**Title*: Performance analysis of linear polarization antenna in 2.45 GHz on-body communications***

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Dear editor:

We are enclosing with this manuscript titled “*Performance analysis of linear polarization antenna in 2.45 GHz on-body communications”* for considering gor publication in *Journal of Modeling and Simulation.*

On-body channels show highly polarization selectivity with respect to the orientation of the transmit and receiving antennas, while the body coupling and scattering effects in reverse affect the antenna polarization characteristics in near-field. In this paper, three kinds of compact linearly polarized antennas, the inverted-F antenna, the MIFA antenna, and the printed dipole antenna, are designed and are analyzed for their polarization performance above the body trunk via numerical simulations. A simplified three-layered human chest model including skin, fat, and muscle tissues is applied. The return loss, bandwidth, and the radiation pattern of the investigated antennas are found to be affected by the relative orientation and distance between the antennas and the trunk, indicating the necessity of the antenna placement optimization for realistic on-body communication devices.

Thank you very much for your time and consideration of our manuscript. Your positive consideration will be greatly appreciated.

With best regards,

Yours Sincerely

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