



INDERSCIENCE *Online*

The online platform for Inderscience Publishers journal content

- Home
- Browse
- Inderscience Publishers
- Subscribe
- Authors
- Librarians

Home > International Journal of Ultra Wideband Communications and Systems > List of Issues > Volume 3, Issue 4 > An indoor path loss model for wireless s

< Previous article

Next article >

An indoor path loss model for wireless sensor networks

Mohammad Abdel-Rahim , Mohamed Hadi Habaebi , Jalel Chebil , Aisha Hassan A. Hashim , Musse Mohamud Ahmed , Md Rafiqul Islam , Alhareth Zyoud

<https://doi.org/10.1504/IJUWBCS.2018.092427>

Abstract

PDF

Abstract

In this paper, path loss measurements were conducted and a path loss model was proposed for wireless sensor networks (WSNs) operating in indoor environment. This is done with a view to study transmit power requirements in indoor application of WSNs. The proposed model is a hybrid of the two-ray ground reflection model and the log-normal model and considers frequency and three-dimensional link trajectory as key parameters in evaluating path loss. The study highlights the effect of height on path loss exponent by means of various measurements taken in indoor environment. Comparison with the empirical data and other models in the literature was conducted and had very favourable results for the proposed model.

Keywords: channel models, indoor environments, path loss exponent, ZigBee, empirical models

SHARE

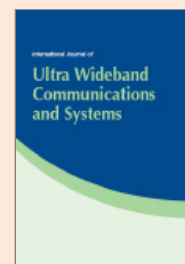
Purchase this article

Subscribe this journal

Click 'Add to cart' to add this article to the shopping cart. This article price is \$40.00. You may review the list of added articles prior to making the actual purchase on the shopping cart page.

Add to cart

International Journal of Ultra Wideband Communications and Systems



Print ISSN: 1758-728X Online ISSN: 1758-7298

- Current issue
- List of issues
- Subscribe
- Get TOC alerts
- About this journal

Article / Chapter Tools

- Add to Favourites
- Email to a Friend
- Send to Citation Mgr
- Track Citations

Related Content Search

By Keyword

- channel models
- indoor environments
- path loss exponent
- ZigBee
- empirical models

By Author

- Mohammad Abdel-Rahim
- Mohamed Hadi Habaebi
- Jalel Chebil
- Aisha Hassan A. Hashim
- Musse Mohamud Ahmed
- Md Rafiqul Islam
- Alhareth Zyoud

Search

Most Read

Most Cited

Preliminary UWB channel study for wireless body area networks in medical applications

Low complexity RAKE receiver for TH-based multiuser UWB system with realistic UWB indoor channel

Packet loss-ratio based scheduler: an adaptive scheduling scheme to increase the number of multimedia applications in WLAN

Adaptive data distribution technique for enhancing MB-OFDM UWB link performance in detect and avoid environments

A low power 35 GHz CMOS high linearity, unconditional stability and excellent gain flatness UWB power amplifier design using current reused technique

See More

Keep in touch:      



Inderscience Online
Advanced Search
Browse



Inderscience Publishers
Subscribe
Authors
Librarians



Inderscience Submissions
Submissions Guidelines
Submit an Article