



An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs)

By Grégory Berhuy, Frédérique Oggier



Download



Read Online

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier

Central simple algebras arise naturally in many areas of mathematics. They are closely connected with ring theory, but are also important in representation theory, algebraic geometry and number theory. Recently, surprising applications of the theory of central simple algebras have arisen in the context of coding for wireless communication. The exposition in the book takes advantage of this serendipity, presenting an introduction to the theory of central simple algebras intertwined with its applications to coding theory. Many results or constructions from the standard theory are presented in classical form, but with a focus on explicit techniques and examples, often from coding theory. Topics covered include quaternion algebras, splitting fields, the Skolem-Noether Theorem, the Brauer group, crossed products, cyclic algebras and algebras with a unitary involution. Code constructions give the opportunity for many examples and explicit computations. This book provides an introduction to the theory of central algebras accessible to graduate students, while also presenting topics in coding theory for wireless communication for a mathematical audience. It is also suitable for coding theorists interested in learning how division algebras may be useful for coding in wireless communication.



[Download An Introduction to Central Simple Algebras and The ...pdf](#)



[Read Online An Introduction to Central Simple Algebras and T ...pdf](#)

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs)

By Grégory Berhuy, Frédérique Oggier

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier

Central simple algebras arise naturally in many areas of mathematics. They are closely connected with ring theory, but are also important in representation theory, algebraic geometry and number theory. Recently, surprising applications of the theory of central simple algebras have arisen in the context of coding for wireless communication. The exposition in the book takes advantage of this serendipity, presenting an introduction to the theory of central simple algebras intertwined with its applications to coding theory. Many results or constructions from the standard theory are presented in classical form, but with a focus on explicit techniques and examples, often from coding theory. Topics covered include quaternion algebras, splitting fields, the Skolem-Noether Theorem, the Brauer group, crossed products, cyclic algebras and algebras with a unitary involution. Code constructions give the opportunity for many examples and explicit computations. This book provides an introduction to the theory of central algebras accessible to graduate students, while also presenting topics in coding theory for wireless communication for a mathematical audience. It is also suitable for coding theorists interested in learning how division algebras may be useful for coding in wireless communication.

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier Bibliography

- Sales Rank: #5158605 in Books
- Published on: 2013-07-05
- Original language: English
- Dimensions: 10.00" h x 7.25" w x 1.00" l, 1.45 pounds
- Binding: Hardcover
- 276 pages

 [Download An Introduction to Central Simple Algebras and The ...pdf](#)

 [Read Online An Introduction to Central Simple Algebras and T ...pdf](#)

Download and Read Free Online An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier

Editorial Review

About the Author

Gregory Berhuy , Universite Joseph Fourier, Grenoble, France Frederique Oggier , Nanyang Technological University, Singapore, Singapore

Users Review

From reader reviews:

Alan Johnson:

Have you spare time for just a day? What do you do when you have much more or little spare time? Yeah, you can choose the suitable activity for spend your time. Any person spent their particular spare time to take a move, shopping, or went to the Mall. How about open or even read a book eligible An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs)? Maybe it is for being best activity for you. You already know beside you can spend your time with the favorite's book, you can more intelligent than before. Do you agree with it has the opinion or you have other opinion?

Deborah Ellefson:

Now a day individuals who Living in the era just where everything reachable by talk with the internet and the resources included can be true or not require people to be aware of each details they get. How individuals to be smart in receiving any information nowadays? Of course the correct answer is reading a book. Reading a book can help persons out of this uncertainty Information particularly this An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) book because book offers you rich data and knowledge. Of course the details in this book hundred per cent guarantees there is no doubt in it you may already know.

Joshua Orvis:

Nowadays reading books be than want or need but also turn into a life style. This reading practice give you lot of advantages. Advantages you got of course the knowledge the particular information inside the book that will improve your knowledge and information. The information you get based on what kind of publication you read, if you want attract knowledge just go with education books but if you want really feel happy read one using theme for entertaining for example comic or novel. The actual An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) is kind of publication which is giving the reader unpredictable experience.

Desmond Goforth:

In this period globalization it is important to someone to find information. The information will make someone to understand the condition of the world. The condition of the world makes the information quicker to share. You can find a lot of sources to get information example: internet, paper, book, and soon. You can view that now, a lot of publisher that will print many kinds of book. Typically the book that recommended to your account is An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) this book consist a lot of the information in the condition of this world now. This kind of book was represented how does the world has grown up. The words styles that writer value to explain it is easy to understand. Often the writer made some exploration when he makes this book. That is why this book appropriate all of you.

Download and Read Online An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier #HS1CT59O7I2

Read An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier for online ebook

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier 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 An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier books to read online.

Online An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier ebook PDF download

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier Doc

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier Mobipocket

An Introduction to Central Simple Algebras and Their Applications to Wireless Communication (Mathematical Surveys and Monographs) By Grégory Berhuy, Frédérique Oggier EPub