

**Expert talk on "Energy
and Spectrally Efficient
Signalling for Beyond 5G
and 6G Communication"**

IEEE AHMEDABAD UNIVERSITY STUDENT BRANCH
JULY 25 , 2022

Opening:

The Hosting of the Expert talk on "Energy and Spectrally Efficient Signaling for Beyond 5G and 6G Communication" was called to order at 4:00 PM on 25th July on the online platform, Zoom.

Agenda :

The talk will present an overview of energy management in machine type devices (MTDs), self-sustaining nodes through energy harvesting, energy efficient signaling techniques, backscatter communications, intelligent reflecting surfaces, non-orthogonal multiple access (NOMA) and grant-free access for massive machine type communications

About Speaker :

Professor Shankar Prakriya received B.E (Hons.) in Electronics and Communications Engineering from the Regional Engineering College Tiruchirapalli (now NIT) in 1987. He worked for the Indian Space Research Organization briefly. He also received the M.A.Sc (Engg.) and PhD from the department of Electrical and Computer Engineering of the University of Toronto, Toronto, Canada in 1993 and 1997 respectively. He joined the Indian Institute of Technology Delhi as a lecturer in 1997, where he is currently serving as a professor in the department of electrical engineering. He was associated faculty with the Bharti School of Telecom Technology and Management at IIT Delhi until February 28, 2018, and served as its coordinator from 2014 to 2017. He held the Jai Gupta research chair for five years until 2017. Currently He holds the Prof. G.K. Chandiramani Chair at IIT Delhi. He holds two US, Korean, Japanese and Chinese patents related to DSL, and two US patents on wireless communications. He has filed several patent applications related to 5G communications. Since July 2021, He is serving as an editor of the IEEE transactions on Wireless Communications. He is a senior member of the IEEE.

Total Number of Attendees:

The Total of 45 Students from various departments of Ahmedabad University , as well as from the other colleges attend this expert talk . There are also some faculties from various colleges which includes Dr Sarosh Dastoor ,Dr Chirag Paunwala and Prof. Chintan Varnagar.

Discussion Order:

1. Welcome
2. About IEEE Signal Processing society
3. Expert Talk
4. Q&A session
5. Felicitation
6. Vote of Thanks

Flow:

The session was hosted by Kenil Shah And Manan Anjaria. The session began with introduction of the speaker and after that introduction of IEEE SPS Gujarat section , session was then carried forward by Professor Shankar Prakriya.

In this session, Professor Shankar Prakriya discussed important concepts of 5G, 6G infrastructure and the challenges and solutions to make it more and more energy efficient. This includes discussion about types of Buffer Batteries that can be used using different methods of connectivity of objects which can make more energy efficient connections and also improve coverage.

The session was carried further with discussion about evolution from 1G to 6G and how things can adapt for the transition

The final segment included ongoing research in the domain for creating and adapting things to be more energy efficient for 5G and 6G connections.

Participants were then asked to write their questions and Professor Shankar Prakriya answered them in depth .


Thereafter, Manan Anjaria, Chairperson of IEEE AU SB, presented a Vote of Thanks and Memento to Professor Shankar Prakriya.

Each participant gained new information about Energy and Spectrally Efficient Signaling . The session ended at 5.30 PM and all the participants were given certificates upon filling up the feedback .

Event Poster :




IEEE Signal Processing Society Gujarat Chapter
presenting a Talk
in collaboration with
IEEE Ahmedabad University Student Branch



**Energy and Spectrally Efficient
Signalling for Beyond 5G and 6G
Communications**

25TH JULY, 2022 | 4:00PM(IST)

Scan to Register



<https://bit.ly/3O7E4iE>
(WebEx link will be shared to registered participants)



ieeespsgs.org



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Memento:

IEEE Ahmedabad University Student Branch

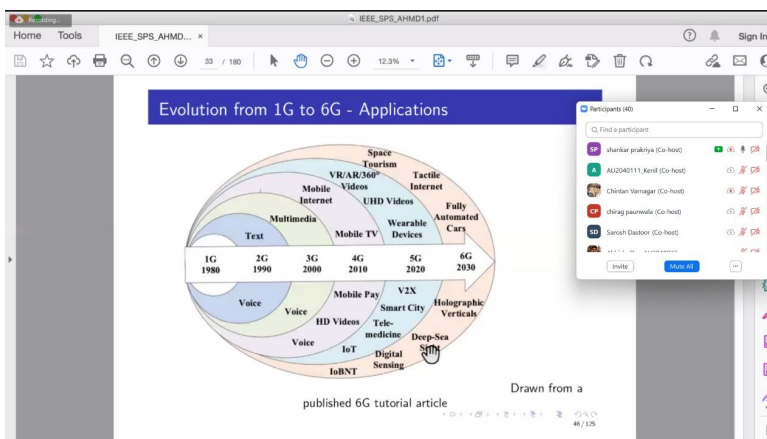
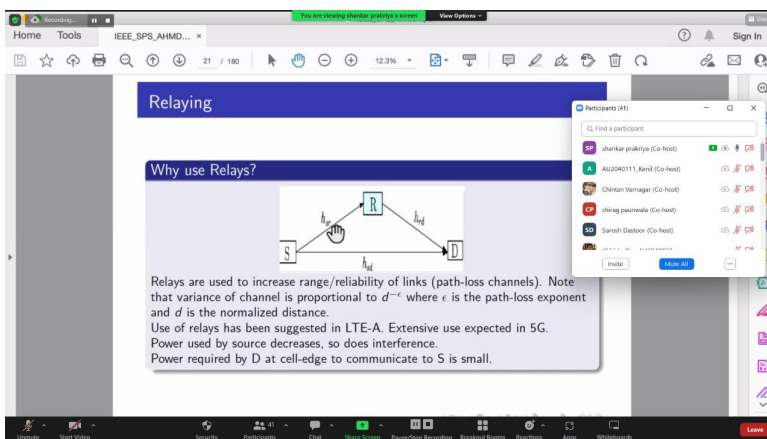


Technical Talk Series 2022
25 July 2022

IEEE SPS GS and IEEE AU SB thanks
Prof.(Dr.) Shankar Prakriya
IIT Delhi

for delivering an expert talk on
**"Energy and Spectrally Efficient Signalling for Beyond
5G and 6G Communication"**

Glimpse of Event :



Conclusion:

With the goal of imparting knowledge of Energy and Spectrally Efficient Signaling For connectivity , Expert talk was a great success owing to the efforts of the organizing team and the energetic attendees. Looking at the Future which leans towards more connectivity , the expert talk paved a great way to understand how things can be made more efficient for Faster Connectivity. There was ample participation in expert talk, and it got conducted smoothly. Moreover, good feedback was received from the participants of the expert talk , and they want some more Hand-on session on various other domains.