

On Mitigation of Ranging Errors for Through-the-Body NLOS Conditions using Convolutional Neural Networks

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Abstract— A UWB-based indoor localization is highly useful in various location-aware applications due to its high-precision and robustness in obstacles. However, it is still a challenging issue to mitigate ranging errors caused by non-line-of-sight(NLOS) conditions. In recent years, various approaches have been attempted using deep learning, but this is mostly the study of NLOS conditions by indoor obstacles. In this paper, we proposed a solution of ranging error mitigation for through-the-human body NLOS conditions using Convolutional Neural Networks.

Keyword— Ultrawideband (UWB), Ranging Error, Convolutional Neural Networks, NLOS Mitigation, Human Body NLOS.



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