

25th Iberoamerican Congress on Pattern Recognition

CIARP Porto

10 - 13 May 2021 Porto, Portugal

Monday, 10th May 2021

08:45 - 09:00	Welcome message - 25th CIARP General Chairs
09:00 - 12:00	<p>Introduction to Phase congruence (Tutorial) Manuel G. Forero, Carlos A. Jacanamejoy Universidad de Ibagué</p>
12:00 - 14:00	Break
14:00 - 15:30	<p>Symposium on Pattern Recognition, Computer Vision and Deep Learning for Medical Image Processing and Medical Robot Vision Chair: Eduardo José Bayro-Corrochano Centro de Investigación y de Estudios Avanzados del I.P.N. CINVESTAV</p> <p>14:00 - 14:15: Predicting the use of Invasive Mechanical Ventilation in ICU COVID-19 patients. Diana S. Serrano</p> <p>14:15 - 14:30: A Coarse to Fine Corneal Ulcer Segmentation Approach using U-net and DexiNed in Chain. Helano Miguel, Jefferson Sousa, Anselmo Paiva, Daniel Leite, João M Tavares, Luis Henrique S. Vogado, Rodrigo Veras.</p> <p>14:30 - 14:45: Replacing data augmentation with rotation-equivariant CNNs in image-based classification of oral cancer. Karl Bengtsson Bernander.</p> <p>14:45 - 15:00: A Multitasking Learning Framework for Dermoscopic Image Analysis. Lidia Talavera-Martínez, Manuel González-Hidalgo, Pedro Bibiloni.</p> <p>15:00 - 15:15: An Evaluation of Segmentation Techniques for COVID-19 Identification in Chest X-Ray Images. Arthur Rodrigues Batista, Lucas Teixeira, Diego Bertolini, Rodolfo Miranda Pereira, Luiz Felliipe Machi Perreira, Yandre Costa.</p> <p>15:15 - 15:30: A Study on Annotation Efficient Learning Methods for Segmentation in Prostate Histopathological Images. Pedro Miguel Vendas da Costa, Aurélio Campilho, Jaime Cardoso.</p>
15:30 - 16:00	Break
16:00 - 17:00	<p>Keynote speaker: Alejandro Frangi University of Leeds, United Kingdom Large scale medical image analytics – progress, challenges and opportunities</p> <p><i>Chairs: João Manuel R.S. Tavares and João Paulo Papa</i></p>

Tuesday, 11th May 2021

09:00 - 10:00	<p align="center">Keynote speaker: Mário A. T. Figueiredo Instituto Superior Técnico, Portugal Dealing with correlated variables in regression and classification</p> <p align="center"><i>Chairs: João Manuel R.S. Tavares and João Paulo Papa</i></p>
10:00 - 10:45	<p align="center">Technical Session 1 - Natural Language Processing Chair: João Paulo Papa <i>São Paulo State University, Brazil</i></p> <p>10:00 - 10:15: Data-Augmented Emoji Approach to Sentiment Classification of Tweets. <i>Tiago Barros, Helio Pedrini, Zanoni Dias.</i></p> <p>10:15 - 10:30: Detecting Hate Speech in Cross-Lingual and Multi-Lingual Settings Using Language Agnostic Representations. <i>Sebastian Rodriguez Ortiz, Héctor Gabriel Allende.</i></p> <p>10:30 - 10:45: Prediction of Perception of Security Using Social Media Content. <i>Cristian Pulido, Luísa Fernanda Chaparro, Jorge Rudas, Jorge Victorino, Camilo Estrada, Luz Angela Narvaez, Francisco Gómez Jaramillo.</i></p>
10:45 - 11:15	<p align="center">Break</p>
11:15 - 12:00	<p align="center">Technical Session 2 - Metaheuristics Chair: Leandro Aparecido Passos Júnior <i>São Paulo State University, Brazil</i></p> <p>11:15 - 11:30: Fine-Tuning Dropout Regularization in Energy-Based Deep Learning. <i>Gustavo Henrique de Rosa, Mateus Roder, João Paulo Papa.</i></p> <p>11:30 - 11:45: Enhancing Hyper-To-Real Space Projections Through Euclidean Norm Meta-Heuristic Optimization. <i>Luiz Carlos Felix Ribeiro, Mateus Roder, Gustavo Henrique de Rosa, Leandro Aparecido Passos Júnior, João Paulo Papa.</i></p> <p>11:45 - 12:00: Using Particle Swarm Optimization With Gradient Descent For Parameter Learning In Convolutional Neural Networks. <i>Steven Wessels, Dustin T. van der Haar.</i></p>
12:00 - 14:00	<p align="center">Break</p>
14:00 - 14:30	<p align="center">Technical Session 3 - Image Segmentation Chair: João Paulo Papa <i>São Paulo State University, Brazil</i></p> <p>14:00 - 14:15: Object Delineation by Iterative Dynamic Trees. <i>David Aparco Cardenas, Pedro J. de Rezende, Alexandre Xavier Falcão.</i></p> <p>14:15 - 14:30: Low-Cost Domain Adaptation for Crop and Weed Segmentation. <i>Gustavo J. Q. Vasconcelos, Thiago Vallin Spina, Helio Pedrini.</i></p>
14:30 - 15:30	<p align="center">Technical Session 4 - Databases Chair: Leandro Aparecido Passos Júnior <i>São Paulo State University, Brazil</i></p> <p>14:30 - 14:45: MIGMA: The Facial Emotion Image Dataset for Human Expression Recognition. <i>Jhennifer Cristine Matias, Tobias R. Müller, Felipe Zago Canal, Gustavo Gino Scotton, Antonio Carlos Sobieranski, Antonio Reis de Sá-Júnior, Eliane Pozzebon.</i></p> <p>14:45 - 15:00: Construction of Brazilian Regulatory Traffic Sign Recognition Dataset. <i>Rafael Andrade da Silva, Bruno Prado, Leonardo Matos, Flávio Santos, Paulo Novais, Cleber Zanchettin.</i></p> <p>15:00 - 15:15: Japanese Kana and Brazilian Portuguese manuscript database. <i>Luiz Fellipe Pereira, Fabio Pinhelli, Edson Cizeski, Flávio Uber, Diego Bertolini, Yandre Costa.</i></p> <p>15:15 - 15:30: Skelibras: a large 2d skeleton dataset of dynamic brazilian signs. <i>Lucas Amaral, Victor Ferraz, Tiago Vieira, Thales Vieira.</i></p>
15:30 - 16:00	<p align="center">Break</p>
16:00 - 17:00	<p align="center">Keynote speaker: Leo Joskowicz The Hebrew University of Jerusalem, Israel Bootstrapping Deep Learning Medical Image Analysis in Radiology</p> <p align="center"><i>Chairs: João Manuel R.S. Tavares and João Paulo Papa</i></p>

Wednesday, 12th May 2021

09:00 - 10:00	<p>Keynote speaker: M. Emre Celebi University of Central Arkansas, USA Two Decades of Research in Dermoscopy Image Analysis <i>Chairs: João Manuel R.S. Tavares and João Paulo Papa</i></p>
10:00 - 10:45	<p>Technical Session 5 - Deep Learning I Chair: João Paulo Papa <i>São Paulo State University, Brazil</i></p> <p>10:00 - 10:15: Cricket Scene Analysis using the RetinaNet architecture. <i>Tevin Moodley, Dustin T. van der Haar.</i></p> <p>10:15 - 10:30: Texture-Based Image Transformations for Improved Deep Learning Classification. <i>Tomas Maitner, Buda Bajic, Jurgen Herp.</i></p> <p>10:30 - 10:45: Towards Precise Recognition of Pollen Bearing Bees by Convolutional Neural Networks. <i>Fernando C. Monteiro, José Rufino.</i></p>
10:45 - 11:15	Break
11:15 - 12:15	<p>Technical Session 6 - Deep Learning II Chair: Jurandy Gomes de Almeida Júnior <i>Federal University of São Paulo, Brazil</i></p> <p>11:15 - 11:30: Web application attacks detection using deep learning. <i>Nicolas Montes, Gustavo Betarte, Alvaro Pardo, Rodrigo Martínez.</i></p> <p>11:30 - 11:45: Less is More: Accelerating Faster Neural Networks Straight from JPEG. <i>Samuel Felipe dos Santos, Jurandy Almeida.</i></p> <p>11:45 - 12:00: Optimizing Person Re-Identification using Generated Attention Masks. <i>Leonardo Gomes Capozzi, João Ribeiro Pinto, Jaime S. Cardoso, Ana Rebelo.</i></p> <p>12:00 - 12:15: Self-Supervised Bernoulli Autoencoders for Semi-Supervised Hashing. <i>Antonio Macaluso, Stefano Lodi, Claudio Sartori, Ricardo Nanculef, Francisco Mena.</i></p>
12:15 - 14:00	Break
14:00 - 14:45	<p>Technical Session 7 - Explainable Artificial Intelligence Chair: Luis Antonio de Souza Júnior <i>Federal University of São Carlos, Brazil</i></p> <p>14:00 - 14:15: Interpretable Concept Drift. <i>João Guilherme Mattos, Alex Laier, Thuener Silva, Hélio Lopes.</i></p> <p>14:15 - 14:30: Interpreting a Conditional Generative Adversarial Network Model for Crime Prediction. <i>Juan S. Moreno, Oscar Gomez, Mateo Dulce, Alvaro Riascos, Christian Urcuqui.</i></p> <p>14:30 - 14:45: Interpreting Decision Patterns in Financial Applications. <i>Tiago Faria, Catarina Silva, Bernardete Ribeiro.</i></p>
14:45 - 15:30	<p>Technical Session 8 - Image Processing Chair: Danilo Samuel Jodas <i>São Paulo State University, Brazil</i></p> <p>14:45 - 15:00: Denoising Speckle Noise of SAR Images with Stochastic Distances by the BURR Type-III and Ratio of Rayleigh Distributions. <i>Pedro A. Penna, Nelson D. Mascarenhas.</i></p> <p>15:00 - 15:15: Metal Artifact Reduction based on color mapping and inpainting techniques. <i>Rafaela Souza Alcântara, Antonio L. Apolinario, Perfilino Eugênio Ferreira Júnior, Gilson Giraldi, Iêda Rebello, Joaquim Dultra</i></p> <p>15:15 - 15:30: New Improvement in Obtaining Monogenic Phase Congruence. <i>Carlos A. Jacanamejoy, Manuel G. Forero.</i></p>
15:30 - 16:00	Break
16:00 - 17:00	Steering Committee Meeting

Thursday, 13th May 2021

09:00 - 10:00	<p>Technical Session 9 - Machine Learning Chair: João Paulo Papa <i>São Paulo State University, Brazil</i></p> <p>09:00 - 09:15: Evaluating the construction of feature descriptors in the performance of the image data stream classification. Mateus Curcino de Lima, Maria Camila N. Barioni, Alex Abreu.</p> <p>09:15 - 09:30: Clustering-based partitioning of water distribution networks for leak zone location. Marlon J. Ares-Milián, Marcos Quiñones-Grueiro, Carlos Cruz, Orestes Llanes-Santiago.</p> <p>09:30 - 09:45: Bias Quantification for Protected Features in Pattern Classification Problems. Lisa Koutsoviti Koumeri, Gonzalo Napoles.</p> <p>09:45 - 10:00: Regional Commodities Price Volatility Assessment Using Self-Driven Recurrent Networks. Pablo Negri, Maria Priscila Ramos, Martin Breittkopf.</p>
10:00 - 10:45	<p>Technical Session 10 - Computer Vision I Chair: Fabricio M. Lopes <i>Federal University of Technology – Paraná, Brazil</i></p> <p>10:00 - 10:15: Generalized conics with the sharp corners. Aysylu Gabdulkhakova, Walter G. Kropatsch.</p> <p>10:15 - 10:30: Automatic Face Mask Detection using a Hide and Seek Algorithm. Soumya S. Kundu, Pratyaksh Bhalla, Deepanjali S., G. Vadivu, Sapdo Utomo.</p> <p>10:30 - 10:45: A feature extraction approach based on LBP operator and complex networks for face recognition. João Piotto, Fabricio M. Lopes.</p>
10:45 - 11:15	Break
11:15 - 12:15	<p>Technical Session 11 - Machine Learning II Chair: Vahid Haji Hajihashemi <i>University of Porto, Portugal</i></p> <p>11:15 - 11:30: Semi-supervised deep learning based on label propagation in a 2D embedded space. Bárbara C. Benato, Jancarlo Gomes, Alexandru Telea, Alexandre Xavier Falcão.</p> <p>11:30 - 11:45: Less is More: Iterative Creation of Matching-Graphs -- Finding Relevant Substructures in Graph Sets. Mathias C. Fuchs, Kaspar Riesen.</p> <p>11:45 - 12:00: Semi-Autogeonous (SAG) Mill Overload Forecasting Framework. Rodrigo Hermosilla, Héctor Allende, Carlos Valle, Erich Lucic, Pablo Espinoza.</p> <p>12:00 - 12:15: Novel time-frequency based scheme for detecting sound events from sound background in audio segments. Vahid Hajihashemi, Abdorreza Alavi gharahbagh, Hugo Oliveira, Pedro Cruz, João M.S. Tavares.</p>
12:15 - 14:00	Break
14:00 - 14:45	<p>Keynote speaker: Alexandre Falcão <i>University of Campinas, Brazil</i> The Role of Human-Machine Interaction in the Design of Convolutional Neural Networks <i>Chairs: João Manuel R.S. Tavares and João Paulo Papa</i></p>
14:45 - 15:45	<p>Technical Session 12 - Computer Vision II Chair: Marcos Cleison Silva Santana <i>São Paulo State University, Brazil</i></p> <p>14:45 - 15:00: End-to-End Deep Sketch-to-Photo Matching Enforcing Realistic Photo Generation. Leonardo Gomes Capozzi, Jaime S. Cardoso, Ana Rebelo, João Ribeiro Pinto.</p> <p>15:00 - 15:15: Forensic analysis of tampered digital photos. Sara Ferreira, Mário Antunes, Manuel Correia.</p> <p>15:15 - 15:30: COVID-19 Lung CT Images Recognition: A Feature-Based Approach. Chiara Losquadro, Luca Pallotta, Gaetano Giunta.</p> <p>15:30 - 15:45: A Topologically Consistent Color Digital Image Representation by a Single Tree, Díaz-del-Río-Fernando, Sánchez-Cuevas, Pablo; Molina, Helena; Real Jurado, P.</p>
15:30 - 16:00	Break
16:00 - 17:00	Closing Ceremony