

## DISCUSSION INFORMATION PAGE

- Thesis title: Research on scheduling techniques for the new generation mobile communication network.
- Specialization: Telecommunications Engineering
- Code: 62.52.02.08
- Full name of PhD student: Pham Hung
- Science instructor:
  1. Assoc. Prof. Dr. Nguyen Tien Ban
  2. Assoc. Prof. Dr. Dang Hoai Bac.
- Training institution: Institute of Post and Telecommunications Technology.

### NEW RESULTS OF THE THESIS:

1. Scheduling technique using channel aging information. Calculating the effect of channel aging information on the speed of the user and the system as a whole. From there, a scheduling technique is proposed to ensure the minimum speed of serviced subscribers and improve the capacity of the whole system.
2. Combined with power control technology to ensure many different types of minimum speeds depending on user requirements. The proposed scheduling technique takes into account the user's quality of service characteristics such as latency, priority, and minimum speed in the scheduling process.
3. Exploiting the semi-orthogonal characteristics of the channel and of the low-resolution ADC converter, determining the threshold to find the optimal subscriber set to reduce the scheduling time. Thereby reducing the latency of the system while still approaching the optimal capacity.

### APPLICATIONS, POSSIBILITY OF APPLICATION IN PRACTICE OR ISSUES THAT NEED CONTINUED RESEARCH:

- The thesis has proposed a number of preparation techniques that can be applied in the 5G fifth generation mobile communication system.
- However, it is necessary to continue to study open issues such as the channel aging in the mmWave system.

Confirmation of the scientific supervisor PhD

Student

**Nguyen Tien Ban    Dang Hoai Bac**

**Pham Hung**