



SIBGRAPI 2008

**XXI BRAZILIAN SYMPOSIUM ON COMPUTER
GRAPHICS AND IMAGE PROCESSING**
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1 Message from the General Chairs

It is our pleasure to welcome you to Campo Grande and to the 21st Brazilian Symposium on Computer Graphics and Image Processing. Campo Grande has an excellent infrastructure for rural and urban leisure and is considered a cosmopolitan tourist center that preserves its historical heritages. All that gives the city of Campo Grande an irresistible air of peace and tranquility. We could not think of a more appropriate venue to hold the first edition of the symposium in the center-west region of Brazil.

SIBGRAPI has been the premier Brazilian forum for researchers and educators engaged in the field of Computer Graphics, Computer Vision, and Image Processing. SIBGRAPI's track record of excellence continues this year. Cláudio Jung, Marcelo Walter and the Program Committee have put together a strong technical program. This year we also have a great suite of traditional and new workshops, a mix of basic and advanced tutorials, and five keynote talks by the world's leading experts in Graphics, Vision, and Image Processing.

On behalf of all attendees, we thank the Program Committee chairs, Cláudio Jung and Marcelo Walter, as well as all chairs, members and reviewers of the Program Committees of the main conference, technical posters, workshops, and tutorials, for their tireless efforts. Last but not least, we wish to express our appreciation to the many students and colleagues who volunteered to help us with the logistics of the symposium.

We also would like to acknowledge our sponsors for their support of SIBGRAPI 2008. The list includes: SBC, UCDB, UFMS, CNPq, Capes, Embrapa, Microsoft, and Petrobrás. Without their generous support we would not be able to provide the quality of speakers and events that have made the symposium such a success in the past

Finally, whether this is the first or twenty-first time you take part in SIBGRAPI, we hope you will enjoy the program and the city of Campo Grande, that you will make the most out of your participation, and that we will see you again in Rio de Janeiro next year!

Hemerson Pistori and Marcelo Siqueira

SIBGRAPI 2008 General Chairs



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2 Program

2.1 Sunday, October 12

Welcome to the SIBGRAPI 2008 tutorial sections!

This year we have an exceptional selection of tutorials prepared for you, that cover a large range of community interest subjects.

For our two introductory tutorials, one is about the use of OpenCV, an established open library for the development of computer vision applications. Our second tutorial is about image processing for accomplishing visual special effects.

We also have quite a distinct set of advanced tutorials. One is about the use of CUDA, a new programming language developed by NVIDIA for the use of the new graphics boards in general computing applications, in the domain of augmented reality applications. Our second advanced tutorial deals with surface fitting using parametric pseudo-manifolds.

We hope you all have an exceptional SIBGRAPI.

Anselmo and Siome
Tutorial Chairs

	Room	Description	
08:30 – 09:00	Onça Pintada	Registration/Reception	
09:00 – 10:30	Tuiuiu	T2 - Introdução a Processamento de Imagens e Visão Computacional usando OpenCV Chair: Siome Klein Goldstein	Mauricio Marengoni Denise Stringhini
	Jacaré	T4 - High Performance Computing: CUDA as a supporting technology for next generation augmented reality applications Chair: Anselmo Montenegro	Thiago Farias João M. Teixeira Pedro Leite Gabriel Almeida Veronica Teichrieb Judith Kelner
10:30 – 11:00	Lounge	Coffee Break	
11:00 – 12:30	Tuiuiu	T2 – Introdução a Processamento de Imagens e Visão Computacional usando OpenCV Chair: Siome Klein Goldstein	Mauricio Marengoni Denise Stringhini
	Jacaré	T4 - High Performance Computing: CUDA as a supporting technology for next generation augmented reality applications Chair: Anselmo Montenegro	Thiago Farias João M. Teixeira Pedro Leite Gabriel Almeida Veronica Teichrieb Judith Kelner
12:30 – 14:00		Lunch	



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Room

Description

14:00 – 15:30	Tuiuiu	T1 - Efeitos visuais, uma abordagem a partir do processamento digital de imagens Chair: Siome Klein Goldstein	Joao Victor Gomide Arnaldo de Albuquerque
	Jacaré	T3 - Fitting Surfaces to Polygonal Meshes using Parametric Pseudo-Manifolds Chair: Anselmo Montenegro	Jean Gallier Dimas M. Morera Luis G. Nonato Marcelo Siqueira Luiz Velho Dianna Xu
15:30 – 16:00	Lounge	Coffee Break	
16:00 – 17:30	Tuiuiu	T1 - Efeitos visuais, uma abordagem a partir do processamento digital de imagens Chair: Siome Klein Goldstein	Joao Victor Gomide Arnaldo de Albuquerque
	Jacaré	T3 - Fitting Surfaces to Polygonal Meshes using Parametric Pseudo-Manifolds Chair: Anselmo Montenegro	Jean Gallier Dimas M. Morera Luis G. Nonato Marcelo Siqueira Luiz Velho Dianna Xu



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2.2 Monday, October 13

	Room	Description
08:30 – 09:00	Onça Pintada	Registration/Reception
09:00 – 11:00	Tuiuiu	TS1. Pattern Recognition Chair: Herman Gomez
		Automatic produce classification from images using color, texture and appearance cues Anderson Rocha Daniel C. Hauagge Jacques Wainer Siome Goldenstein
		Face recognition aiding historical photographs indexing using a two-stage training scheme and an enhanced distance measure Ana Paula B. Lopes Camillo J. S. Oliveira Arnaldo de A. Araújo
		A New Training Algorithm for Pattern Recognition Technique Based on Straight Line Segments Joao Burckas Ribeiro Ronaldo Hashimoto
	Jacaré	Crop type recognition based on Hidden Markov Models of plant phenology Paula Leite Raul Feitosa Antonio R. Formaggio Gilson Costa Kian Pakzad Ieda Sanches
		TS2. Computational Geometry Chair: Hélio C. Vieira Lopes
		Projective estimators for point/tangent representations of planar curves Thomas Lewiner Marcos Craizer
		Approximation by Smooth Transition in BSP Marcos Lage Alex Bordignon Fabiano Petronetto Álvaro Veiga Geovan Tavares Thomas Lewiner Hélio Lopes
	Jacaré	Tradeoffs in Approximate Range Searching Made Simpler ok Sunil Arya Guilherme D. Fonseca David M. Mount
		An automatic crude registration of two partially overlapping range images Mercedes G. Márquez Shin-Ting Wu



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Room		Description																		
11:00 – 11:30	Lounge	Coffee Break																		
11:30 – 12:30	Sucuri	Invited Talk 1 Chair: Claudio Jung Invited Speaker: James L. Crowley Speech Title: Perception of Human Activity for Augmented Environments Abstract: In this presentation I will discuss the problem of augmenting ordinary objects and environments with information and communication technologies. I will begin with a presentation of projected interaction in the PRIMA Augmented Meeting Environment at INRIA Grenoble Research Centre. I will present video demonstrations in which ordinary surfaces are augmented with abilities for presentation and interaction using a steerable camera-projector pair. I will then address the looming problem of disruption created by the large-scale use of such technologies. I present a possible solution to this problem that relies on providing environments with an understanding of social situation and context of activities. I will briefly describe a layered architecture for building context aware services for augmented environments, finishing with an example of an automated video acquisition systems for context aware recording and transmission of meetings and lectures.																		
12:30 – 14:00		Lunch																		
14:00 – 16:00	Tuiuiu	WTD Chair: Claudio Esperanca <table> <tr> <th colspan="2">TITLE</th><th>AUTHORS</th></tr> <tr> <td>14:00-14:15</td><td>Fluid Warping</td><td>Dalia Bonilla Luiz Velho Andre Nachbin Luis G.Nonato</td></tr> <tr> <td>14:15-14:30</td><td>Least Squares and Point-based Surfaces: New Perspectives and Applications</td><td>João Paulo Gois Antonio C.Filho</td></tr> <tr> <td>14:30-14:45</td><td>Renderizações Não Fotorealísticas para Estilização de Imagens e Vídeos usando Areia Colorida</td><td>Laurindo B. Neto Bruno Carvalho</td></tr> <tr> <td>14:45-15:00</td><td>Um sistema simplificado para animação física usando malhas tetraedrais</td><td>Guina Alzamora Claudio Esperança</td></tr> <tr> <td>15:00-15:15</td><td>Image-Based Techniques for Surface Reconstruction of Adaptively Sampled Models</td><td>Ricardo Marroquim Paulo Cavalcanti</td></tr> </table>	TITLE		AUTHORS	14:00-14:15	Fluid Warping	Dalia Bonilla Luiz Velho Andre Nachbin Luis G.Nonato	14:15-14:30	Least Squares and Point-based Surfaces: New Perspectives and Applications	João Paulo Gois Antonio C.Filho	14:30-14:45	Renderizações Não Fotorealísticas para Estilização de Imagens e Vídeos usando Areia Colorida	Laurindo B. Neto Bruno Carvalho	14:45-15:00	Um sistema simplificado para animação física usando malhas tetraedrais	Guina Alzamora Claudio Esperança	15:00-15:15	Image-Based Techniques for Surface Reconstruction of Adaptively Sampled Models	Ricardo Marroquim Paulo Cavalcanti
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Room

Description

		15:15-15:30	Discrete Models for Animating Gas-Liquid and Fluid-Surface Interactions	Sicilia Judice Gilson Giraldi
		15:30-15:45	Exploration of Volumetric Datasets through Interaction in Transfer Function Space	Francisco Pinto Carla Freitas
		15:45-16:00	Sistema Composto para Amostragem e Geração de Luzes a partir de Mapas de Iluminação	Aldo Zang Luiz Velho



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Room	Description	
14:00 – 16: 00	Jacaré	WUW Chair: José Pinheiro
		Extração de Informações de Cor e Forma para Detecção de Placas de Trânsito em Imagens Ricardo Rodrigues Sérgio Pellegrino
		Equalização de Histograma para Melhoria de Contraste de Imagens Digitais Codificadas pela Técnica de Quantização Vetorial Marcelo Sousa Marcelo Alencar Carlos V. Jr. Waslon Lopes
		Um Novo Algoritmo para Detecção de Contorno de Melanomas em Imagens de Pele Marilú Silva Ana Lúcia Candeias
		Método de Classificação de Pontos em Esqueletos de Resolução Aumentada Diogenes Canozza André Saúde
		SketchSim: Interactive Simulation of Ink Brushstrokes Nicole Sultanum Silvio Melo
		Uso de Saliências do Contorno via Esqueletização para Caracterização de Formas Glauco Pedrosa Marcos Batista Henrique Fernandes Celia Barcelos
		Técnicas Simples para Visualização Foto-realista de Terrenos em Tempo Real Usando Placas Gráficas Programáveis Ricardo Costa Waldemar Celes
		Classificação Automática de Imagens do Acervo de Obras de Candido Portinari Daniel P. de Queiroz Antonio Jr. Arnaldo Albuquerque
		Identificação automática de cromossomos humanos Guilherme C. Kurtz Tiago B. Bonini Giovani Librelotto Luis Augusto Perles Michele Rorato
		Visão Computacional aplicada à Localização e Mapeamento Simultâneos de Robôs Subaquáticos Paulo Drews Jr. Sílvia Botelho
		Extração Automática de Características em Imagens de Impressão Digital Eduardo Ribeiro
	Recuperação de Imagens com Base no Conteúdo Aplicada à Pesquisa Guignard Rodrigo Oliveira Thatyene Ramos Ana Paula Lopes Camillo J. Oliveira Arnaldo Albuquerque	



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Room		Description	
		Estruturas Tritree Compressão de imagens coloridas	Tiago Cunha Vânia Silva
		Redução de Ghost em imagens de MR adquiridas pelo método EPI	Bruno Marini Marcelo Zibetti Gabriela Castellano
		Segmentação de Dentes Utilizando a Transformada Imagem-Floresta em Sistemas Biométricos	Elizabeth Barboza Demiam Fonseca Aparecido Marana
16:00 – 16:30	Lounge	Coffee Break	
16:30 – 17:30	Sucuri	Invited Talk 2 Chair: Marcelo Walter Invited Speaker: Jos Stam Speech Title: Nucleus: Toward a Unified Dynamics Solver for Computer Graphic Abstract: In this talk I will present some research I have done over the past few years in developing a unified dynamics solver for computer graphics. Currently many solvers are specialized for a given phenomenon such as fluid flow, cloth, rigid bodies, hair, etc. Having these different solvers interact is sometimes problematic. We propose to model all matter as a linked particle system having the topology of a simplicial complex. The dynamical complex evolves due to external forces like gravity and constraints such as collisions and internal deformation energies. We use a solution scheme that iteratively updates the velocities to achieve all constraints. Key to the stability of our system is to interleave the solve for the different constraints. The talk will cover the main ideas and ingredients of our solver and will be accompanied with live demonstrations.	
17:30 – 19:00	Sucuri	CEGRAPI meeting Chair: Olga Bellon	
19:30 – 20:00	Sucuri	Opening	
20:00 – 22:00	Lounge	Reception	



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2.3 Tuesday, October 14

	Room	Description
08:30 – 09:00	Onça Pintada	Registration/Reception
09:00 – 11:00	Tuiuiu	TS3. Object Tracking Chair: Luciano Silva
		Synchronizing Video Cameras with Non-Overlapping Fields of View Darlan N. Brito Flávio L. C. Pádua Rodrigo L. Carceroni Guilherme A. S. Pereira
		A Backmapping Approach for Graph-based Object Tracking Thiago Meireles Paixão Ana Beatriz V. Graciano Roberto M. Cesar Jr. Roberto Hirata Jr.
		People detection under occlusion in multiple camera views Thiago T. Santos Carlos H. Morimoto
	Jacaré	Occlusion Handling for Object Tracking using a Fast Level Set Method Juliana Gambini Damian Rozichner María E. Buemi Marta Mejail Julio Jacobo Berllés
		TS4. Rendering and Geometric Modeling Chair: David Mount
		Using Multi-Agent Systems for Illustrative Rendering of Implicit Surfaces Pauline Jepp Jörg Denzinger Brian Wyvill Mario Costa Sousa
		Simulation and Rendering of Opus Palladium 3D Mosaics Vladimir A. dos Passos Marcelo Walter
11:00 – 11:30	Lounge	A Parallel Multi-View Rendering Architecture Wallace Santos Lages Carlúcio Cordeiro Dorgival Guedes
		Shape Aware Deformation Using a Skeleton-Guided Scheme Alvaro Cuno Claudio Esperança Antonio Oliveira
11:00 – 11:30	Lounge	Coffee Break



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Room	Description										
11:30 – 12:30	Invited Talk 3 Chair: Nelson D. A. Mascarenhas Invited Speaker: William K.Pratt, PixelSoft, Inc. Speech Title: Digital Image Processing — Past, Present and Future. Abstract: A taxonomy of digital image processing technology is established into the following categories: image science, image characterization, image improvement, image analysis, image understanding, image coding, video coding, image processing hardware and image processing software. The technology of each category is rated as a significant achievement, an important contribution or as an under achievement for the past, present and future and for theoretical and commercial advances										
12:30 – 14:00	Lunch										
14:00 – 16:00	TS5. Image Analysis Chair: Marcos Craizer <table border="1"> <tr> <td>Structural Matching of 2D Electrophoresis Gels using Graph Models</td><td>Alexandre Noma Alvaro Pardo Roberto M. Cesar Jr.</td></tr> <tr> <td>Efficient Text Color Modulation for Printed Side Communications and Data Hiding</td><td>Paulo V. Koerich Borges Ebroul Izquierdo Joceli Mayer</td></tr> <tr> <td>Estimating the skew angle of document through background area information</td><td>Angélica A. Mascaro George D. C. Cavalcanti</td></tr> <tr> <td>Benchmark for Quantitative Evaluation of Assisted Object Segmentation Methods to Image Sequences</td><td>Franklin César Flores Roberto A. Lotufo</td></tr> <tr> <td>VSUMM: An Approach for Automatic Video Summarization and Quantitative Evaluation</td><td>Sandra E. F. de Ávila Antonio da Luz Jr. Arnaldo de A. Araújo Matthieu Cord</td></tr> </table>	Structural Matching of 2D Electrophoresis Gels using Graph Models	Alexandre Noma Alvaro Pardo Roberto M. Cesar Jr.	Efficient Text Color Modulation for Printed Side Communications and Data Hiding	Paulo V. Koerich Borges Ebroul Izquierdo Joceli Mayer	Estimating the skew angle of document through background area information	Angélica A. Mascaro George D. C. Cavalcanti	Benchmark for Quantitative Evaluation of Assisted Object Segmentation Methods to Image Sequences	Franklin César Flores Roberto A. Lotufo	VSUMM: An Approach for Automatic Video Summarization and Quantitative Evaluation	Sandra E. F. de Ávila Antonio da Luz Jr. Arnaldo de A. Araújo Matthieu Cord
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VSUMM: An Approach for Automatic Video Summarization and Quantitative Evaluation	Sandra E. F. de Ávila Antonio da Luz Jr. Arnaldo de A. Araújo Matthieu Cord										
	Jacaré TS6. Visualization and Reconstruction Chair: Carla Freitas <table border="1"> <tr> <td>Multidimensional visualization to support analysis of image collections</td><td>Danilo M. Eler Marcel Y. Nakazaki Fernando V. Paulovich Davi P. Santos M. Cristina F. Oliveira João E. S. Batista Neto Rosane Minghim</td></tr> <tr> <td>High Quality Image Reconstruction of Point Models</td><td>Ricardo Marroquim Antonio Oliveira</td></tr> </table>	Multidimensional visualization to support analysis of image collections	Danilo M. Eler Marcel Y. Nakazaki Fernando V. Paulovich Davi P. Santos M. Cristina F. Oliveira João E. S. Batista Neto Rosane Minghim	High Quality Image Reconstruction of Point Models	Ricardo Marroquim Antonio Oliveira						
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Room		Description	
		Exploratory visualization of RFLP-PCR genomic data using Multidimensional Scaling	Paulo Roma Cavalcanti S. Espezu-Llerena C. D. Maciel
		PCA-based 3D Face Photography	Jesús P. Mena-Chalco Ives Macêdo Luiz Velho Roberto M. Cesar Jr.
16:00 – 16:30	Lounge	Coffee Break	
16:30 – 17:30	Arara Azul	POSTERS Chairs: Celia Barcelos / Maria Andreia F. Rodrigues	
		Equalization	Francisco Benavides Douglas Navarro Francisco Torres Alexander Ramirez
		Efficient computation of global illumination for image synthesis	Anamaria Gomide Danillo Pereira Jorge Stolfi
		A Geometric Bisection Algorithm for Automatic Page Layout	Alexandre Seki Mauricio Klein Ricardo Piccoli Isabel Manssour Joao Oliveira
		DICOM Server applied to Medical Image Processing	Luis Sebastián Barberis Fabián Lucena Juan Pablo G. Vaggione María Eugenia G. Marrello Raúl Romo
		Using Metaprogrammed Functors to Implement Double-Dispatch for Collision Handling	Tiago Nobrega Diego Carvalho Aldo Wangenheim
		Enabling Interactive Brain Fiber Tracking with the GPU	Adiel Mittmann Tiago Nóbrega Eros Comunello Diego Carvalho Aldo Wangenheim
		Watershed Transform based Interactive Image Segmentation Tool	Bruno Klava Nina Hirata
		Marvin A Tool for Image Processing Algorithm Development	Gabriel Archanjo Fabio Andrijauskas Danilo Rosetto Muñoz



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Room		Description	
		Color Gradient Map-Oriented Anisotropic Diffusion Filtering	Leandro Coser Antonio Sobieranski Adiel Mittmann Eros Comunello Aldo Wangenheim
		OCR4JkanjiCards: Exploring Japanese Character Recognition	Oswaldo Bassani Celso Kurashima Marcelo Zanchetta
		Physically Based Simulation Using Particle Systems	Yalmar Atencio Claudio Esperança
		Fusion of Infrared and Visible Spectra Face Recognition Methods	Giovani Chiachia Aparecido Marana
		3D Texture Painting of Point Models	José Ricardo Mello Viana Ricardo Marroquim Claudio Esperança
		A Fourier Transform-based Method to Fusion IKONOS Data	Juliana Denipote Maria Stela Veludo de Paiva
		Level of Detail for Point Model Rendering	Felipe Carvalho Ricardo Marroquim Antonio Alberto F. de Oliveira
		SAR Image Compression Using Bounded Variation Component Analysis	Regis Marques
		A new Content-Based Image Retrieval methodology based on Image Registration algorithms processed in Grid Computing	Marcelo Oliveira Walfredo Cirne José Flávio Júnior Paulo de Azevedo-Marques
		Improving Content-based Image Retrieval by Combining Growing Hierarchical Self Organizing Map Classifiers for Color, Shape and Texture Features	Saulo de Tarso Rodrigues Tiago Albuquerque Herman Gomes
		Fracture Pattern for Non-Photorealistic Image Rendering	Anna Regina Corbo Luiz Henrique de Figueiredo
18:00 – 19:30	Sucuri	Vídeo Festival Chairs: Alessandro de L. Bicho/ Valguima Odakura Page 21	
20:00 – 24:00	Vip-Hall ¹	Banquet	

¹ Rua Pedro Celestino, 2.363 – Fone: (67) – 3324 – 9090



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2.4 Wednesday, October 15

Room		Description	
08:30 – 09:00	Onça Pintada	Registration/Reception	
09:00 – 11:00	Tuiuiu	TS7. Biomedical Image Analysis Chair: Jacob Scharcanski	
		Can bilateral asymmetry analysis of breast MR images provide additional information for detection of breast diseases?	Ricardo J. Ferrari Kimberley A. Hill Donald B. Plewes Anne L. Martel
		A Fast and Automatic Method for 3D Rigid Registration of MR Images of the Human Brain	Fernanda O. Favretto Felipe P. G. Bergo Alexandre X. Falcão
		Bayesian estimation of Hyperparameters in MRI through the Maximum Evidence Method	Damián E. Oliva Roberto A. Isoardi Germán Mato
		Evaluation of Five Algorithms for Mapping Brain Cortical Surfaces	Simon F. Eskildsen Lasse Riis Østergaard
	Jacaré	TS8. Applications Chair: Joceli Mayer	
		Three-Dimensional Transforms and Entropy Coders for a Fast Embedded Color Video Codec	Vanessa Testoni Max H. M. Costa
		A Genetic Programming Approach for Relevance Feedback in Region-based Image Retrieval Systems	Jefersson A. Santos Cristiano D. Ferreira Ricardo da Silva Torres
		Color descriptors for Web image retrieval: a comparative study	Otávio A. B. Penatti Ricardo da Silva Torres
		Regularized Simultaneous Super-Resolution with Automatic Determination of the Parameters	Marcelo V. W. Zibetti Joceli Mayer Fermín S. V. Bazan
		Matching Photometric Observation Vectors with Shadows and Variable Albedo	Helena C. G. Leitão Rafael F. V. Saracchini Jorge Stolfi
11:00 – 11:30	Lounge	Coffee Break	



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Room	Description
11:30 – 12:30	Invited Talk 4 Chair: Hemerson Pistori Invited Speaker: Prof. Nelson D. A. Mascarenhas Speech Title: Reconstruction and Restoration of Images Under Poisson Noise Abstract: Two problems will be covered in this talk, both dealing with inverse problems under Poisson noise. The first one is an algebraic technique to reconstruct computed tomography images, under low exposure time. First, the projections are filtered to reduce the Poisson noise using three different techniques: a) thresholding of the Discrete Wavelet Transform coefficients, after the application of an Anscombe Transformation, that approximately converts signal-dependent Poisson noise into additive, signal independent Gaussian noise; b) pointwise Wiener Filter, after the application of the Anscombe Transform; c) Maximum a Posteriori Techniques, under different a priori distributions. After the projections are filtered, the reconstruction is performed by a parallel POCS (Projection onto Convex Sets) technique. Simulation results with phantoms and experiments with real images are presented. The second problem is concerned with the restoration of real widefield 3-D fluorescence images, also contaminated by Poisson noise due to low photon counting. In order to obtain a 3-D reconstruction of the specimen, it is often necessary to deblur the point spread of the microscope, which is particularly extended over the axial direction (Computational Optical Sectioning Microscopy – COSM). The present work proposes the Richardson-Lucy and Richardson-Lucy regularized with Total Variation iterative algorithms as methods of restoration of these 3-D images, and also the use of a preprocessing stage before the execution of the iterative methods, that consists of filtering the image with the Wiener Filter or the Median Filter for reduction of the Poisson noise in the Anscombe domain. The results demonstrate the robustness of the proposed methods, since the image filtered in the Anscombe domain transforms the Poisson noise into a distribution that is not Poisson, as required by the Richardson-Lucy algorithm and still its use provides improved results with the iterative methods.
12:30 – 14:00	Lunch



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Room	Description			
14:00 – 15:00	Sucuri	Invited Talk 5 Chair: Marcelo Siqueira Invited Speaker: Allisson Sol – Microsoft Speech Title: AutoCollage: The experience of going from a paper to a product Abstract: Every year thousands of technical papers are published, some improving on previous research results, and some proposing innovations. As with other areas, the field of digital image processing experiences a significant delay between what is demonstrated in technical symposiums and what is available in the market. This presentation focuses on 3 main topics, with emphasis in the digital image processing technologies: a) What are the differences between demo software and product line software? b) How researchers can contribute to bring technology to market quickly. c) What are companies doing to bring innovation to customers as quick as possible. For each of the focus points there will be examples of problems and solutions, based on a real experience of getting a published paper and developing a product based on the paper findings		
14:00 – 17:00	Arara Azul	WAGAE Chair: Milton Romero Page 24		
15:00 – 17:00	Tuiuiu	WTD Chair: Herman M. Gomes		
			TITLE	AUTHORS
		15:00-15:15	Reconhecimento Semi-Automático de Sinus Frontais para Identificação Humana Forense Baseado na Transformada Imagem-Floresta e no Contexto da Forma	Juan Falguera Aparecido Marana
		15:15-15:30	Fusão de Métodos Baseados em Minúcias e em Cristas para Reconhecimento de Impressões Digitais	Fernanda Falguera Aparecido Marana
		15:30-15:45	Contrast Enhancement in Digital Imaging using Histogram Equalization	David Menotti Amaldo Albuquerque Laurent Najman Gisele Pappa



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Room		Description	
15:00 – 17:00		15:45-16:00	High-resolution image reconstruction using the Discontinuity Adaptive ICM algorithm Jacques Facon Ana Luísa Martins Nelson Mascarenhas
		16:00-16:15	Mapeamento e Monitoramento Ambiental Usando Imagens Aéreas de Pequeno Formato Natal Cordeiro Bruno Carvalho Luiz Gonçalves
		16:15-16:30	Shape Descriptors based on Tensor Scale Fernanda Andaló Ricardo Torres Alexandre Falcão
		16:30-16:45	Automatização do Ajuste de Segmentadores Neurais de Imagens Coloridas Fernando Cardoso Herman Gomes
	Jacaré	WUW Chair: Soraia Musse	
		Geração da Curva de Interseção em Superfícies Trianguladas	André Alves Rosana Marques da Silva
		Método Híbrido de Reconhecimento Ótico de Caracteres	William Ivanski Luciano Silva Olga Bellon
		Software de Aquisição de Dados para um Sistema de Captura de Movimentos	Carolina Bigonha David Flam Joao Victor Gomide Arnaldo de Albuquerque
		SMALL GPS Sistema de Mapeamento de Linhas de Ônibus e Localização do Usuário via GPS pelo Celular	Carlos Gasparetto Isabel Manssour
		Autenticação Biométrica: um Sistema Híbrido Combinando Informações Globais e Locais de Impressões Digitais	Rubisley Lemes Cristiano Oliveira Ferreira Maurício Segundo Olga Bellon Luciano Silva
		Fecho Convexo e o Paradigma Rotating Calipers	Renato Manzoni
		Rastreamento facial em vídeo com aplicação em monitoramento e Segurança	Maurício Segundo Alessandro Fior Luciano Silva Olga Bellon
		Simulações de Movimentos Físicos em Duas Dimensões, Utilizando Framework XNA	Luiz Carneiro Wietske Meyering
		Uma Estrutura Hierárquica para Iluminação de Cartoon	Allan Rocha Leandro Leite Renata Nascimento Adelailson Peixoto Vinícius Mello
		Deformação de Objetos 2D Utilizando Curvas de Bézier e Mínimos	Douglas Cedrim Adelailson Peixoto



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Room

Description

15:00 – 17:00		Quadrados Móveis	
		Estimando Cobertura Vegetal por Análise de Imagens	Jaime Mendes André Saúde
		Inspeção Visual de Placas de Circuito Integrado com Alta Densidade de Microcomponentes	Felipe Oliveira José Luiz Pio
		VHuP: A Tool to Visualize Virtual Humans	Diogo Lima Henry Braun Soraia Musse
		Um Aplicativo para Medição do Tamanho do Grão de Materiais Metálico	Francisco R. Caetano Magnaura M. dos Santos José Queiroz-Neto
	Tucano	TS9. Mathematical Morphology Chair: Roberto M. Cesar Jr	
		A general self-dual adaptative filtering toggle operator	Leyza Baldo Dorini Neucimar Jerônimo Leite
		Diffusion tensor imaging segmentation by watershed transform on tensorial morphological gradient	Leticia Rittner Roberto Lotufo
		New Extinction Values From Efficient Construction and Analysis of Extended Attribute Component Tree	Alexandre G. Silva Roberto de A. Lotufo
		New Higher-resolution Discrete Euclidean Medial Axis in nD with Linear Time Parallel Algorithm	André Vital Saúde



3 Video Festival Program

3.1 Presentation

We are honored to present the results of the XXI Sibgrapi Video Festival.

The SIBGRAPI Video Festival is an exhibition of short videos generated with computer graphics or digital video processing techniques, which brings technical innovations and creativity together. Scientists, engineers, computer science researchers, designers, artists, advertising specialists, and animators submitted works that fascinate, innovate, provoke, and entertain. The SIBGRAPI Video Festival is a privileged forum where professionals, amateurs, production houses, research groups, and students can share experiences and exhibit their productions to a selected and specialized international audience.

Among many submitted works, the present titles were selected for their creativity quality and/or their good technical contribution.

We would like to acknowledge all the participants, and hope that all the conference participants enjoy the presentation.

Alessandro de Lima Bicho and Valguima Victoria Viana Aguiar Odakura.
Chairs of the XXI Sibgrapi Video Festival.



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3.2 Category Technical

Title	Authors
Environ: a visualization system aimed at massive CAD models	Ismael dos Santos Luciano Soares Eduardo Corseuil Alberto Raposo Gustavo Wagner Paulo Santos Rodrigo de Toledo Marcio Henrique Pinto Pedro Ponce
Spline joints for multibody dynamics	Sung-Hee Lee Demetri Terzopoulos
Heads up! Biomechanical modeling and neuromuscular control of the neck	Sung-Hee Lee Demetri Terzopoulos
Expressive trajectories	Luiz Velho Ilana Paterman Alice Bodanzky Julio Martins UERJ Analivia Cordeiro
LabOceano3D	Eduardo Hartmann Tiago Pasito Schultz Wesley Adonay Castelluber Vitor Irigon Gervini Sebastião Cícero Pinheiro Gomes
Managing Groups	Renato Silveira Leonardo Fischer Edson Prestes Luciana Nedel
A Tale of Evolution	Erick Passos Mark Joselli Esteban Clua Anselmo Montenegro
Visualizing Social Networks: A Graph Visualization Case Study	Andre Spritzer Carla M. D. S. Freitas
Tracking is Believing	Adriano Werhli Alessandro Bicho Diogo Strube de Lima Henry Braun Juliano Lucas Moreira Julio Cezar S. J. Júnior Marcelo Cohen Marcelo Paravisi Maurício B. Gehling Rafael Rodrigues Rossana Queiroz Soraia Raupp Musse
Simulation and Rendering of Opus Palladium 3D Mosaics	Marcelo Walter Vladimir Alves dos Passos



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3.3 Category Artistic

Title	Authors
Maratinho	Rodrigo Santos João Carlos Lima
Colégio Equipe – surpresa	Rodrigo Santos José Luiz Cabral
Dezembro de 2007	Mára Fragoso da Silva Estefhan Wandekoken Fabbiano Ferrari Igor Vale Pedro Barcelos
Vida de engenheiro depois de formado: grandes obras da engenharia	Mára Fragoso da Silva Douglas Almonfrey Filipe Pandolfi Merielen dos Santos Otávio Mendes
Visual effects design	João Victor Gomide Arnaldo de Albuquerque
Natural	Fernando Franco Codevilla
Pictures at an Exhibition	Reinaldo A. C. Bianchi Arnau Ramisa Ramon López de Mántaras
A Guerra dos Ratos	Danilo David Juan Gabriel Antonio Leite Marco Antonio G. de Carvalho
Unsquare dance	Luiz Velho Ilana Paterman Alice Bodanzky Julio Martins Analivia Cordeiro
Gramophone	Luiz Velho Ilana Paterman Priscila Freire
Fut Web	Rafael Silva da Costa Paulo Mattos
Brasilia Tropicalis	Rafael Silva da Costa Paulo Mattos



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4 WAGAE Program (in Portuguese)

4.1 Apresentação

Bem-vindos ao primeiro Workshop on Applications of Computer Graphics and Image Processing to Agribusiness and Environment que faz parte do Brazilian Symposium on Computer Graphics and Image Processing (SIBGRAPI 2008).

O agronegócio brasileiro é um setor da economia com grande capacidade de geração de empregos e movimenta da ordem de US\$ 200 bilhões por ano. Dentre os seus maiores desafios se encontram a busca por índices de produtividade e o atendimento à sustentabilidade ambiental dos sistemas de produção. A agricultura vem apontando para o uso e a difusão de novos métodos e aderência às práticas multidisciplinares com a busca de soluções nas diferentes áreas do conhecimento. Neste contexto, uma série de soluções, aos problemas que se apresentam, tem sido obtida com base na computação gráfica e no processamento de imagens.

O Workshop em aplicações da computação gráfica e do processamento de imagens no agronegócio e no meio ambiente tem por objetivo discutir a construção de soluções a problemas que visem sistemas de suporte às decisões, incluindo modelagem e simulação de agroecossistemas, análise de risco e prescrições de manejo nos níveis cognitivo, analítico e de síntese.

O Agronegócio é o setor mais importante da economia da região e contribui significativamente para economia do país. O evento em Campo Grande, torna-se relevante para o desenvolvimento da área e para o enriquecimento dos pesquisadores e dos estudantes.

Agradecemos aos autores que submeteram trabalhos, e ao Comitê de Programa pela sua substancial contribuição nas avaliações.

4.2 Chairs

Milton Romero

Universidade Federal de Mato Grosso do Sul - UFMS

Paulo Cruvinel

Empresa Brasileira de Pesquisa Agropecuária - Embrapa Instrumentação Agropecuária



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4.3 Comitê do Programa

Hemerson Pistori	Universidade Católica Dom Bosco - UCDB
Jacob Scharcanski	Universidade Federal do Rio Grande do Sul - UFRGS
Joaquim Teixeira de Assis	Universidade Estadual do Rio de Janeiro - UERJ /IPRJ
José Saito	Universidade Federal de São Carlos - UFSC
Luiz Colnago	Empresa Brasileira de Pesquisa Agropecuária - Embrapa
Marco Alvarez	Utah State University
Vilma Alves de Oliveira	Universidade Estadual de São Paulo - USP

4.4 Programa

	Sala	Descrição	Autor
14:00 – 14:30	Arara Azul	Avaliação das técnicas de filtragem de Kalman e suavização Rauch-Tung-Striebel para a melhoria da qualidade de imagens tomográficas de solos agrícolas	Marcos Laia
14:30 – 15:00	Arara Azul	Modelo de Visualização 2D e 3D de Imagens Tomográficas de Raios X de Amostras Agrícolas, Baseado em Técnicas de Processamento Paralelo e Realidade Virtual	Mauricio Pereira Leonardo C. Botega
15:00 – 15:30	Arara Azul	Uso de Imagens Digitais em Mensurações de Coeficientes Técnicos Agropecuários	Fábio Rossi Claudino Andrighetto Otoniel Lauz Ferreira
15:30 – 15:50		Intervalo	
15:50 – 16:30	Sucuri	Palestra: Sistemas automatizados para avaliação da qualidade de carcaça bovina	Gelson Luiz D. Feijó
16:30 – 17:45	Sucuri	Mesa Redonda	Mediador: Paulo Cruvinel



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4.5 Mesa Redonda

Título: Oportunidades e aplicações da Computação Gráfica e do Processamento de imagens em questões ambientais e agrícolas.

Componentes da Mesa:

Cleber Oliveira Soares

Pesquisador Chefe Adjunto de Pesquisa e Desenvolvimento Embrapa Gado de Corte
Brasil

Antônio de Souza Oliveira

Coordenador do Núcleo de APLs do Estado do Mato Grosso do Sul Secretaria Técnica do
GTP APL

Departamento de Micro, Pequenas e Médias Empresas Secretaria do Desenvolvimento da
Produção/MDIC

Brasil

Daniel Marçal de Queiroz

Pesquisador e Professor Universitário

Universidade Federal de Viçosa

Centro de Ciências Agrárias,

Departamento de Engenharia Agrícola

Brasil

Maurício Braga Meira

RapidEye

Alemanha

Paulo E. Cruvinel

Pesquisador

Coordenador Executivo da Rede de Inovação e Prospecção Tecnológica para o

Agronegócio (RIPA/CTA Agro/Finep/CNPq)

Embrapa Instrumentação Agropecuária

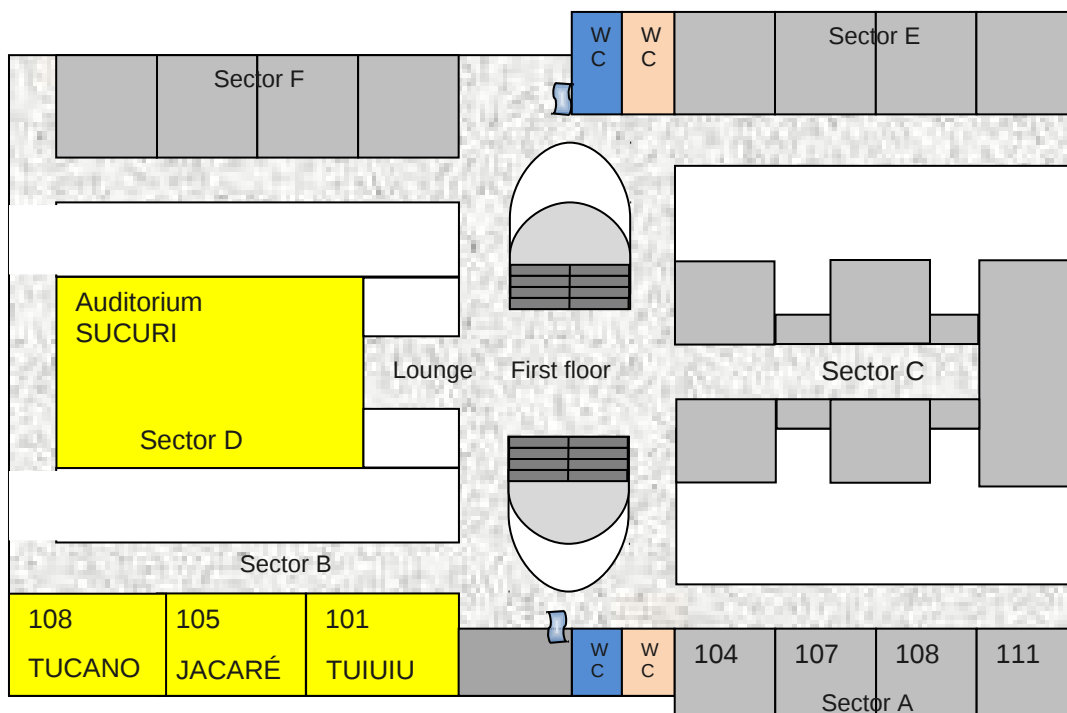
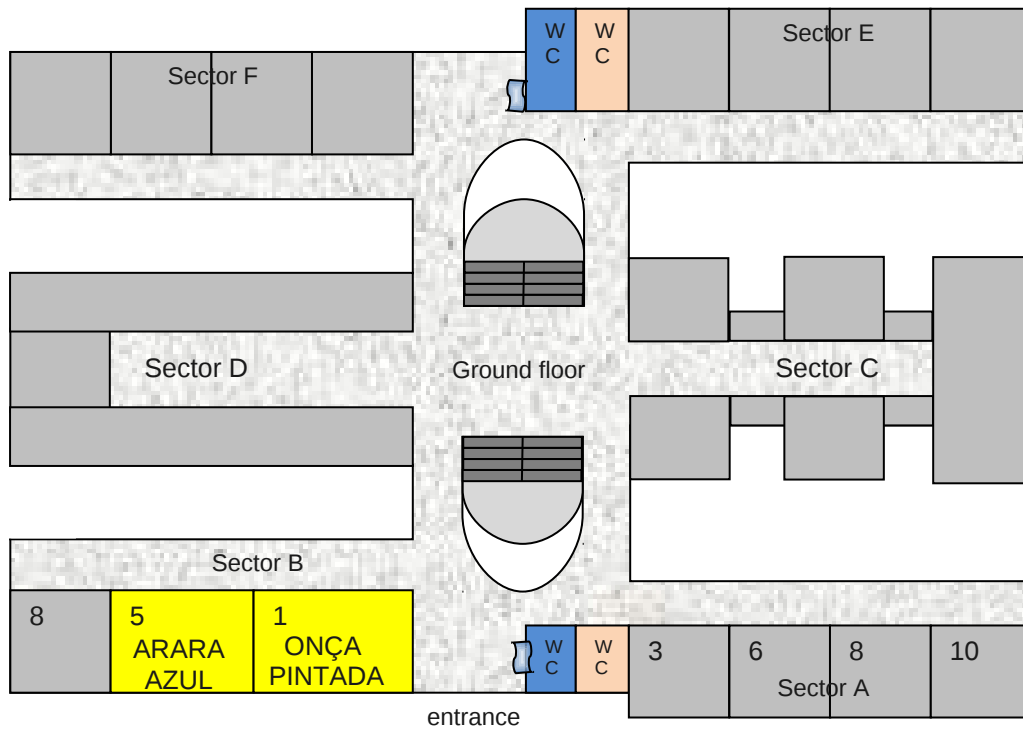
Brasil



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5 Floor Plan





6 Transportation

SIBGRAPI 2008 will provide free bus transportation to take all participants from the hotels to the UCDB campus and vice-versa, and from the UCDB campus to the banquet, and from the banquet to the hotels. There will be four buses available (except on Sunday, when only three buses will ride), each of which can accommodate over 40 people. The buses will stop to pick up and drop off the participants at the following locations:

6.1 Hotels

1. Hotel Advanced
Address: *Av. Calógeras, 1909, Centro*
2. Hotel Metropolitan
Address: *Av. Ernesto Geisel, 5100, Centro*
3. Hotel Brumado
Address: *Av. Afonso Pena, 743, Bairro Amambaí*
4. Exceler Plaza Hotel
Address: *Av. Afonso Pena, 444, Bairro Amambaí*

6.2 Stops

Stop 1 is closer to Hotel Concord and Hotel Advanced

Stop 2 is closer to Hotel Metropolitan

Stop 3 is closer to Hotel Brumado and Hotel Internacional

Stop 4 is closer to Hotel Vale Verde and Exceler Plaza Hotel.

6.3 Timetable

The timetable for the bus rides is given below:

Sunday (October 12, 2008)

07:30 – Buses will park at stops 1, 3 and 4.

07:50 – Buses will ride to stop 2.

08:00 – Buses will park at stop 2.

08:10 – Buses will ride to the UCDB campus.

17:30 – Buses will stop by the UCDB campus.

17:45 – Buses will ride to the hotels.



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Monday (October 13, 2008)

- 07:40 – Buses will park at stops 1, 2, 3, and 4.
- 08:00 – Buses will ride to the UCDB campus.
- 17:30 – Buses will stop by the UCDB campus.
- 17:45 – Buses will ride to the hotels.
- 18:40 – Buses will park at stops 1, 2, 3, and 4.
- 19:00 – Buses will ride to the UCDB campus.
- 21:00 – Buses will stop by the UCDB campus.
- 21:10 – Buses will ride to the hotels.

Tuesday (October 14, 2008)

- 07:40 – Buses will park at stops 1, 2, 3, and 4.
- 08:00 – Buses will ride to the UCDB campus.
- 19:30 – Buses will stop by the UCDB campus.
- 19:40 – Buses will ride to the banquet (and to the hotels for those who **not** will take part in the banquet).
- 23:00 – Buses will ride to the hotels.

Wednesday (October 15, 2008)

- 07:40 – Buses will park at stops 1, 2, 3, and 4.
- 08:00 – Buses will ride to the UCDB campus.
- 17:30 – Buses will stop by the UCDB campus.
- 17:45 – Buses will ride to the hotels.



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7 Full Program

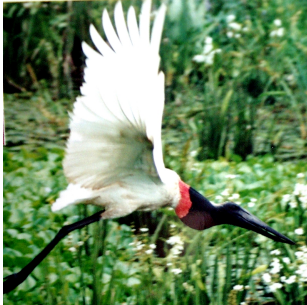
	Sunday, Oct. 12		Monday, Oct. 13		Tuesday, Oct. 14		Wednesday, Oct. 15		Location	
08:30 - 09:00	Registration	Onça Pintada	Registration	Onça Pintada	Registration	Onça Pintada	Registration	Onça Pintada		
09:00 - 09:30	T2/T4	Tuiuiu/Jacaré	TS1/TS2	Tuiuiu/Jacaré	TS3/TS4	Tuiuiu/Jacaré	TS7/TS8	Tuiuiu/Jacaré		
09:30 - 10:00	Coffee-break	Lounge C	Coffee-break	Lounge C	Coffee-break	Lounge C	Coffee-break	Lounge C		
10:00 - 10:30			Invited Talk 1	Sucuri	Invited Talk 3	Sucuri	Invited Talk 4	Sucuri		
10:30 - 11:00	T2/T4	Tuiuiu/Jacaré								
11:00 - 11:30										
11:30 - 12:00										
12:00 - 12:30										
12:30 - 14:00										
14:00 - 14:30	T1/T3	Tuiuiu/Jacaré	WTD/WUW	Tuiuiu/Jacaré	TS5/TS6	Tuiuiu/Jacaré	Invited Talk 5/WAGAE	Sucuri/Arara Azul		
14:30 - 15:00	Coffee-break	Lounge C	Coffee-break	Lounge C	Coffee-break	Lounge C	Coffee-break	Lounge C		
15:00 - 15:30			Invited Talk 2	Sucuri	Posters	Arara Azul				
15:30 - 16:00			CEGRAPI meeting	Sucuri	Video Festival	Sucuri	WTD/WUW/WAGAE/TS9	Tuiuiu/Jacaré/Arara Azul/Tucano		
16:00 - 16:30			Official Opening	Sucuri						
16:30 - 17:00			Reception	Lounge C						
17:00 - 17:30										
17:30 - 18:00										
18:00 - 18:30										
18:30 - 19:00										
19:00 - 19:30										
19:30 - 20:00										
20:00 - 20:30										
20:30 - 21:00										
21:00 - 24:00										



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8 Animal Rooms



TUIUIU



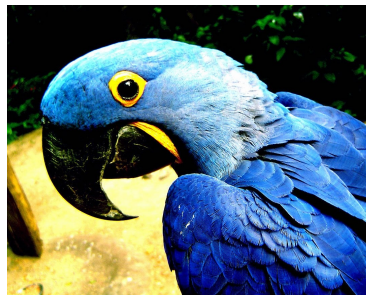
SUCURI



JACARÉ



ONÇA
PINTADA



ARARA AZUL



TUCANO



9 Useful Phones

Police	190
Firefighter	193
Drug Store Delivery	3314-2222
Airport	3368-6000
Bus station	3383-1678

10 Restaurants

10.1 Barbecue

Boi de Ouro

Rua Antônio Arantes, Nº 307
phone: 3326-5463

Boi Branco

Rua 14 de julho, Nº 180
phone: 3342-0376

Galleto

Av. Noroeste, N º 7138
phone: 3342-0360

Khalil Karnes

Rua Rubens Gil de Camilo, Nº 142
phone: 3326-3715

Nilson

Rua José do Patrocínio, Nº 165
phone: 3342-5413

Nossa Querência

Av. Afonso Pena, Nº 1267
phone: 3383-2572

Costelaria do Gaúcho Gastão

Rua 14 de julho, N º 775
phone: 3384-4326

Montreal

Av. Coronel Antonino, Nº 1714
phone: 3351-3212



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10.2 Pizza

Pizza Papaleguas Delivery
3361-1162

Pizza Hut
Av. Afonso Pena, N° 4000
phone: 3028-2820

Pizzaria Martignoni
Av. Via Park, N° 307
phone: 3327-1010

Mangiare Bene
Rua Sebastião Lima, N° 528
phone: 3382-1235

Gato Mia
Rua Cândido Mariano, N° 2511
phone: 3382-1036

L'acqua in Bocca
Av. Mato Grosso, N° 2521
phone: 3326-0003

Napoli
Av. Afonso Pena, N° 216
phone: 3321-2247

Pallacio
Rua Sebastião Lima, N° 403
phone: 3321-1711

Pizza & Pizza
Rua José Antônio, N° 182
phone: 3325-6768

Itapuã
Av. Eduardo Elias Zahram, N° 2219
phone: 3341-3772

Bela Pizza
Rua Euclides da Cunha, N° 135
phone: 3325-2070

San Marino Pizzas
Rua Rui Barbosa, N° 1834
phone: 3382-6469

Reis Magos
Av. Noroeste, N° 6231
phone: 3324-2990

Pizza House
Rua José Antônio, N° 523
phone: 3325-3000

Dom Marchitto
Rua Dom Aquino N° 1600
phone: 3324-3643

Romana
Rua Bahia, N° 463
phone: 3321-3306

Pizzaria Pantanal
Rua Rui Barbosa, N° 1111
phone: 3384-5677

Dom Pauligi
Rua Arthur Jorge, N° 933
phone: 3325-7885

Paulão
Rua Dom Aquino, N° 1863
phone: 3384-3090

A Tavola con Toscano
Rua Jornalista Belizário Lima, N° 388
phone: 3324-2634

10.3 Vegetarian Food

Multiplus Restaurante Verde Limpo
Rua Marechal Cândido Mariano, N° 2512
phone: 3325-6447

Restaurante Viva a Vida
Rua Dom Aquino, N° 1354
phone: 3384-6524



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10.4 International Food

Empório Árabe

Rua 15 de novembro, Nº 2090
phone: 3383-1546

Litani

Rua Euclides da Cunha, Nº 707
phone: 3324-9396

Manura

Av. Mato Grosso, Nº 579
phone: 3384-1464

Restaurante Shimada

Rua Antônio Corrêa, Nº 776
Phone: 3324-9752

Yaki Sobá

Av. Enerto geisel, Nº 5115
phone: 3321-0305

Sobaria Carandá

Rua Vitorio Zeolla Nº 1870
phone: 3325-5287

Sobáchopps

Av. Mato Grosso, Nº 2580
phone: 3326-5744

Acepipe Restaurante

Rua Eduardo Santos Pereira, Nº 645
phone: 3383-4287

China in Box

Av. Rodolfo José Pinho, Nº 435
Phone: 3325-3370

Hong Kong Senshim

Av. João Rosa Pires, Nº 761
Phone: 3324-3237

Restaurante China

Rua Pedro Celestino, Nº 750
Phone: 3382-5091

Mangiare Bene

Rua Sebastião Lima, Nº 528
Phone: 3382-1235

10.5 Regional Food

Fogo Caipira

Rua José Antônio, Nº 145
phone: 3324-1641

Peixaria Recanto Corumbaense

Av. Afonso Pena, Nº 488
phone: 3384-3489

Fogão de Minas

Rua Dom Aquino, Nº 2200
phone: 3325-5287

Restaurante Casa do Peixe

Rua João Rosa Pires, Nº 1030
phone: 3382-7121



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10.6 Fast Food

Águila Fast Food

Rua Arthur Jorge, Nº 2018
phone: 3321-4234

Bob's

Av. Afonso Pena, Nº 4909 - Shopping
phone: 3326-6271

Canil Lanches

Rua São Paulo, Nº 946
phone: 3351-5242

Fast Suco

Av. Afonso Pena, Nº 4324
phone: 33028-6921

Gugu Lanches

Av. Afonso Pena, Nº 1465
phone: 3321-2284

Mac Donald's

Av. Afonso Pena, Nº 4909 - Shopping
phone: 3025-2111

Mac Donald's Drive-Thru

Av. Afonso Pena, Nº 1620
phone: 3027-2100

Roasted Potato

Av. Afonso Pena, Nº 4909 - Shopping
phone: 3326-1962

Meat Bar - choperia e restaurante

Av. Ceará, Nº 1553
phone: 3326-5562

Thomaz Lanches

Rua 7 de setembro, Nº 744
phone: 3321-3676

10.7 Night Clubs

Tango Restaurante Dancing Bar

Rua Cândido Mariano, Nº 2181
phone: (67) 3028-4714

Club Garage

Rua 13 de Maio, Nº 2825
phone: (67) 3383-3930

Atualmente Chopperia

Rua Brilhante, Nº 2110
phone: (67) 3325-9897

Café Moinho

Rua Dr. Zerbini, Nº 646
phone: (67) 3326-6430

Tozen

Parque de Exposições Laucídio Coelho
phone: (67) 3325-4940



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10.8 Bars

Casablanca Bar e Choperia
Rua 15 de Novembro, 2.283
phone: 3042-4707

Curtiça
Av. Afonso Pena, Nº 4227
phone: 3306-1000

Park's Burguer Bar e Lanchonete
Rua Itacuru, Nº 140
phone: 3382-6829 / 3382-4260

Água Doce Cachaçaria
Rua José Antonio, Nº 194
phone: 3321-6978

Atualmente Chopperia
Rua Brilhante, Nº 2110
phone: 3325-9897

JK Cervejaria
Av. Afonso Pena, Nº 3951
phone: 3321-0047

Santo Mé
Av. Afonso Pena, Nº 3883
phone: 3325-2588

Mundial Snooker Bar
Rua Pedro Celestino, Nº 865
phone: 8412-0337

Café Mostarda
Av.: Afonso Pena, Nº 3.952
phone: 3382-8468 / 3026-8469

Péssimus Bar e Chopperia II
Av.: Afonso Pena, Nº 3.901
phone: 3383-6445

Pele Vermelha
Rua 7 de Setembro, Nº 2.116
phone: 384-1172

Cantina Mato Grosso - Fábrica de Chopp
Av.: Mato Grosso, Nº 5.017
phone: 3326-4576

Vermelho Grill
Av.: Afonso Pena, Nº 6.178
phone: 3326-7813

Vinte Um Bar e Lazer
Rua: São Vicente de Paulo, Nº 160
phone: 3029-2440

Errata:

A New Training Algorithm for Pattern Recognition Technique Based on Straight Line Segments
João Henrique Burckas Ribeiro and Ronaldo Fumio Hashimoto

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