

Book Review

HANDBOOK OF GEOPHYSICS AND ARCHAEOLOGY

Alan J. Witten. Equinox Publishing Ltd, 2006.
Pages 329. Price (P/B) £25. ISBN-10: 1904768601

This book is an introduction to the basic principles of geophysics and is meant for those who have a minimum of knowledge of physics and mathematics. The aim of this book is to initiate students of geophysics in the application of the discipline in an archaeological context and also to help archaeologists, whatever their level, who wish to increase their knowledge of the different geophysical methods used in archaeology. The author, Allan J. Witten, wished to produce, and in my opinion fully succeeded, an extremely educational reference book: he tried to explain physical concepts by describing them, rather than summarizing with an equation, and by illustrating his text with numerous simple drawings. The reader will also be grateful to the author for dedicating some pages to redefine the physical and mathematical basis necessary for a good understanding of the geophysical methods discussed. We can note also the existence of a glossary of the scientific terms, included at the end of the book, which will be useful for people who are not used to such a vocabulary.

The book presents the following geophysical methods: gravity, magnetometry, electromagnetic induction, ground-penetrating radar. Each method is divided into two chapters: the first one concerns the presentation of the theoretical principles and the second one illustrates the methods with some case studies. There is, however, no chapter dedicated to the electrical method, which nevertheless is quickly covered in the last section on electrical tomography. These contents are

then complemented by two more original subjects: one about the theory of waves and another on the application of geotomography.

The author starts with a chapter about gravity; he justifies this choice in the introduction of the book: the notion of gravity provides an educational presentation of the physics of the Earth. This is an original point of view which breaks with books on the same subject which give precedence first to the most common methods used in archaeology.

I would have appreciated to find some more relevant case studies in this book, showing a wider range of possible applications of geophysical methods in archaeology. It also would have been useful to have more bibliographical references, to inform readers interested in gaining more detail on a particular subject. It is also unfortunate that the print quality of book does not do justice to the presented geophysical images. Specialists in the subject area will also note that the author did not clearly explain the link between the inphase response and apparent magnetic susceptibility in the case of the electromagnetic method. It has been shown for a long time that the variations of the magnetic susceptibility are well correlated with human occupation.

This book will certainly find its place in the references dedicated to geophysics in archaeology. The purpose of the author in this book was to encourage the dialogue between geophysicists and archaeologists through making the knowledge of geophysical science accessible to everybody. He has certainly achieved this goal and has further shown that geophysics is an essential tool of research in modern archaeology.

Christophe Benech
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'Handbook of Geophysics and Archaeology' offers a comprehensive overview of geophysical techniques. The handbook focuses on applications and issues in archaeology but also provides a broad overview of the basics of geophysics. Geophysics influences a wide range of subjects, from environmental studies to archaeology, palaeontology to counter-terrorism and law enforcement. 'Handbook of Geophysics and Archaeology' offers a comprehensive overview of geophysical techniques. Paperback, 329 pages. Published June 18th 2015 by Equinox Publishing (UK) (first published October 15th 2006). More Details Original Title. 1904768601 (ISBN13: 9781904768609). Edition Language. English. Handbook of geophysics and archaeology. Alan J. Witten. Equinox Publishing Ltd, 2006. Pages 329. ISBN10: 1904768601. Save to Library. Download. Visible is the concentration that outlines a number of external pins of the fortification system of the third phase of the complex (the classical phase of culture Toponica-Akropotamoc), detected during archaeological excavations in the eastern square M16, L16 and K16 (Sector Topolnica). Tagging and mapping of large areas without concentration of magnetized particles that surround the village from the south and north. Geophysics influences a wide range of subjects, from environmental studies to archaeology, palaeontology to counter-terrorism and law enforcement. 'Handbook of Geophysics and Archaeology' offers a comprehensive overview of geophysical techniques. The handbook focuses on applications and issues in archaeology but also provides a broad overview of the basics of geophysics. The Handbook examines a wide range of techniques: techniques associated with gravity, magnetometry, waves, electromagnetic induction, ground penetrating radar, geotomography, and electrical resistivity tomography. Each technique Imprint Equinox Publishing Ltd. Publication City/Country Sheffield, United Kingdom. Language English. Illustrations note 324 black & white line drawings, 3 colour plates. ISBN10 1904768601. ISBN13 9781904768609. Bestsellers rank 31,519. Other books in this series. Handbook of Geophysics and Archaeology. Alan Joel Witten. 15 Oct 2006. Paperback. US\$49.04. Alan J. Witten, who died in 2005, was a professor of geophysics at the University of Oklahoma. He specialized in the development of techniques for imaging the shallow underground and worked at sites of archaeological, historical, and political interest and was featured in a number of television documentaries. show more. Geophysics influences a wide range of subjects, from environmental studies to archaeology, palaeontology to counter-terrorism and law enforcement. 'Handbook of Geophysics and Archaeology' offers a comprehensive overview of geophysical techniques. The handbook focuses on applications and issues in archaeology but also provides a broad overview of the basics of geophysics. The Handbook examines a wide range of techniques: techniques associated with gravity, magnetometry, waves, electromagnetic induction, ground penetrating radar, geotomography, and electrical resistivity tomography. Each technique