This book brings together results from different branches of computer science (in particular, artificial intelligence), medical informatics and medicine to examine cutting edge approaches to computer-based guideline modeling, verification and interpretation. Different methods have been developed to support the development, deployment, maintenance and use of evidence-based guidelines, using techniques from artificial intelligence, software engineering, medical informatics and formal methods. Such methods employ different representation formalisms and computational techniques. As the guideline-related research spans a wide range of research communities, a comprehensive integration of the results of these communities was lacking. It is the intention of this book to fill this gap. It is the first book of its kind that partially has the nature of a textbook. The book consists of two parts. The first part consists of nine chapters which together offer a comprehensive overview of the most important medical and computer-science aspects of clinical guidelines and protocols. The second part of the book consists of chapters that are extended versions of selected papers that were originally submitted to the ECAI-2006 workshop ‘AI Techniques in Health Care: Evidence-based Guidelines and Protocols’. These chapters will provide the reader detailed information about actual research in the area by leading researchers.
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