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**Engineering : Signal, Image and Speech Processing**

Thanki, Rohit, Borra, Surekha

# Medical Imaging and its Security in Telemedicine Applications

- Provides basic information of medical imaging and its security requirements in telemedicine applications
- Presents information on advanced image processing transforms and their application in data hiding techniques
- Includes a comprehensive review on data hiding techniques for security of medical images and addresses the issue of copyright protection as well as authentication

This book introduces medical imaging, its security requirements, and various security mechanisms using data hiding approaches. The book in particular provides medical data hiding techniques using various advanced image transforms and encryption methods. The book focuses on two types of data hiding techniques: steganography and watermarking for medical images. The authors show how these techniques are used for security and integrity verification of medical images and designed for various types of medical images such as grayscale image and color image. The implementation of techniques are done using discrete cosine transform (DCT), discrete wavelet transform (DWT), singular value decomposition (SVD), redundant DWT (RDWT), fast discrete curvelet transform (FDCuT), finite ridgelet transform (FRT) and non-subsampled contourlet transform (NSCT). The results of these techniques are also demonstrated after description of each technique. Finally, some future research directions are provided for security of medical images in telemedicine application.

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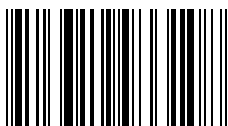
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