

IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS

PART A: SYSTEMS AND HUMANS

A PUBLICATION OF THE IEEE SYSTEMS, MAN, AND CYBERNETICS SOCIETY

MAY 2010

VOLUME 40

NUMBER 3

ITSHFX

(ISSN 1083-4427)



SPECIAL ISSUE ON RECENT ADVANCES IN BIOMETRICS

GUEST EDITORIAL

- Introduction to the Special Issue on Recent Advances in Biometrics *K. W. Bowyer* 434

SPECIAL ISSUE PAPERS

- Adaptive Appearance Model and Condensation Algorithm for Robust Face Tracking *Y. M. Lui, J. R. Beveridge, and L. D. Whitley* 437
Assessing the Uniqueness and Permanence of Facial Actions for Use in Biometric Applications *L. Benedikt, D. Cosker, P. L. Rosin, and D. Marshall* 449
Tracking Vertex Flow and Model Adaptation for Three-Dimensional Spatiotemporal Face Analysis *Y. Sun, X. Chen, M. Rosato, and L. Yin* 461
Hand-Drawn Face Sketch Recognition by Humans and a PCA-Based Algorithm for Forensic Applications *Y. Zhang, C. McCullough, J. R. Sullins, and C. R. Ross* 475
Toward Unconstrained Ear Recognition From Two-Dimensional Images *J. D. Bustard and M. S. Nixon* 486
Extended-Depth-of-Field Iris Recognition Using Unrestored Wavefront-Coded Imagery *V. N. Boddeti and B. V. K. V. Kumar* 495
Estimating and Fusing Quality Factors for Iris Biometric Images *N. D. Kalka, J. Zuo, N. A. Schmid, and B. Cukic* 509
Cancelable Templates for Sequence-Based Biometrics with Application to On-line Signature Recognition *E. Maiorana, P. Campisi, J. Fierrez, J. Ortega-Garcia, and A. Neri* 525
Quality-Based Score Normalization With Device Qualitative Information for Multimodal Biometric Fusion *N. Poh, J. Kittler, and T. Bourlai* 539
Binary Biometrics: An Analytic Framework to Estimate the Performance Curves Under Gaussian Assumption *E. J. C. Kelkboom, G. Garcia Molina, J. Breebaart, R. N. J. Veldhuis, T. A. M. Kevenaar, and W. Jonker* 555

REGULAR ISSUE PAPERS

- Large-Scale Public R&D Portfolio Selection by Maximizing a Biobjective Impact Measure *I. S. Litvinchev, F. López, A. Alvarez, and E. Fernández* 572
Competitive Capacity and Price Decisions for Two Build-to-Order Manufacturers Facing Time-Dependent Demands *T. Xiao and T.-M. Choi* 583

(Contents Continued on Page 433)



Segmentation of Human Body Parts Using Deformable Triangulation	J.-W. Hsieh, C.-H. Chuang, S.-Y. Chen, C.-C. Chen, and K.-C. Fan	596
Modified Frequency-Partitioned Spectrum Estimation for a Wireless Health Advanced Monitoring Bio-Diagnosis System	C.-E. Tseng, J.-Y. Yen, M.-W. Chang, W.-C. Chang, and C.-K. Lee	611
Model-Based Development of Virtual Laboratories for Robotics Over the Internet	F. D. Von Borstel and J. L. Gordillo	623
CORRESPONDENCE		
Decision Strategies in Mediated Multiagent Negotiations: An Optimization Approach	D. A. Pelta and R. R. Yager	635
A Modified Fuzzy Min-Max Neural Network With a Genetic-Algorithm-Based Rule Extractor for Pattern Classification	A. Quteishat, C. P. Lim, and K. S. Tan	641
On Guo and Nixon's Criterion for Feature Subset Selection: Assumptions, Implications, and Alternative Options	K. S. Balagani, V. V. Phoha, S. S. Iyengar, and N. Balakrishnan	651
ANNOUNCEMENTS		
Call for Papers—IEEE TRANSACTIONS ON SYSTEMS, MAN, AND CYBERNETICS, PART C—APPLICATIONS AND REVIEWS Special Issue on Engineering Applications of Memetic Computing		656
