# The Impact of Interference from the Side Lanes on mm Wave/THz Band V2V Communication Systems with Directional Antennas

# ABSTRACT


- In this paper, using a combination of measurement, simulation, and analytical methods we comprehensively characterize the interference from the side lanes in two typical deployments.
- Both the multipath interference and direct interference from the transmitting vehicles on the side lanes is taken into account.
- As a result of our study, we reveal that the interference from the side lanes can be well approximated using two-dimensional stochastic models without any significant loss of accuracy.

# EXISTING SYSTEM

- Communications systems operating in the millimeter-wave and terahertz band have been recently suggested to enable high data-rate vehicle-to-vehicle communications in 5G and beyond wireless networks.
- However, massive deployment of such systems may lead to significant interference, affecting the performance of information transmission.
- While the multipath interference caused by the signal reflections from the road has been extensively discussed in literature.

# PROPOSED SYSTEM

- In addition, the interference level in the analyzed configurations greatly depends on the angle of the antenna radiation pattern.
- On the contrary, for angles smaller than 20° the interference in dense deployments of vehicles is typically marginal even in the absence of the interference mitigation techniques.

# HARDWARE REQUIREMENTS

- Processor - Intel core i3
- RAM - 2B
- Hard Disk - 20 GB

# SOFTWARE REQUIREMENTS

- Operating System : LINUX
- Tool : Network Simulator-2
- Front End : OTCL (Object Oriented Tool Command Language)

# REFERENCE


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