



# Antenna Arrays: A Computational Approach

By Randy L. Haupt

[Download now](#)

[Read Online](#) 

**Antenna Arrays: A Computational Approach** By Randy L. Haupt

**A comprehensive tutorial on the design and practical applications of antenna arrays**

An antenna array is an assembly of antenna elements that maximizes a received or transmitted signal in a desired direction. This practical book covers a wide range of antenna array topics that are becoming increasingly important in wireless applications, with emphasis on array design, applications, and computer modeling.

Each chapter in *Antenna Arrays* builds upon the previous chapter, progressively addressing more difficult material. Beginning with basic electromagnetics/antennas/antenna systems information, the book then deals with the analysis and synthesis of arrays of point sources and their associated array factors. It presents a sampling of different antenna elements that replace these point sources, then presents element configurations that do not have to lie along a line or in a plane.

The complex and difficult-to-predict interactions of elements and electromagnetic waves are introduced, along with computer modeling and experiments that are necessary for predicting the performance of arrays where mutual coupling is important. Then, various approaches to getting signals to and from the array elements to a computer where the signal detection takes place are explored, as are the numerical techniques behind smart antennas.

The book emphasizes the computational methods used in the design and analysis of array antennas. Also featured are signal processing and numerical modeling algorithms, as well as pictures of antenna arrays and components provided by industry and government sources, with explanations of how they operate.

Fully course-tested, *Antenna Arrays* serves as a complete text in phased array design and theory for advanced undergraduate- and graduate-level courses in electronics and communications, as well as a reference for practicing engineers and scientists in wireless communications, radar, and remote sensing.

 [Download](#) **Antenna Arrays: A Computational Approach ...pdf**

 [Read Online](#) **Antenna Arrays: A Computational Approach ...pdf**

# Antenna Arrays: A Computational Approach

By Randy L. Haupt

**Antenna Arrays: A Computational Approach** By Randy L. Haupt

## **A comprehensive tutorial on the design and practical applications of antenna arrays**

An antenna array is an assembly of antenna elements that maximizes a received or transmitted signal in a desired direction. This practical book covers a wide range of antenna array topics that are becoming increasingly important in wireless applications, with emphasis on array design, applications, and computer modeling.

Each chapter in *Antenna Arrays* builds upon the previous chapter, progressively addressing more difficult material. Beginning with basic electromagnetics/antennas/antenna systems information, the book then deals with the analysis and synthesis of arrays of point sources and their associated array factors. It presents a sampling of different antenna elements that replace these point sources, then presents element configurations that do not have to lie along a line or in a plane.

The complex and difficult-to-predict interactions of elements and electromagnetic waves are introduced, along with computer modeling and experiments that are necessary for predicting the performance of arrays where mutual coupling is important. Then, various approaches to getting signals to and from the array elements to a computer where the signal detection takes place are explored, as are the numerical techniques behind smart antennas.

The book emphasizes the computational methods used in the design and analysis of array antennas. Also featured are signal processing and numerical modeling algorithms, as well as pictures of antenna arrays and components provided by industry and government sources, with explanations of how they operate.

Fully course-tested, *Antenna Arrays* serves as a complete text in phased array design and theory for advanced undergraduate- and graduate-level courses in electronics and communications, as well as a reference for practicing engineers and scientists in wireless communications, radar, and remote sensing.

## **Antenna Arrays: A Computational Approach By Randy L. Haupt Bibliography**

- Sales Rank: #1475471 in Books
- Published on: 2010-04-12
- Original language: English
- Number of items: 1
- Dimensions: 9.60" h x 1.30" w x 6.40" l, 1.95 pounds
- Binding: Hardcover
- 552 pages



[Download Antenna Arrays: A Computational Approach ...pdf](#)



[Read Online](#) **Antenna Arrays: A Computational Approach ...pdf**

## **Editorial Review**

### **About the Author**

**Randy Haupt** earned his PhD in electrical engineering at the University of Michigan in 1987. He has been Senior Scientist and Department Head of Computational Electromagnetics at the Applied Research Laboratory at Pennsylvania State University since 2004, and also a member of the Graduate Faculty in Electrical Engineering.

## **Users Review**

### **From reader reviews:**

#### **Rita Hackett:**

Do you one of people who can't read pleasant if the sentence chained from the straightway, hold on guys this specific aren't like that. This Antenna Arrays: A Computational Approach book is readable through you who hate those straight word style. You will find the information here are arrange for enjoyable looking at experience without leaving also decrease the knowledge that want to provide to you. The writer of Antenna Arrays: A Computational Approach content conveys objective easily to understand by a lot of people. The printed and e-book are not different in the articles but it just different as it. So , do you still thinking Antenna Arrays: A Computational Approach is not loveable to be your top checklist reading book?

#### **Cindy Gross:**

This Antenna Arrays: A Computational Approach is great e-book for you because the content which can be full of information for you who also always deal with world and also have to make decision every minute. This particular book reveal it facts accurately using great coordinate word or we can claim no rambling sentences inside. So if you are read that hurriedly you can have whole info in it. Doesn't mean it only provides you with straight forward sentences but difficult core information with beautiful delivering sentences. Having Antenna Arrays: A Computational Approach in your hand like having the world in your arm, details in it is not ridiculous one particular. We can say that no e-book that offer you world with ten or fifteen small right but this publication already do that. So , this can be good reading book. Heya Mr. and Mrs. occupied do you still doubt that?

#### **Joshua Smith:**

Is it an individual who having spare time then spend it whole day by simply watching television programs or just resting on the bed? Do you need something totally new? This Antenna Arrays: A Computational Approach can be the solution, oh how comes? It's a book you know. You are consequently out of date, spending your time by reading in this completely new era is common not a geek activity. So what these guides have than the others?

**Jerry Ingle:**

As we know that book is very important thing to add our expertise for everything. By a guide we can know everything we wish. A book is a list of written, printed, illustrated or maybe blank sheet. Every year was exactly added. This reserve Antenna Arrays: A Computational Approach was filled regarding science. Spend your spare time to add your knowledge about your science competence. Some people has different feel when they reading a book. If you know how big advantage of a book, you can feel enjoy to read a reserve. In the modern era like right now, many ways to get book which you wanted.

**Download and Read Online Antenna Arrays: A Computational Approach By Randy L. Haupt #69IXD3WRBQG**

# **Read Antenna Arrays: A Computational Approach By Randy L. Haupt for online ebook**

Antenna Arrays: A Computational Approach By Randy L. Haupt Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Antenna Arrays: A Computational Approach By Randy L. Haupt books to read online.

## **Online Antenna Arrays: A Computational Approach By Randy L. Haupt ebook PDF download**

**Antenna Arrays: A Computational Approach By Randy L. Haupt Doc**

**Antenna Arrays: A Computational Approach By Randy L. Haupt MobiPocket**

**Antenna Arrays: A Computational Approach By Randy L. Haupt EPub**

**69IXD3WRBQG: Antenna Arrays: A Computational Approach By Randy L. Haupt**