

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>Predicting the use of Invasive Mechanical Ventilation in ICU COVID-19 patients. Diana S. Serrano</p> <p>A Coarse to Fine Corneal Ulcer Segmentation Approach using U-net and DexiNed in Chain. Helano Miguel Portela, Jefferson Sousa, Anselmo Paiva, Daniel Leite, Joao M Tavares, Luis Henrique S. Vogado, Rodrigo Veras.</p> <p>Replacing data augmentation with rotation-equivariant CNNs in image-based classification of oral cancer. Karl Bengtsson Bernander.</p> <p>A Multitasking Learning Framework for Dermoscopic Image Analysis. Lidia Talavera-Martínez, Manuel González-Hidalgo, Pedro Bibiloni.</p> <p>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 Felipe Machi Perreira, Yandre Costa.</p> <p>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>Chairs: João Manuel R.S. Tavares and João Paulo Papa</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>Data-Augmented Emoji Approach to Sentiment Classification of Tweets. <i>Tiago Barros, Helio Pedrini, Zaroni Dias.</i></p> <p>Detecting Hate Speech in Cross-Lingual and Multi-Lingual Settings Using Language Agnostic Representations. <i>Sebastian Rodriguez Ortiz, Héctor Gabriel Allende.</i></p> <p>Prediction of Perception of Security Using Social Media Content. <i>Cristian Pulido, Luisa 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>Fine-Tuning Dropout Regularization in Energy-Based Deep Learning. <i>Gustavo Henrique de Rosa, Mateus Roder, João Paulo Papa.</i></p> <p>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>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>Object Delineation by Iterative Dynamic Trees. <i>David Aparco Cardenas, Pedro J. de Rezende, Alexandre Xavier Falcão.</i></p> <p>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>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>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>Japanese Kana and Brazilian Portuguese manuscript database. <i>Luiz Fellipe Pereira, Fabio Pinhelli, Edson Cizeski, Flávio Uber, Diego Bertolini, Yandre Costa.</i></p> <p>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 align="center">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 align="center">Technical Session 5 - Deep Learning I Chair: João Paulo Papa <i>São Paulo State University, Brazil</i> Cricket Scene Analysis using the RetinaNet architecture. <i>Tevin Moodley, Dustin T. van der Haar.</i></p> <p>Texture-Based Image Transformations for Improved Deep Learning Classification. <i>Tomas Maitner, Buda Bajic, Jurgen Herp.</i></p> <p>Towards Precise Recognition of Pollen Bearing Bees by Convolutional Neural Networks. <i>Fernando C. Monteiro, José Rufino.</i></p>
10:45 - 11:15	<p align="center">Break</p>
11:15 - 12:15	<p align="center">Technical Session 6 - Deep Learning II Chair: Jurandy Gomes de Almeida Júnior <i>Federal University of São Paulo, Brazil</i></p> <p>Web application attacks detection using deep learning. <i>Nicolas Montes, Gustavo Betarte, Alvaro Pardo, Rodrigo Martínez.</i></p> <p>Less is More: Accelerating Faster Neural Networks Straight from JPEG. <i>Samuel Felipe dos Santos, Jurandy Almeida.</i></p> <p>Optimizing Person Re-Identification using Generated Attention Masks. <i>Leonardo Gomes Capozzi, João Ribeiro Pinto, Jaime S. Cardoso, Ana Rebelo.</i></p> <p>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	<p align="center">Break</p>
14:00 - 14:45	<p align="center">Technical Session 7 - Explainable Artificial Intelligence Chair: Luis Antonio de Souza Júnior <i>Federal University of São Carlos, Brazil</i></p> <p>Interpretable Concept Drift. <i>João Guilherme Mattos, Alex Laier, Thuener Silva, Hélio Lopes.</i></p> <p>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>Interpreting Decision Patterns in Financial Applications. <i>Tiago Faria, Catarina Silva, Bernardete Ribeiro.</i></p>
14:45 - 15:30	<p align="center">Technical Session 8 - Image Processing Chair: Danilo Samuel Jodas <i>São Paulo State University, Brazil</i></p> <p>Denosing 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>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 Dutra</i></p> <p>New Improvement in Obtaining Monogenic Phase Congruence. <i>Carlos A. Jacanamejoy, Manuel G. Forero.</i></p>
15:30 - 16:00	<p align="center">Break</p>
16:00 - 17:00	<p align="center">Steering Committee Meeting</p>

Thursday, 13th May 2021

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