Foreword

Image Processing and Pattern Analysis are the two areas in applied science that have become almost indispensable in modern day to day life. The application areas are many. Use of images in medicine for diagnostic purpose is well known. Remote sensing through satellite images, biometric authentication through face and finger print recognition, video surveillance, visual inspection, automated navigation, gesture recognition and anomaly detection etc. are only to name a few. All these applications use images or sequences of images in the form of video as inputs. In most of the applications the raw input image or the image sequence is processed to have an intermediate representation, mostly symbolic, before it can be used for understanding the content of the images or video sequences. That is where the theory of learning and recognition comes into picture.

In all these applications determining the authenticity of the input data, image or video, is very essential. Also some of the critical applications may require secrecy of the image/video data to be maintained while transmitting from one place to another. This demands watermarking as well as data hide to be effective.

Handbook of Research on Emerging Perspectives in Intelligent Pattern Recognition, Analysis, and Image Processing provides a valuable insight into the science of image data analysis as well as content recognition. The chapters contributed by various authors and classified into three different subsections, namely Image Processing and Computer Vision, Pattern Recognition, Watermarking and Face Recognition, and Bio-Imaging and Applications describe the employed techniques from the basics. I believe that the book will not only motivate the beginners in the Image Processing and Pattern Recognition domain but will act as a handbook to the researchers.

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