Fundamentals of 5G NR

5G technology is taking over wireless communications by storm. Forbes magazine has referred to the release of 5G as the 5G Tsunami. Experts predict carriers across most regions will release 5G within a year. 5G will be providing the technology to many new industries on the horizon.

Catch the 5G wave and stay current with this revolutionary technology.
Course Highlights:

- 5G use cases and 3GPP standards status
- Waveforms: OFDM, DFT – spread OFDM
- Numerology, frame structure, HARQ
- Channel coding (LDPC and polar code)
- Massive MIMO: precoding, CSI feedback
- Beamforming: hybrid beamforming, operation at mmWave
- Data channel, control channel, initial access
- Advanced Quality of Service (QoS) support in 5G
- Co-existence between NR and LTE
- Online delivery provides participants with schedule flexibility

What you will learn:

- Key technologies of 5G NR (New Radio), the global 5G standard for a new radio access network design to support a wide array of 5G device-types, services, spectrum and deployments
- Differentiate 5G use cases including Enhanced Mobile Broadband (EMBB), Ultra Reliable and Low Latency
- Communication (URLLC), massive Machine-Type Communications (MMTC)
- Research 3GPP technical specifications
- Identify the differences between NR and LTE

About the instructor:

Liangping Ma is an IEEE Communication Society distinguished lecturer covering 5G and video communication. He is also a technical staff member and delegate to the 3GPP NR standards with InterDigital Inc.

At a Glance:

Course typically offered Online in Summer and Winter
Cost: $795.00
Duration: 9 weeks
IEEE 5G International Summit attendees and IEEE Members get a 10% Discount. Simply enter discount code IEEE10 at check out.

Enroll today at: https://extension.ucsd.edu/5gnr
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