

IWCIA 2008

12th International Workshop on Combinatorial Image Analysis

**Adam's Mark Hotel,
Buffalo, NY, USA
April 7-9, 2008**

Sunday, April 6th

18:00-19:30	Registration outside Fountain Room
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Monday, April 7th

08:00-08:40		Registration	
08:40-10:10		Opening Session Chair: Valentin E. Brimkov <i>Fountain Room</i>	
	08:50-09:10	Opening Addresses: Dr. Muriel Howard, President of SUNY Buffalo State Dr. Larry Flood, Dean Natural and Social Sciences, SUNY Buffalo State <i>Fountain Room</i>	
	09:10-10:10	<i>Opening Talk</i> by the Nobel Laureate Herbert A. Hauptman, Hauptman-Woodward Institute <i>Fountain Room</i>	
10:10-10:40		Coffee Break & Picture	
10:40-12:20		Theoretical Track: <i>Digital Geometry and Topology. Curves and Surfaces</i> Chair: Peter Veelaert <i>Fountain Room</i>	
	10:40 -11:00	Thinning on Quadratic, Triangular, and Hexagonal Cell Complexes <i>Petra Wiederhold, Sandino Morales</i>	
	11:00-11:20	Evaluation of Tangent Estimators <i>François de Vieilleville, Jacques-Olivier Lachaud</i>	
	11:20-11:40	Polyhedral Surface Approximation of Non-Convex Voxel Sets through the Modification of Convex Hulls <i>Henrik Schulz</i>	
	11:40-12:00	Weighted Neighborhood Sequences in Non-Standard Three-Dimensional Grids – Parameter Optimization <i>Robin Strand, Benedek Nagy</i>	
	12:00-12:20	Connectivity Preserving Voxel Transformation <i>Anvesh Komuravelli, Arnab Sinha, Arijit Bishnu</i>	
12:20-13:40		Lunch (on your own)	
13:40-15:00		Theoretical Track: <i>Combinatorics in Digital Spaces: Lattice Polygons, Polytopes, Tilings, and Patterns</i> Chair: Peer Stelldinger <i>Fountain Room</i>	Applied Track: <i>Medical Applications</i> Chair: Tetsuo Asano <i>Ontario Room</i>
	13:40-14:00	Scaling of Plane Figures that Assures Faithful Digitization <i>Valentin E. Brimkov</i>	A Theoretical Solution to Partial Volume MAP-EM Tissue Mixture Segmentation for CT/MRI Imaging Modalities <i>Su Wang, Hongyu Lu, Zhengrong Liang</i>
	14:00-14:20	Computing Admissible Rotation Angles from Rotated Digital Images <i>Yohan Thibault, Yukiko Kenmochi, Akihiro Sugimoto</i>	Iris Recognition based on Genetic Algorithms and Multi-Class Gaussian Mixture Model <i>Kaushik Roy, Prabir Bhattacharya</i>
	14:20-14:40	On the Number of <i>h_v</i> -Convex Discrete Sets <i>Péter Balázs</i>	Optimal Features Selection and Classification for Iris Recognition <i>Kaushik Roy, Prabir Bhattacharya</i>
	14:40-15:00	Finding the Orthogonal Hull of a Digital Object: A Combinatorial Approach <i>Arindam Biswas, Partha Bhowmick, Moumita Sarkar, Bhargab B. Bhattacharya</i>	Brain CT Image Feature Extraction Using Nonnegative Tensor Factorization <i>Jiying Zou, Kehong Yuan, Weixiang Liu, Shu Feng, Ziqiang Chen, Wufan Chen</i>
15:00-15:15		Break	
15:15-21:30		Workshop Tour & Welcome Reception	

Tuesday, April 8th

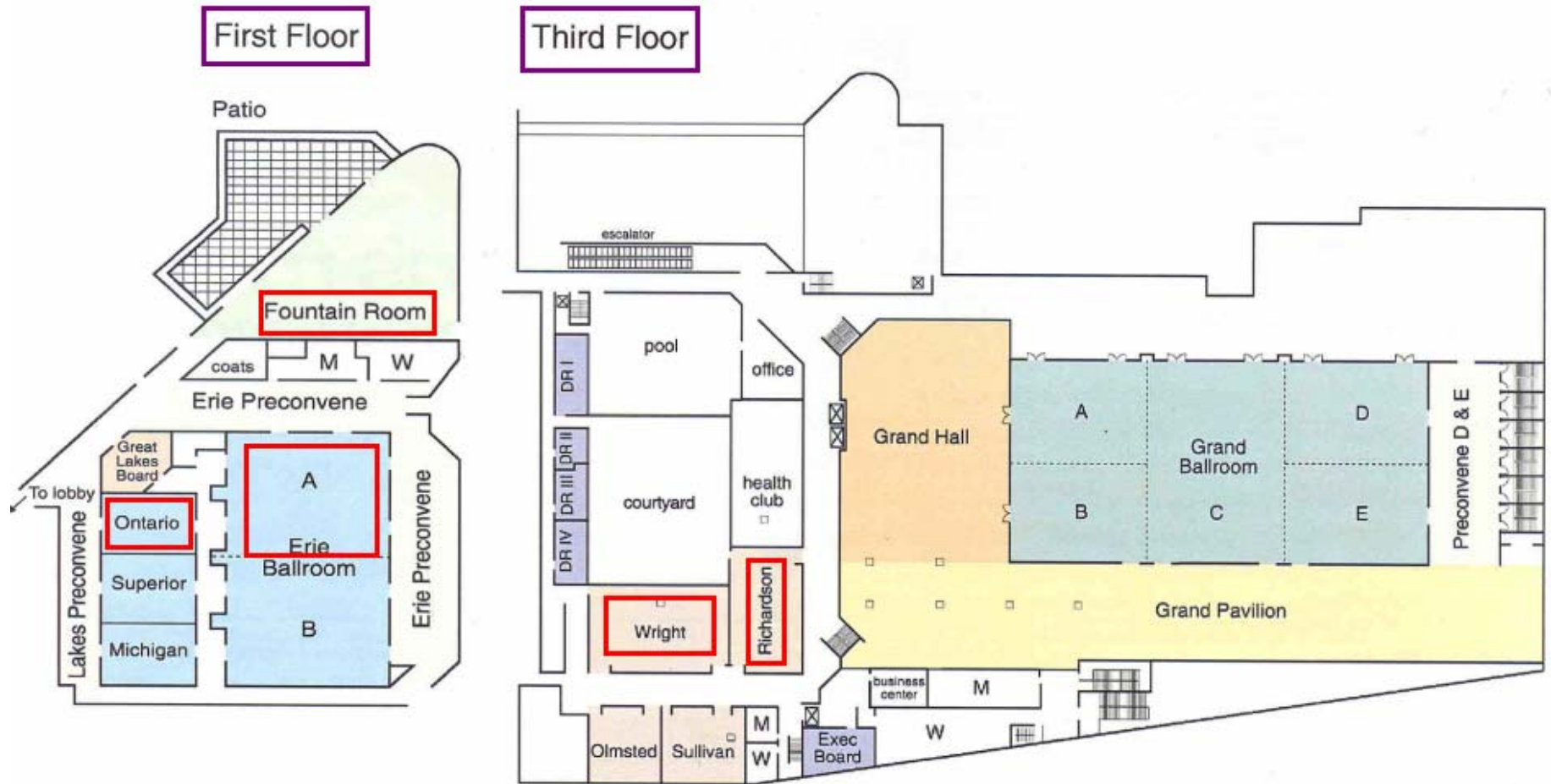
08:00-08:40		Registration	
08:40-09:40		<i>Keynote: Polina Golland, MIT</i> “Representation and Modeling of Spatial Patterns of Dynamics in Images” <i>Wright Room</i>	
09:40-10:40		Theoretical Track: <i>Image Representation, Segmentation, Grouping, and Reconstruction</i> Chair: Atsushi Imiya <i>Wright Room</i>	Applied Track: <i>Other Applications</i> Chair: Khalid Siddiqui <i>Richardson Room</i>
	09:40-10:00	Robust Decomposition Of Thick Digital Shapes <i>Alexandre Faure, Fabien Feschet</i>	Computing Surfaces via pq-Permutations <i>Gabriele Pulcini</i>
	10:00-10:20	Segmentation of Noisy Discrete Surfaces <i>Laurent Provot, Isabelle Debled-Rennesson</i>	Electronic Multimedia Dictionary with Direct-Access Printed Interface <i>Reneta P. Barneva, Valentin E. Brimkov, Kamen D. Kanev</i>
	10:20-10:40	MRF Labeling with a Graph-Shifts Algorithm <i>Jason J. Corso, Zhuowen Tu, Alan Yuille</i>	Volumetric Object Reconstruction using Generalized Voxel Coloring <i>Teresa Azevedo, João Manuel R. S. Tavares, Mário Vaz</i>
10:40-11:00		Coffee Break	
11:00-12:20		Theoretical Track: <i>Applications of Computational Geometry, Integer and Linear Programming to Image Analysis</i> Chair: Kunio Aizawa <i>Wright Room</i>	Applied Track: <i>Motion Detection</i> Chair: K. Joost Batenburg <i>Richardson Room</i>
	11:00-11:20	Reducing the Coefficients of a Two-Dimensional Integer Linear Constraint <i>Emilie Charrier, Lilian Buzer</i>	Motion Analysis Using Dynamic Texture in Crowd Environment <i>Yunqian Ma, Petr Cisar</i>
	11:20-11:40	A Branch Bound Algorithm for Medical Image Registration <i>Michael Stiglmayr, Frank Pfeuffer, Kathrin Klamroth</i>	Producing Stylized Renderings using the AVP Rendering Tool <i>Lucas M. Oliveira, Laurindo S. Britto-Neto, Rafael B. Gomes, Tiago S. Santos, Gilbran S. Andrade, Bruno M. Carvalho</i>
	11:40-12:00	Global Optimization for First Order Markov Random Fields <i>Jérôme Darbon</i>	Complex Motion Separation and Recognition Using Directional Motion Templates <i>Md. Atiqur Rahman Ahad, T. Ogata, J.K. Tan, H.S. Kim, S. Ishikawa</i>
	12:00-12:20	Transformation Polytopes for Line Correspondences <i>Kristof Teelen, Peter Veelaert</i>	Extracting Semantic Video Object Using Morphology Watershed Algorithm <i>Weiyu Yu, Yan Cao, Shengli Xie</i>
12:20-13:40		Lunch (on your own)	
13:40-14:40		<i>Keynote: Jake K. Aggarwal, University of Texas at Austin</i> “Computer Recognition of Human Activities, Objects and their Interaction” <i>Wright Room</i>	
14:40-16:00		Theoretical Track: <i>Fuzzy and Stochastic Image Analysis, Parallel Architectures and Algorithms</i> Chair: Mohamed Tajine <i>Wright Room</i>	Applied Track: <i>From Theory to Applications</i> Chair: Petra Wiederhold <i>Richardson Room</i>
	14:40-15:00	A Convergence Proof for the Horn-Schunck Optical-Flow Computation Scheme using Neighborhood Decomposition <i>Yusuke Kamada, Atsushi Imiya, Naoya Ohnishi</i>	Neighborhood Sequences in the Diamond Grid <i>Benedek Nagy, Robin Strand</i>
	15:00-15:20	Topologically Correct 3D Surface Reconstruction and Segmentation from Noisy Samples <i>Peer Stelldinger</i>	3-Dimensional Rectangular Array Acceptors and Learning <i>F. Sweetey, D.G. Thomas, V.R. Dare, T. Kalyani</i>
	15:20-15:40	Detecting the Most Unusual Part of a Digital Image <i>Kostadin Koroutchev, Elka Korutcheva</i>	Recognizability of Iso Picture Languages by Wang Systems <i>T. Kalyani, V.R. Dare, D.G. Thomas</i>
	15:40-16:00	Labeling Irregular Graphs with Belief Propagation <i>Ifeoma Nwogu, Jason J. Corso</i>	Variational Method On Discrete Ricci Flow <i>Miao Jin, Junho Kim, Feng Luo, Xianfeng Gu</i>

16:00-17:00		Poster Session (Theoretical & Applied Tracks) Chair: Kostadin Koroutchev <i>Wright Room</i>	
		Refreshments	
		Computing Homology Generators for Volumes using Minimal Generalized Maps <i>Guillaume Damiand, Samuel Peltier, Laurent Fuchs</i>	
		Digital Segments and Hausdorff Discretization <i>Mohamed Tajine</i>	
		Linear Boundary and Corner Detection Using Limited Number of Sensor Rows <i>Bishal Prasad, Arijit Bishnu, Tetsuo Asano</i>	
		Comparison of Local and Global Region Merging in the Topological Map <i>Alexandre Dupas, Guillaume Damiand</i>	
		Rewriting P Systems Generating Iso-picture Languages <i>S. Annadurai, D.G. Thomas, V.R. Dare, T. Kalyani</i>	
		Distributional Characteristics of Random Convex Sets <i>Patricia Giurgescu</i>	
17:00-18:00		Theoretical Track: <i>Grammars and Models for Image or Scene Analysis</i> Chair: Vladimir Kovalevsky <i>Richardson Room</i>	Applied Track: <i>From Theory to Applications</i> Chair: Jason Corso <i>Richardson Room</i>
	17:00-17:20	Image Registration Using Markov Random Coefficient Fields <i>Edgar Román Arce-Santana, Alfonso Alba</i>	A Linear Time Connected Component Labeling Algorithm in Quadrees <i>Kunio Aizawa, Shojiro Tanaka</i>
	17:20-17:40	A Secret Sharing Scheme for Digital Images Based on Two-Dimensional Linear Cellular Automata <i>Angel Martín del Rey</i>	A Generic Feature Subset Selection Model for Large Feature Set Problems <i>Khalid J. Siddiqui</i>
	17:40-18:00	Pure 2D Picture Grammars (P2DPG) and P2DPG with Regular Control <i>K.G. Subramanian, Atulya K. Nagar, M. Geethalakshmi</i>	Three Dimensional Objects in Four Dimensional Digital Spaces <i>Boxi Chen</i>
19:00-22:00		Banquet <i>Erie Ballroom A</i>	

Wednesday, April 9

08:00-08:40		Registration	
08:40-09:40		<p><i>Keynote: Arie E. Kaufman, SUNY Stony Brook</i> “Virtual Colonoscopy with Computer-Aided Polyp Detection” <i>Wright Room</i></p>	
09:40-11:20		<p>Theoretical Track: <i>Discrete Tomography, Medical Imaging, and Biometrics</i> Chair: Benedek Nagy <i>Wright Room</i></p>	<p>Application Track: <i>Object Detection</i> Chair: Angel Martin del Rey <i>Richardson Room</i></p>
	09:40-10:00	Reconstructing a Matrix with a Given List of Coefficients and Prescribed Row and Column Sums Is NP-hard <i>Yan Gerard</i>	Windowpane Detection Based on Maximum A Posteriori Probability Labeling <i>Jan Čech, Radim Šára</i>
	10:00-10:20	A Reasoning Framework for Solving Nonograms <i>K. Joost Batenburg, Walter A. Kosters</i>	Finding Optimal Non-Overlapping Subset of Extracted Image Objects <i>Filip Korč, Wolfgang Förstner</i>
	10:20-10:40	A Memetic Algorithm for Binary Image Reconstruction <i>Vito Di Gesù, Giosuè Lo Bosco, Filippo Millonzi, Cesare Valenti</i>	A Discrete Approach for Supervised Pattern Recognition <i>João P. Papa, Alexandre X. Falcão, Celso. T. N. Suzuki, Nelson D. A. Mascarenhas</i>
	10:40-11:00	A Min-cost-Max-flow Based Algorithm <i>V. Masilamani, Kamala Krithivasan</i>	A Robust Extension of the Mean Shift Algorithm using Optimum Path Forest <i>Leonardo M. Rocha, Alexandre X. Falcão, Luis G. P. Meloni</i>
11:00-11:30		Coffee Break	
11:30-12:20		<p>Vladimir Kovalevsky, University of Applied Sciences Wildau, Germany “Geometry of Locally Finite Spaces” (New monograph presentation) <i>Wright Room</i></p>	
12:20-13:40		Lunch (on your own)	
13:40-14:40		<p><i>Closing Talk</i> by Gabor T. Herman, CUNY Graduate Center “Combinatorial Classification of Heterogeneous Electron Microscopic Projection Images into Homogeneous Subsets” <i>Wright Room</i></p>	
14:40-15:00		Closing <i>Wright Room</i>	
15:00-17:00		Post-Workshop Tour	

Adam's Mark Hotel Floor Plan



The rooms where IWCIA'08 will be held are marked in red.