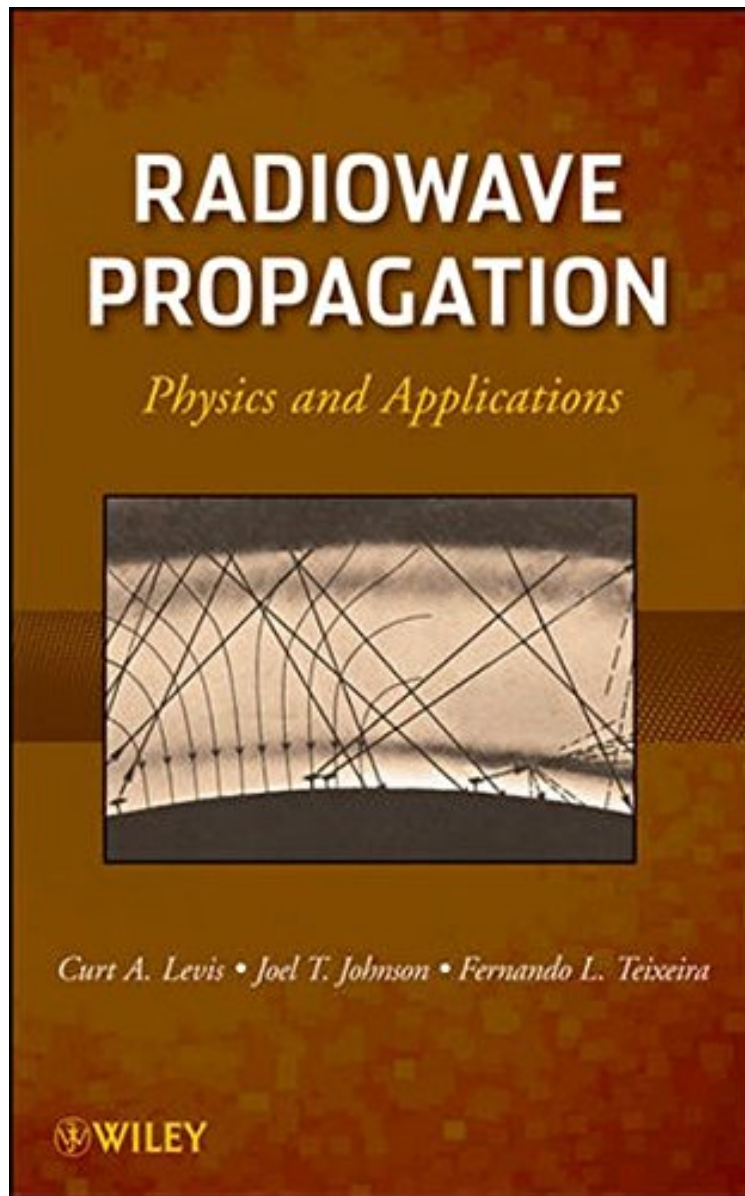


# Radiowave Propagation: Physics and Applications

*Curt Levis, Joel T. Johnson, Fernando L. Teixeira*  
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**Curt Levis, Joel T. Johnson, Fernando L. Teixeira : Radiowave Propagation: Physics and Applications** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Radiowave Propagation: Physics and Applications:

0 of 0 people found the following review helpful. Five Stars By Thomas McGoldrick The book is in very condition - I'm happy. 3 of 4 people found the following review helpful. Good book for intro into practical radiowave

propagation. By Electrical Engineer This is a great book for intro into radiowave propagation. It covers everything from atmospheric and rain attenuation, fresnel zones, statistical propagation, ground wave, ionospheric propagation, and many others. This is not a book for learning all about the physics behind this intricate propagation methods, but a great book for learning how to put the methods to use. It does require previous knowledge of Electromagnetic theory, because the review in the beginning will not be enough to learn the material from scratch. The book is written in such a way that it is very easy to learn from for self study, but there are no problems in the book to check your understanding. There are however many worked examples of propagation systems that are currently being used all over the world. Overall it is a great book for someone wanting to get a good intro into propagation or someone in another area of Electrical Engineering who want to gain a thorough understanding to the methods of radiowave propagation. 2 of 3 people found the following review helpful. Good book. Seems very thorough in my limited knowledge of the subject. By Joel I have the pre-released version as printed by UniPrint in 2008. I took the propagation class with author Joel Johnson who mentioned a real book was on its way. According to the table of contents in the book previews on this and other sites my printed copy is identical except this book seems to have better figure quality and is hard bound. This book has been a great reference in my space mission design class recently when we got to the link budget analysis sections. I like the plentiful charts showing empirical data for various path loss scenarios. They are a handy way to get a sanity check and make some quick calculations. I'm very tempted to buy this so I can have the hardcover with nicer images.

An accessible student-oriented approach to radiowave propagation Propagation-the process whereby a signal is conveyed between transmitter and receiver-has a profound influence on communication systems design. Radiowave Propagation provides an overview of the physical mechanisms that govern electromagnetic wave propagation in the Earth's troposphere and ionosphere. Developed in conjunction with a graduate-level wave propagation course at The Ohio State University, this text offers a balance of physical and empirical models to provide basic physical insight as well as practical methods for system design. Beginning with discussions of propagation media properties, plane waves, and antenna and system concepts, successive chapters consider the most important wave propagation mechanisms for frequencies ranging from LF up to the millimeter wave range, including: Direct line-of-sight propagation through the atmosphere Rain attenuation The basic theory of reflection and refraction at material interfaces and in the Earth's atmosphere Reflection, refraction, and diffraction analysis in microwave link design for a specified terrain profile Empirical path loss models for point-to-point ground links Statistical fading models Standard techniques for prediction of ground wave propagation Ionospheric propagation, with emphasis on the skywave mechanism at MF and HF and on ionospheric perturbations for Earth-space links at VHF and higher frequencies A survey of other propagation mechanisms, including tropospheric scatter, meteor scatter, and propagation effects on GPS systems Radiowave Propagation incorporates fundamental materials to help senior undergraduate and graduate engineering students review and strengthen electromagnetic physics skills as well as the most current empirical methods recommended by the International Telecommunication Union. This book can also serve as a valuable teaching and reference text for engineers working with wireless communication, radar, or remote sensing systems.

It is highly recommended for any RF engineer who is concerned with the effects of the propagation channel on his or her systems performance. (International Union of Radio Science, 1 March 2012) About the Author Curt A. Levis was director of The Ohio State University ElectroScience Laboratory from 1961 to 1969. He received the Eta Kappa Nu Distinguished Teaching Award in 1978, 1979, and 1980; he also received a Distinguished Teaching Award from The Ohio State University Alumni Association in 1980. Professor Levis is an IEEE Fellow. Joel T. Johnson is a professor in the Department of Electrical and Computer Engineering and ElectroScience Laboratory at The Ohio State University. His research interests are in the areas of electromagnetics, propagation, and microwave remote sensing. He is an IEEE Fellow and a recipient of the ONR Young Investigator, PECASE, and NSF CAREER awards. Fernando L. Teixeira is an associate professor in the Department of Electrical and Computer Engineering and ElectroScience Laboratory at The Ohio State University, as well as Associate Editor for IEEE Antennas and Wireless Propagation Letters. He is a recipient of the NSF CAREER Award and the triennial USNC-URSI Booker Fellowship.