Ran He Baogang Hu Xiaotong Yuan Liang Wang

Robust Recognition via Information Theoretic Learning



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Ran He • Baogang Hu • Xiaotong Yuan Liang Wang

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Ran He
National Laboratory
of Pattern Recognition
Institute of Automation
Chinese Academy of Sciences
Beijing, China

Xiaotong Yuan
School of Information
and Control
Nanjing University of Information
Science and Technology
Nanjing, China

Baogang Hu
National Laboratory
of Pattern Recognition
Institute of Automation
Chinese Academy of Sciences
Beijing, China

Liang Wang
National Laboratory
of Pattern Recognition
Institute of Automation
Chinese Academy of Sciences
Beijing, China

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To my parents Guocai He and Shuhua Wang, my elder cousin Jie He, and my wife Linlin Chi

— Ran He

To my parents Zhaosen Hu and Huayun Deng and my wife Wenzheng Zhang

— Baogang Hu

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Acronyms

CESR Correntropy-based sparse representation

CIM Correntropy induced metric

CS Compressed sensing

EM Expectation maximization

FN False negative FP False positive

GMM Gaussian mixture model

HQ Half quadratic

KKT Karush–Kuhn–Tucker LDA Linear discriminant analysis LPP Locality preserving projections

MaxEnt Maximum entropy

MCC Maximum correntropy criterion mELE Minimum entropy linear embedding

MSE Mean square error NFL Nearest feature line NI Normalized information

NSR Nonnegative sparse representation ICA Independent component analysis IRLS Iteratively reweighted least squares

IP Information potential

ITL Information theoretic learningPCA Principal component analysisPDF Probability density function

RN Reject negative RP Reject positive

SRC Sparse representation classification SVD Singular value decomposition

TN True negative TP True positive

TSR Two-stage sparse representation