# Mobile broadband

# Dense crowd of users

ECHAHID HAMMA LAKHDAR UNIVERSITY - EL-OUED Under the Supervision of the DGRSDT and in collaboration with the CRTI International Pluridisciplinary PhD Meeting (IPPM'20) 23-26, 2020 1<sup>st</sup> Edition, February https://www.univ-eloued.dz/ippm20/

# Theme: 5G of mobiles Networks: Challenges and requirements

Our aim is to provide a survey about 5G technology; that is the fifth generation network of cellular mobile communications, intended to replace 4G. Normalization and standardization will be done in 2020. The first set was in March 2019 by some countries like China, USA. 5G technology will achieve peak data rates up to several times faster than LTE Advanced's peak speeds of 1 Gbps. We expect 5G to provide between 100 and 1,000 times more capacity than 4G. 5G must have a latency of a single millisecond, 50 times faster than 4G, or even less. The network will set on either centimeter wave bands at spectrum frequencies below 6GHz or centimeter and millimeter wave bands above it 30 to 300GHz. Mobile Internet and the Internet of Things (IoT) are two key market drivers for 5G communications. We resume the aim of this technology is to provide high throughput (gigabits), high area capacity density, data transmission with any delay, to provide smart cities, Device-to-Device communications.....

Topics

### 1- Massive MIMO

- 2- Millimeter wave
- 3- Access techniques
- 4- New Radio
- 5-Beamforming technology

#### Workshop chair:

IoT sensor network

Ali Chemsa, Dean of faculty of Technology, University of El-Oued-Algeria

#### **Program Committee Chair:**

Riadh Ajgou, University of El-Oued, Algeria

#### **Organizing Committee Chair**

Said Ghendir, University of El-Oued-Algeria

# Reliability, resilience, security

## IoT control network

latency

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