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A Novel Statistical AOA Model Pertinent to Indoor Geolocation

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ABSTRACT
A novel statistical angle-of-arrival (AOA) model for indoor geolocation applications is presented. The modeling approach focuses on the arrivals of the multipath components with respect to the line-of-sight (LOS) path which is an important component especially when indoor geolocation applications are considered. The model is particularly important for indoor applications where AOA information could be utilized for tracking indirect paths to aid in precise ranging in harsh and dense multipath environments where LOS path might be blocked due to obstructions. The results have been obtained by a measurement calibrated ray-tracing (RT) tool.

KEYWORDS
angle-of-arrival, indoor geolocation, statistical modeling, ray-tracing

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