

2014 27th SIBGRAPI Conference on Graphics, Patterns and Images

(SIBGRAPI 2014)

**Rio de Janeiro, Brazil
26-30 August 2014**



IEEE Catalog Number: CFP14129-POD
ISBN: 978-1-4799-4257-2

2014 27th SIBGRAPI

Conference on Graphics, Patterns and Images

SIBGRAPI 2014

Table of Contents

Message from Chairs.....	ix
Organizing Committee.....	x
Program Committee.....	xi
Sponsors.....	xiv
Keynotes.....	xv

SIBGRAPI 2014

3D Face Reconstruction from Video Using 3D Morphable Model and Silhouette	1
<i>Christian Baumberger, Mauricio Reyes, Mihai Constantinescu, Radu Olariu, Edilson de Aguiar, and Thiago Oliveira-Santos</i>	
Improving Divide-and-Conquer Ray-Tracing Using a Parallel Approach	9
<i>Cícero Augusto de Lara Pahins and Cesar Tadeu Pozzer</i>	
A Sketch-Based Modeling Framework Based on Adaptive Meshes	17
<i>Emilio Vital Brazil, Ronan Amorim, Mario Costa Sousa, Luiz Velho, and Luiz Henrique de Figueiredo</i>	
Visualization of Music Collections Based on Structural Content Similarity	25
<i>Aurea Soriano, Fernando Paulovich, Luis Gustavo Nonato, and Maria Cristina F. Oliveira</i>	
Segmentation of Pigmented Melanocytic Skin Lesions Based on Learned Dictionaries and Normalized Graph Cuts	33
<i>Eliezer S. Flores and Jacob Scharcanski</i>	
Pre-alignment for Co-registration in Native Space	41
<i>Wu Shin-Ting, Augusto Cavalcante Valente, Lionis de Souza Watanabe, Clarissa Lin Yasuda, Ana Carolina Coan, and Fernando Cendes</i>	
High-Quality Reverse Tone Mapping for a Wide Range of Exposures	49
<i>Rafael P. Kovaleski and Manuel M. Oliveira</i>	

Face Sketch Recognition from Local Features	57
<i>Marco A. A. Silva and Guillermo Cámar-Chávez</i>	
SPH Fluids for Viscous Jet Buckling	65
<i>Luiz Fernando de Souza Andrade, Marcos Sandim, Fabiano Petronetto, Paulo Pagliosa, and Afonso Paiva</i>	
Interactive Object Class Segmentation for Mobile Devices	73
<i>Ignazio Gallo, Alessandro Zamberletti, and Lucia Noce</i>	
A Nested Hierarchy of Localized Scatterplots	80
<i>Martin Eisemann, Georgia Albuquerque, and Marcus Magnor</i>	
WebcamPaperPen: A Low-Cost Graphics Tablet	87
<i>Gustavo Thebit Pfeiffer, Ricardo Guerra Marroquim, and Antonio Alberto Fernandes de Oliveira</i>	
Improved Residual DPCM for HEVC Lossless Coding	95
<i>Gwanggil Jeon, Kibaek Kim, and Jechang Jeong</i>	
Procedural Generation of 3D Canyons	103
<i>Daniel Michelon de Carli, Cesar Tadeu Pozzer, Fernando Bevilacqua, and Victor Schetinger</i>	
Semi-supervised Pattern Classification Using Optimum-Path Forest	111
<i>Willian Paraguassu Amorim, Alexandre Xavier Falcão, and Marcelo Henriques de Carvalho</i>	
Automatic Detection of Fovea in Retinal Images Using Fusion of Color Bands	119
<i>Rodrigo de Melo Souza Veras, Fátima Nelsizeuma Sombra de Medeiros, Romuere Rodrigues Veloso e Silva, and Kelson Rômulo Teixeira Aires</i>	
Evolutionary Optimization Applied for Fine-Tuning Parameter Estimation in Optical Flow-Based Environments	125
<i>Danillo Roberto Pereira, José Delpiano, and João Paulo Papa</i>	
Simplified Training for Gesture Recognition	133
<i>Romain Faugeron, Thales Vieira, Dimas Martinez, and Thomas Lewiner</i>	
Helmet Detection on Motorcyclists Using Image Descriptors and Classifiers	141
<i>Romuere Rodrigues Veloso e Silva, Kelson Rômulo Teixeira Aires, and Rodrigo de Melo Souza Veras</i>	
Improving On-Patient Medical Data Visualization in a Markerless Augmented Reality Environment by Volume Clipping	149
<i>Márcio Cerqueira de Farias Macedo and Antônio Lopes Apolinário Junior</i>	
Unsupervised Hyperspectral Band Selection Based on Spectral Rhythm Analysis	157
<i>Lilian Chaves Brandao dos Santos, Silvio Jamil Ferzoli Guimarães, Arnaldo de Albuquerque Araújo, and Jefersson Alex dos Santos</i>	

Visualization and Analysis of Parallel Dataflow Execution with Smart Traces	165
<i>Daniel K. Osmari, Huy T. Vo, Cláudio T. Silva, João L. D. Comba, and Lauro Lins</i>	
Superpixel-Based Interactive Classification of Very High Resolution Images	173
<i>John E. Vargas, Priscila T. M. Saito, Alexandre X. Falcão, Pedro J. de Rezende, and Jefersson A. dos Santos</i>	
Fuzzy Inference Methods Applied to the Learning Competence Measure in Dynamic Classifier Selection	180
<i>Marek Kurzynski and Maciej Krysmann</i>	
Extending Face Identification to Open-Set Face Recognition	188
<i>Cassio Elias dos Santos Junior and William Robson Schwartz</i>	
Tampering Detection of Audio-Visual Content Using Encrypted Watermarks	196
<i>Ronaldo Rigoni, Pedro Garcia Freitas, and Mylène C.Q. Farias</i>	
A Parallel Framework for Video Super-Resolution	204
<i>Pedro Garcia Freitas, Mylène C.Q. Farias, and Aletéia P.F. de Araújo</i>	
Parallel Shortest Path Algorithm for Voronoi Diagrams with Generalized Distance Functions	212
<i>Julio Toss, João Luiz Dihl Comba, and Bruno Raffin</i>	
Semantically Aware Dynamic Layouts	220
<i>Erick Gomez-Nieto, Danilo Motta, and Luis Gustavo Nonato</i>	
A Fast Feature Tracking Algorithm for Visual Odometry and Mapping Based on RGB-D Sensors	227
<i>Bruno Marques Ferreira da Silva and Luiz Marcos Garcia Gonçalves</i>	
Cloth Simulation with Triangular Mesh Adaptivity	235
<i>Suzana M. F. de Oliveira, Creto A. Vidal, Joaquim B. Cavalcante-Neto, Laise L. de Carvalho, and José G. R. Maia</i>	
Semi-supervised Learning for Relevance Feedback on Image Retrieval Tasks	243
<i>Daniel Carlos Guimarães Pedronette, Rodrigo T. Calumby, and Ricardo da S. Torres</i>	
Brain Mapping and Interpretation of Reading Processing in Children Using EEG and Multivariate Statistical Analysis	251
<i>Fábio Theoto Rocha, Carlos Eduardo Thomaz, Armando Freitas da Rocha, and Eduardo Massad</i>	
Learning Kernels for Support Vector Machines with Polynomial Powers of Sigmoid	259
<i>Silas Evandro Nachif Fernandes, André Luiz Pilastri, Luís Augusto Martins Pereira, Rafael Goncalves Pires, and João Paulo Papa</i>	

Forensic Facial Reconstruction Using Mesh Template Deformation with Detail Transfer over HRBF	266
<i>Rafael Romeiro, Ricardo Marroquim, Claudio Esperança, Andreia Breda, and Carlos Marcelo Figueiredo</i>	
Portable Digital in-Line Holography Platform for Sperm Cell Visualization and Quantification	274
<i>Antonio Carlos Sobieranski, Fatih Inci, H. Cumhur Tekin, Eros Comunello, Aldo von Wangenheim, and Utkan Demirci</i>	
Automatic Segmentation of Specular Reflections for Endoscopic Images Based on Sparse and Low-Rank Decomposition	282
<i>Fabiane da Silva Queiroz and Tsang Ing Ren</i>	
Conveyor Belt X-ray CT Using Domain Constrained Discrete Tomography	290
<i>Luis F. Alves Pereira, Andrei Dabravolski, Tsang Ing Ren, George D. C. Cavalcanti, and Jan Sijbers</i>	
Vehicle License Plate Recognition With Random Convolutional Networks	298
<i>D. Menotti, G. Chiachia, A. X. Falcão, and V. J. Oliveira Neto</i>	
Oriented Relative Fuzzy Connectedness: Theory, Algorithms, and Applications in Image Segmentation	304
<i>Hans Harley Ccacyahuillca Bejar and Paulo A. V. Miranda</i>	
Graph Based Characterization of Microcirculation in Sepsis Using Sidestream Dark Field Imaging	312
<i>Zoghbi J. M., De-La-Cruz L. T., Galarreta M. A. G. V., Marcel P. Jackowski, Vieira J. C. F., Liberatore A. M. A., and Koh Ivan H.J.</i>	
Statistical Learning Approach for Robust Melanoma Screening	319
<i>Michel Fornaciali, Sandra Avila, Micael Carvalho, and Eduardo Valle</i>	
Learning to Annotate Clothes in Everyday Photos: Multi-modal, Multi-label, Multi-instance Approach	327
<i>Adriano Alonso Veloso, Jefersson A. dos Santos, and Keiller Nogueira</i>	
Instanced Rendering of Massive CAD Models Using Shape Matching	335
<i>Paulo Ivson Netto Santos and Waldemar Celes Filho</i>	
Image-Based Streamsurfaces	343
<i>Gustavo Mello Machado, Filip Sadlo, and Thomas Ertl</i>	
Author Index	351