b>TOPIC</b>	<b>Device to Device Communication in Software Defined Network 5G</b>
<b>ORGANIZERS</b>	Student Leadership Council and Faculty of ACIT Institute and TECHLAV Center
<b>AREA</b>	Communication Systems
<b>SPEAKER</b>	Nilufar Bahadori
<b>DATE</b>	Friday, Oct. 14, 2016
<b>TIME</b>	3:00 – 3:30 PM (EST)
<b>VENUE</b>	Fort IRC 410, North Carolina A&T State University, UTSA and SIPI will be joining through video-conferencing
<b>FEES</b>	No Charge

## SYNOPSIS

Due to the recent broad use of Internet applications by smart terminals, wireless networks' traffic load have increased exponentially. Therefore, the bottleneck of wireless bandwidth becomes the crucial problem in the 5G wireless networks. There are several techniques to improve wireless networks' performance, such as increasing the available bandwidth and geographical spectrum reusability, and by improving spectral efficiency. Although some of these techniques can boost the 4G network performance, there is no clear plan on how to achieve 5G performance objectives. The low-frequency bands have almost been used up, and it is hard to find enough resources in the microwave band for 5G network enhancements. On the other hand, a vast amount of spectrum, (3-300GHz range) referred to as Millimeter wave (mmWave) remains under-utilized. mmWave band communication offers a broad bandwidth for multi-gigabit communication and is going to be one of the promising technologies in the 5G wireless networks. In this presentation, I will review the mmWave band communication and investigate its potential benefits, technical challenges, and applications. Furthermore, the integration of mmWave communication in 5G network as a solution for enhancing the network capacity is discussed.

## ABOUT THE SPEAKER



Nilooar Bahadori received her M. Sc. and B. Sc. in Electrical Engineering from Isfahan University. Since December, 2014 she has been a PhD student at NC A&T State University and is working on TECHLAV project on D2D communication in SDN 5G networks.