

# WVC2019 Program (9-11 September 2019)

FEI, São Bernardo do Campo, São Paulo, Brazil

Local: T Building

## Monday (09/09)

**08:00-9:00**      **Check-in and On-Site Registration**

**09:00-10:00**    **Opening Ceremony**

**10:00-10:30**    **Coffee-break**

**10:30-12:00**    **Invited Speaker: Ruth Guinsburg**

(Title: Challenges in neonatal pain assessment: Is there a role for a computer eye?)

**12:00-14:00**    **Lunch**

**14:00-15:30**    **TS 1: Image/Face Processing and Biometrics**

**(Session Chair: Aparecido Marana)**

Variational Method Integrating Edge Detection and Smoothing in Digital Images

(Italo M. F. Santos, Abimael D. Loula, Gastão F. Miranda-Junior, Paulo S. S. Rodrigues and Gilson A. Giraldi)

Evaluation of Fine Tuning and Feature Extraction Methods in Biometric Periocular Recognition

(William Barcellos, Nicolas H. Shitara, Carolina T. Ferraz, Raissa T. V. Queiroga, Jose H. Saito and Adilson Gonzaga)

Facial Makeup Detection using the CMYK Color Model and Convolutional Neural Networks

(Marcello G. Bertacchi and Ismar F. Silveira)

Person Authentication based on the Difference of Deep Features Extracted from the Ocular and Face Regions

(Marcelo V. Vizoni and Aparecido N. Marana)

Atlas of Neonatal Face Images using Triangular Meshes

(Pedro A. S. S. Orona, Davi A. D. Fabbro, Tatiany M. Heiderich, Marina C. M. Barros, Rita C. X. Balda, Ruth Guinsburg and Carlos E. Thomaz)

Alignment, Scale and Skew Correction for Optical Mark Recognition Documents Based

(Erik M. Elias, Paulo M. Tasinaffo and Roberto Hirata-Junior)

**15:30-16:00**    **Coffee-break**

**16:00-18:00**    **Concurso de Teses e Dissertações em Visão Computacional**

**(Session Chair: Danilo Perico)**

Underwater scene matching with acoustic images using deep learning

(Pedro O. C. S. Ribeiro and Paulo L. J. Drews)

Active and descriptor learning techniques for image classification and retrieval

(Rafael S. Bressan, Pedro H. Bugatti and Priscila T. M. Saito)

Movimentos oculares e percepção facial humana: Análises holística, configural e por características locais de imagens frontais de faces

(Victor P. L. Varela and Carlos E. Thomaz)

Texture analysis using fractal descriptors estimated by the mutual interference of groups of colored pixels

(Andre Marasca, Dalcimar Casanova and Marcelo Teixeira)

Multi-class discriminant analysis based on support vector machine ensembles

(Tiene Filisbino and Gilson A. Giraldi)

An efficient hierarchical layered graph approach for multi-region segmentation

(Leissi M. C. Leon and Paulo A. V. Miranda)

Adaptive face tracking based on online learning

(Aasim Khurshid and Jacob Scharcanski)

Matching people in surveillance cameras network

(Raphael Prates and William R. Schwartz)

## Tuesday (10/09)

**09:00-10:00**      **Sponsor/Industrial Session**

**10:00-10:30**      **Coffee-break**

**10:30-12:00**      **Invited Speaker: Jaime S. Cardoso**  
(Title: Interpretable Machine Learning for Computer Vision)

**12:00-14:00**      **Lunch**

**14:00-15:30**      **TS 2: Visual Object Detection/Classification and Robotics**  
(Session Chair: Hemerson Pistori)

Citrus Tree Classification from UAV Images: Analysis and Experimental Results  
(Felipe K. Kobayashi, Andrea B. Mattos, Maysa M. G. Macedo and Bruno H. Gemignani)

Using Syntactic Methods and LSTM to the Recognition of Objects Visual Patterns  
(Gilberto Astolfi, Vanessa A. M. Weber, Adair S. Oliveira-Junior, Geazy V. Menezes, Nicolas A. S. Belete, Everton C. Tetila and Hemerson Pistori)

A Tool for Bridge Detection in Major Infrastructure Works using Satellite Images  
(Keiller Nogueira, Caio Cesar, Pedro H. T. Gama, Gabriel L. S. Machado, Jefersson A. Santos)

A Bio-Inspired Strategy for 3D Surface Reconstruction of Unstructured Scenes Applied to Medical Imagens  
(Murilo Bouzon, Guilherme Albertini, Gustavo Viana, Gabriel Medeiros and Paulo S. S. Rodrigues)

Multi-Camera System Analysis for Autonomous Navigation using End-to-End Deep Learning  
(José A. D. Amado, Jean Amaro, Iago P. Gomes, Denis Wolf and Fernando S. Osório)

Development of a Robotic Sensing System to Assist Visually Impaired People in their Task of Locomotion in Urban Environments  
(Diego R. Bruno, Marcelo H. Assis and Fernando S. Osório)

**15:30-16:00**      **Coffee-break**

**16:00-17:30**      **Poster Session (papers are listed at the end of this document)**  
(Session Chair: Luiz Neves)

**17:30-18:30**      **WVC Committee Meeting**

**19:00-22:00**      **Conference Dinner**

## Wednesday (11/09)

### **09:00-10:00**      **TS 3: Deep Learning in Computer Vision Applications** **(Session Chair: Reinaldo Bianchi)**

A Comparison Study of Deep Convolutional Neural Networks for the Classification of Brazilian Savannah Pollen Grains: Preliminary Results  
(Bruno Aristimunha, Felipe S. B. Borges, Ariadne B. Gonçalves and Hemerson Pistori)

Understanding Fully-Connected and Convolutional Layers in Unsupervised Learning using Face Images  
(Lucas F. Buzuti and Carlos E. Thomaz)

Real-time Ball Detection for Robocup Soccer using Convolutional Neural Networks  
(Lucas R. Abreu and Reinaldo A. C. Bianchi)

Automation of Waste Sorting with Deep Learning  
(João Sousa, Ana Rebelo and Jaime S. Cardoso)

### **10:00-10:30**      **Coffee-break**

### **10:30-12:00**      **Invited Speaker: Mário F. Campos** **(Title: TBA)**

### **12:00-14:00**      **Lunch**

### **14:00-15:30**      **TS 4: Deep Learning and Image/Video Analysis** **(Session Chair: André Backes)**

Coffee Leaf Rust Detection Using Convolutional Neural Network  
(Alexandre P. Marcos, Natan L. S. Rodovalho and André R. Backes)

Regression in Convolutional Neural Networks applied to Plant Leaf Counting  
(Neemias B. Silva and Wesley N. Gonçalves)

Pulmonary Nodule Classification with 3D Convolutional Neural Networks  
(Anthony E. A. Jatobá, Lucas L. Lima and Marcelo C. Oliveira)

Generative Adversarial Networks: A Renewal for Data Augmentation in Lung Nodule Classification  
(Bruno H. L. dos Anjos, Anthony E. A. Jatobá and Marcelo C. Oliveira)

Application of Superpixel to Identify Maggots and their Larval Stages  
(Lucas R. Lima, Eudamara B. S. Acosta, Ariadne B. Gonçalves, Marcio C. B. Pache, Diego A. Sant'ana, Celso S. Costa, Hemerson Pistori, Alessandro S. Ferreira and Carina Elisei)

Traffic Flow Classification using a Video Descriptor and a Convolutional Neural Network  
(Matheus V. L. Ribeiro and Jorge L. A. Samatelo)

### **15:30-16:00**      **Coffee-break**

### **16:00-17:00**      **TS 5: Cognitive and Intelligent Models Applied to CV Systems** **(Session Chair: Gilson Giraldi)**

A Multivariate Correlation Assessment of Chess Proficiency using Brain Signals  
(Laércio Silva-Junior and Carlos E. Thomaz)

Coffee Leaf Rust Detection using Genetic Algorithm  
(Alexandre P. Marcos, Natan L. S. Rodovalho and André R. Backes)

Optimum-Path Forest in the Classification of Defects in Bovine Leather  
(Willian P. Amorim, Felipe S. B. Borges, Marcio C. B. Pache, Marcelo H. Carvalho and Hemerson Pistori)

### **17:00-17:30**      **Awards Ceremony and Closing Session**

## Poster Session Papers

Automatic Detection of Erythrocytes in Fishes using Clustering Segmentation and Supervised Learning  
(Kleyton Leite, Felipe Silva, Bruno Crispim, Felipe Merey, Alexeia Barufatti and Willian Amorim)

Retinal Image Multimodal and Multitemporal Registration for a Multispot Laser Photocoagulation Device  
(Patricia Otoni and Evandro Rodrigues)

A New Approach for Image Classification Applying Reduction of Colored Keypoints  
(Marcelo Borth, Hemerson Pistori, Wesley Gonçalves, Diego Sant'Ana, Marcio Pache and Celso Costa)

Visual Perception of Pain in Neonatal Face Images  
(Lucas Carlini, Tatianny Heiderich, Marina Barros, Rita Balda, Ruth Guinsburg and Carlos Thomaz)

Alternative Signatures based on Randomized Neural Network for Texture Classification  
(Macário Leitão-Júnior and Jarbas Sá-Junior)

Automatic Ocular Alignment Evaluation for Strabismus Detection Using Index of Phylogenetic Diversity and Support Vector Machine  
(Thayane Simões, Johnatan Carvalho, João Almeida, Aristófanés Silva and Anselmo Paiva)

Determination of number of termite mounds supported by computational vision  
(Vanessa Weber, Fabricio Weber, Edilson Silveira, Gilberto Oliveira, Marcelo Folhes, Michel Oliveira and Hemerson Pistori)

Automatic Localization of the Carotid Wall in Ultrasound Imaging Based on Convolutional Neural Network  
(Eryk Cruz and Alexandre Silva)

Tracking and Re-identification of People Using Soft-Biometrics  
(Henrique Tavares, João Neto and Aparecido Marana)

Image Stitching Using Non-Extensive Statistics  
(Everton Achetta, Helmuth Filho, Lucas Laheras, Vinicius Santos, Paulo Rodrigues and Guilherme Wachs)

Use of Deep Learning for Firearms Detection in Images  
(Guilherme Cardoso, Patrick Ciarelli and Raquel Vassallo)

A Bio-Inspired Methodology for Digital Imaging Forensic Detection  
(Giovanni Oliveira, Guilherme Santos, Fernando Prado, Rafael Serikaku, Ricardo Santos, Guilherme Wachs and Paulo Rodrigues)

Image-based automatic counting of spotted fever-carrying tick larvae in vitro  
(Wesley Figueredo, Isabella Sousa, João Diniz, Aristófanés Silva, Anselmo Paiva and Livio Costa-Junior)

Classification of weed in soybean crops using unmanned aerial vehicle images  
(Nicolás Belete, Everton Tetila, Gilberto Astolfi and Hemerson Pistori)

Classification of brain lesions on magnetic resonance imaging using superpixel, PSO and convolutional neural network  
(Carolina Cipriano, Giovanni Silva, Jonisson Ferreira, Aristófanés Silva and Anselmo Paiva)

Visual Patterns in Reading Tasks: An Eye-Tracking Analysis of Meares-Irlen Syndrome Simulation Effects  
(Rafael Orsi, Joao Romera, Rodrigo Filev and Carlos Thomaz)

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## Map of the Campus

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