

Preface

Overview and Goals

Iris recognition became a practical area of technology and study with John Daugman's pioneering work about two decades ago. The development of the field was at first slow but has expanded dramatically in recent years. There are now various national identity schemes in progress that make use of iris recognition technology. There is also a large and vibrant research community focused on iris recognition, studying ways to make it even more accurate in even larger-scale applications. The primary goal of this book is to give an authoritative introduction to the current state of the art in iris recognition technology. The field has already in large part moved past the study of alternative segmentation algorithms and texture filters applied to pristine iris images. One major current emphasis is how to deal with varying quality iris images acquired with less explicit user cooperation. Another major current emphasis is on methods for improving accuracy in the context of varying quality images. Still another major current emphasis is on a better understanding of the basic science underlying iris recognition. Each of these emphases is represented by multiple chapters in this book.

Organisation and Features

This book includes a foreword by Professor John Daugman, along with a collection of nineteen chapters contributed by researchers from around the world. It includes theoretical studies, such as the chapter by Clark, Culp, Herron and Ross on iris dynamics and the chapter by Kong, Zhang and Kamel on the IrisCode. It also includes very empirical studies, such as the chapter by Baker, Bowyer, Flynn and Phillips on iris template aging and the chapter by Phillips and Flynn analysing results from the Iris Challenge Evaluation 2006. The 44 authors contributing to the

book come from companies, government agencies and universities. They also come from many different countries, including Lithuania, Canada, Singapore, Denmark, Portugal, Hong Kong, the United Kingdom and the USA.

Target Audiences

The target audience for this book is anyone who wants a better understanding of the current state of the art in iris recognition. Practitioners in industry should find new insights and possibilities in the breadth of topics covered. Managers and executives in government should find a more sober appraisal of the field than exists in the marketing literature of the industry. Researchers in government, industry and academia should find new ideas for productive research efforts.

Acknowledgements

We want to thank the editors at Springer for their patience and advice during the development of this project. We also want to thank all of the contributors to this book for their prompt replies on various points. We want to thank all of our collaborators at our respective institutions for the vibrant research atmosphere that they have provided. Finally, we want to thank our families; for without their continual support and encouragement, this book would not have been possible.

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<http://www.springer.com/978-1-4471-4401-4>

Handbook of Iris Recognition

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2013, XVI, 407 p., Hardcover

ISBN: 978-1-4471-4401-4