Handbook of Functional MRI Data Analysis

Russell A. Poldrack, Jeanette A. Mumford, Thomas E. Nichols
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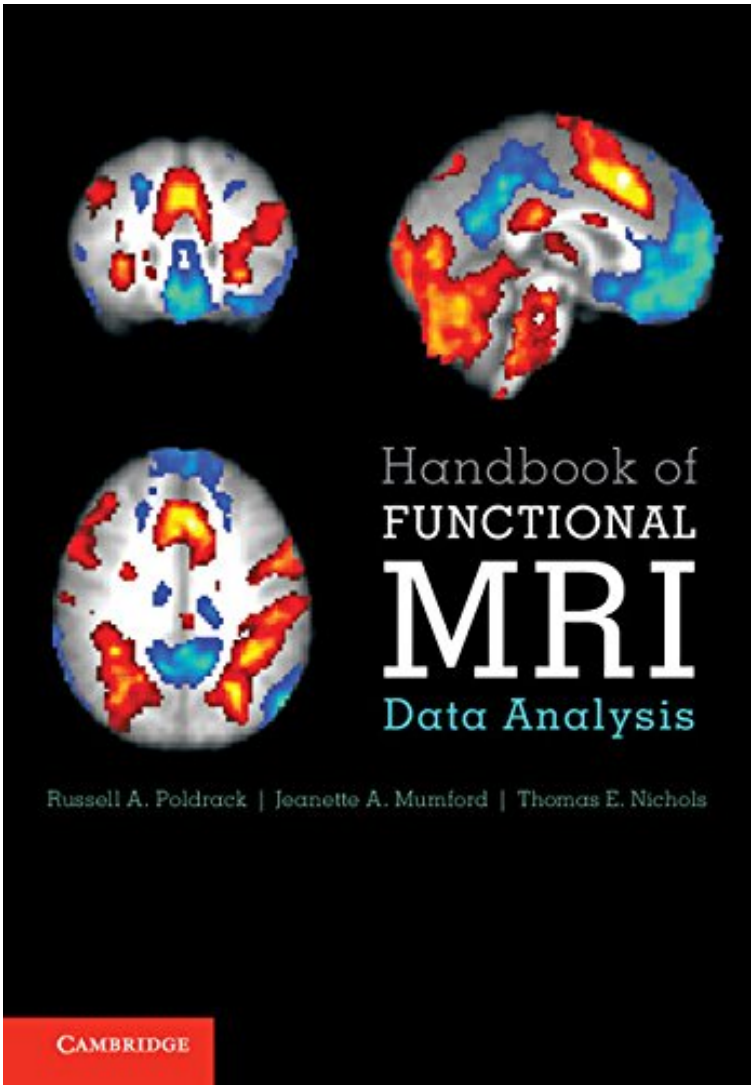

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Russell A. Poldrack, Jeanette A. Mumford, Thomas E. Nichols : Handbook of Functional MRI Data Analysis before purchasing it in order to gage whether or not it would be worth my time, and all praised Handbook of Functional MRI Data Analysis:

0 of 0 people found the following review helpful. Book is great - Kindle reader version is a hassle to read equations.By El CapitanGreat book for those that are outside of the brain imaging field such as myself (EE student working with MRI data). It can be viewed as one long survey paper. It conveys the salient ideas of processing and analyzing MRI data without getting too bogged down in the details. References will point you to more detailed treatments if you need to dig deeper on a particular subject.My recommendation is to get the physical copy. Although this book doesn't have

a lot of formulas and figures, the ones it does have are a pain to read. You have to double click the image to zoom in loosing all of the context (i.e. Figure labels, the narrative describing the equation/figure etc...)1 of 1 people found the following review helpful. A great primer on fMRIBy Mark TwainThis is a well-written overview of fMRI processing. It will certainly be useful to those beginning work in the field. I think it's probably also useful as a quick reference or refresher to people who have been in the field for years to decades.The great strength of the book is readability - I think I read it in 3 or 4 sittings with little effort. It is a good survey - it hits the high points of stages of processing and explains the differences, advantages, and disadvantages of various approaches without being longwinded or getting bogged down in details. It also notes which options are available in the various major software packages.If you want to be reasonably up-to-date on how processing strategies across the field have evolved and are currently implemented, this book is a great place to start reading.1 of 1 people found the following review helpful. Everything You Could Ask For (Almost)By NiccoThis is definitely a great book. I recommend it for anyone getting into the field. There are SOME questions that get glossed over. It does a great job of going over all the meta-analyses of fMRI from the ground up. Starting from defining what an image is all the way to MVPA. If it had a fewwwww more details it would be 5 Stars, but really it's just nitpicking. This is an excellent job. Anyone new to fMRI analysis should have a copy of this.

Functional magnetic resonance imaging (fMRI) has become the most popular method for imaging brain function. Handbook for Functional MRI Data Analysis provides a comprehensive and practical introduction to the methods used for fMRI data analysis. Using minimal jargon, this book explains the concepts behind processing fMRI data, focusing on the techniques that are most commonly used in the field. This book provides background about the methods employed by common data analysis packages including FSL, SPM, and AFNI. Some of the newest cutting-edge techniques, including pattern classification analysis, connectivity modeling, and resting state network analysis, are also discussed. Readers of this book, whether newcomers to the field or experienced researchers, will obtain a deep and effective knowledge of how to employ fMRI analysis to ask scientific questions and become more sophisticated users of fMRI analysis software.

"Wow! Very often in neuroimaging a title has little relationship to what follows. That is clearly not the case with the Handbook of Functional MRI Data Analysis by Poldrack, Mumford, and Nichols. This relatively slender volume is all that handbook should be: It is crafted by true experts in the field, it is structured so that a newcomer can understand a method's strengths and weaknesses, but it also contains meaty information useful to experts. The book touches on all of the major analytical approaches current in the field and, while I don't agree with every choice the authors make, their advice is always well-conceived. This will be a standard reference on every neuroimager's shelf." Steven Petersen, Washington University, St Louis"This book, by some of the best in the field, will no doubt be the go-to book found in every imaging lab and recommended for all trainees. Poldrack, Mumford, and Nichols cover the most basic to sophisticated imaging analyses in a wonderfully accessible way." B. J. Casey, Sackler Institute, Weill Cornell Medical College"This is a great and timely book. The authors start with the basic concepts of fMRI and image analysis, develop the standard processings and statistical models, and finally explain in a simple and didactic style more advanced topics such as connectivity and machine learning techniques ... This textbook provides a comprehensive, and yet very clear, introduction to all of the important aspects of FMRI data analysis. It is extremely readable, and I would strongly recommend anyone new to the field of neuroimaging to read this from cover to cover. Psychologists and medics will find it accessible, and not mathematically daunting, while engineers and other methods researchers will find the breadth of imaging-related issues a very valuable background." Steve Smith, FMRIB Analysis Group, Oxford"The book is a must in any research laboratory or clinical environment using fMRI, and it is the perfect reading for students or researchers, whether they want to develop fMRI data analysis methods or understand and apply these methods. I believe this book will be a best-seller in our field and a reference for many years because it ideally fills the gap between introductory and advanced research textbooks." Jean-Baptiste Poline, Neurospin, Institut d'Imagerie Biomdicale, CEA, FranceAbout the AuthorDr Russell A. Poldrack is the Director of the Imaging Research Center and Professor of Psychology and Neurobiology at the University of Texas, Austin. He has published more than 100 articles in the field of cognitive neuroscience, in journals including Science, Nature, Neuron, Nature Neuroscience and PNAS. He is well known for his writings on how neuroimaging can be used to make inferences about psychological function, as well as for his research using fMRI and other imaging techniques to understand the brain systems that support learning and memory, decision making and executive function.