

# IEEE TRANSACTIONS ON IMAGE PROCESSING

A PUBLICATION OF THE IEEE SIGNAL PROCESSING SOCIETY



[www.ieee.org/sp/tip](http://www.ieee.org/sp/tip)

JUNE 2007

VOLUME 16

NUMBER 6

IIPRE4

(ISSN 1057-7149)

---

## PAPERS

### *Interpolation and Spatial Transformations*

- An Image Morphing Technique Based on Optimal Mass Preserving Mapping ..... *L. Zhu, Y. Yang, S. Haker, and A. Tannenbaum* 1481
- The Error-Amended Sharp Edge (EASE) Scheme for Image Zooming ..... *Y. Cha and S. Kim* 1496

### *Linear Filtering and Enhancement*

- Algebraic Signal Processing Theory: 2-D Spatial Hexagonal Lattice ..... *M. Püschel and M. Rötteler* 1506

### *Wavelets and Multiresolution Processing*

- Hyperanalytic Denoising ..... *S. C. Olhede* 1522

### *Lossy Image Coding*

- Fast Planar-Oriented Ripple Search Algorithm for Hyperspace VQ Codebook ..... *C.-C. Chang and W.-C. Wu* 1538
- Histogram Approaches for Lossy Compression of Digital Holograms of Three-Dimensional Objects .....  
..... *A. E. Shortt, T. J. Naughton, and B. Javidi* 1548

### *Source/Channel Coding*

- Iterative Decoding of Serially Concatenated Arithmetic and Channel Codes With JPEG 2000 Applications .....  
..... *M. Grangetto, B. Scanavino, G. Olmo, and S. Benedetto* 1557
- Joint Source-Channel Coding Using Real BCH Codes for Robust Image Transmission .....  
..... *A. Gabay, M. Kieffer, and P. Duhamel* 1568

### *Rank and Morphological*

- Detecting Wide Lines Using Isotropic Nonlinear Filtering ..... *L. Liu, D. Zhang, and J. You* 1584

---

(Contents Continued on Back Cover)



---

<i>Super-Resolution</i>		
Image Superresolution Using Support Vector Regression .....	K. S. Ni and T. Q. Nguyen 1596	
<i>Multimedia Applications</i>		
A Hybrid Algorithm With Artifact Detection Mechanism for Region Filling After Object Removal From a Digital Photograph .....	H.-J. Hsu, J.-F. Wang, and S.-C. Liao 1611	
<i>Deblurring</i>		
The Equivalence of Half-Quadratic Minimization and the Gradient Linearization Iteration .....	M. Nikolova and R. H. Chan 1623	
<i>Denoising</i>		
A Short- Time Beltrami Kernel for Smoothing Images and Manifolds .....	A. Spira, R. Kimmel, and N. Sochen 1628	
<i>Edge or Color Segmentation</i>		
Ultrasound Image Segmentation With Shape Priors: Application to Automatic Cattle Rib-Eye Area Estimation .....	P. Arias, A. Pini, G. Sanguinetti, P. Sprechmann, P. Cancela, A. Fernández, A. Gómez, and G. Randall 1637	
<i>Machine Learning for Image and Video Classification</i>		
Learning and Matching of Dynamic Shape Manifolds for Human Action Recognition .....	L. Wang and D. Suter 1646	
Incremental Kernel Principal Component Analysis .....	T.-J. Chin and D. Suter 1662	
<i>Stereoscopic and 3-D Coding</i>		
Joint Source and Channel Coding for 3-D Scene Databases Using Vector Quantization and Embedded Parity Objects ...	D. Tian, J. Li, and G. AlRegib 1675	
CORRESPONDENCE		
<i>Color and Multispectral Processing</i>		
Reversible Integer Color Transform .....	S.-C. Pei and J.-J. Ding 1686	
<i>Image Quality Assessment</i>		
Objective Distortion Measure for Binary Text Image Based on Edge Line Segment Similarity ....	J. Cheng and A. C Kot 1691	
EDICS—Editor’s Classification Scheme .....		1696
Information for Authors .....		1697
ANNOUNCEMENTS		
Call for Papers—IEEE TRANSACTIONS ON MULTIMEDIA, Special Issue on Multimedia Applications in Mobile/Wireless Context .....	1699	
Call for Papers—IEEE TRANSACTIONS ON AUDIO, SPEECH, AND LANGUAGE PROCESSING, Special Issue on New Approaches to Statistical Speech and Text Processing .....	1700	
Call for Papers—ISCAS 2008 .....	1701	
Call for Papers—ICASSP 2008 .....	1702	

---