

Tracks

Tuesday - October 14

10:00 am - 11:20 am

Medical And Biomedical Imaging I: Brain Analysis

Sparse bayesian framework applied to 3D super-resolution reconstruction

Laura C. Becerra, Nelson Velasco Toledo and Eduardo Romero Castro
Universidad Nacional de Colombia and Universidad Militar Nueva Granada. Bogotá, Colombia.

Discovering anatomical patterns with pathological meaning by clustering

Juan Leon, Andrea Pulido and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Morphometry Based Comparison of Relevant Brain Regions for Alzheimer's

Diana L. Giraldo, Juan D. García-Arteaga and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Multivariate analysis of eigenvalues and eigenvectors in tensor based morphometry

Vidya Rajagopalan, Armin Schwartzman, Xue Hua, Alex Leow, Paul Thompson and Natasha Lepore
Children's Hospital Los Angeles.

Effectiveness of morphological and spectral heartbeat characterization on arrhythmia clustering for Holter recordings

Cristian Castro-Hoyos, Diego Hernán Peluffo-Ordoñez, Jose Luis Rodríguez-Sotelo and Germán Castellanos-Domínguez
Universidad Nacional de Colombia, Universidad Cooperativa de Colombia and Universidad Autónoma de Manizales.

Extracting stationary segments from non-stationary synthetic and cardiac signals

Mara G. Rodríguez, Carlos A. Ledezma, Gilberto Perpiñan, Sara Wong and Miguel Altuve
Universidad Simón Bolívar and Universidad Católica Andres Bello. Caracas, Venezuela.

Automatic detection of Wheezes by evaluation of multiple acoustic feature extraction methods and C-weighted SVM

German D. Sosa, Angel Cruz-Roa and Fabio A. González
Universidad Nacional de Colombia. Bogotá, Colombia.

Artificial balance: 10-year experience with an implantable vestibular prosthesis in humans

Angélica Pérez Fornos, Nils Guinand, Raymond Van De Berg, Maurizio Ranieri, Samuel Cavuscens.
Geneva University Hospital. Geneva, Switzerland.

2:00 pm - 3:20 pm

Analysis Of Medical Procedures Through Imaging I: Cancer

A Comparison of Multiparametric MRI Modalities to Discriminate Prostate Cancer Tumours

R. E. Gutiérrez-Carvajal, A. Fargeas, K. Gnep, Y. Rolland, O. Acosta and R. De Crevoiser
Université de Rennes 1, INSERM and Centre Eugène Marquis. Rennes, France.

An automatic multi-atlas prostate segmentation in MRI using a multiscale representation and a label fusion strategy

Charlens Álvarez, Fabio Martínez and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Segmentation of prostate from CT scans using a combined voxel random forests classification with spherical harmonics regularization

F. Commandeur, O. Acosta, A. Simon, J. D. Ospina Arango, J. L. Dillenseger, R. Mathieu, P. Haigron and R. de Crevoisier
Université de Rennes 1, INSERM, CHU Pontchaillou and Centre Eugène Marquis. Rennes, France.

Experimental assessment of an automatic breast density classification algorithm based on principal component analysis applied to histogram data

Antonio Angulo, Jose Ferrer, Joseph Pinto, Roberto Lavarello, Jorge Guerrero and Benjamín Castaneda
Pontificia Universidad Católica del Perú, Medical Innovation and Technology, and Oncosalud. Lima, Perú.

A statistical model for characterization of histopathology images

Pablo Alvarez, Guatizalema Castro, German Corredor and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Digital image analysis of striated skeletal muscle tissue injury during reperfusion after induced ischemia

Doris Haydee Rosero Salazar and Liliana Salazar Monsalve.
Universidad del Valle. Cali, Colombia.

A comparative evaluation of supervised and unsupervised representation learning approaches for anaplastic medulloblastoma differentiation

Angel Cruz-Roa, John Arevalo, Ajay Basavanhally, Anant Madabhushi and Fabio González
Universidad Nacional de Colombia and Case Western Reserve University.

Image superresolution of cytology images using wavelet based patch search

Carlos Vargas, Juan D. García-Arteaga and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Digital Pathology

Tracks

Wednesday - October 15

10:00 am - 11:20 am

Medical And Biomedical Imaging II: Heart

Segment Clustering Methodology for Unsupervised Holter Recordings Analysis

Jose Luis Rodríguez-Sotelo, Diego Peluffo-Ordoñez and German Castellanos Dominguez
Universidad Autónoma de Manizales, Universidad Cooperativa de Colombia and Universidad Nacional de Colombia.

A level set approach for Left Ventricle detection in CT images using shape segmentation and optical flow

Jorge Brieva, Ernesto Moya-Albor and Boris Escalante-Ramírez
Universidad Panamericana and Universidad Nacional Autónoma de México. Ciudad de México, México.

SVM-based classification of LV wall motion in cardiac MRI with the assessment of STE

Juan Mantilla, Mireille Garreaua, Jean-Jacques Bellanger and Jose Luis Paredes
INSERM, Université de Rennes 1, Universidad Nacional Experimental del Táchira and Universidad de Los Andes.

A stethoscope with wavelet separation of cardiac and respiratory sounds for real time telemedicine implemented on field-programmable gate array

Víctor Manuel Castro, Nestor Andrés Muñoz and Antonio José Salazar
Universidad de los Andes and Universidad Santo Tomás de Aquino. Bogotá, Colombia.

Imaging Of Biosignals I: Functional Brain

Dynamic functional network connectivity using distance correlation

Jorge Rudas, Javier Guaje, Athena Demertz, Lizette Heine, Luaba Tshibanda, Andrea Soddu, Steven Laureys and Francisco Gomez
Universidad Nacional de Colombia, University of Liège, University of Western Ontario and Universidad Central de Colombia.

Influence of the segmentation on the characterization of cerebral networks of structural damage for patients with disorders of consciousness

Darwin Martínez, Jamuna J. Mahalingam, Andrea Soddu, Hugo Franco, Natasha Lepore, Steven Laureys, Francisco Gomez
Universidad Central de Colombia, University of Southern California, University of Western Ontario and University of Liège.

Thalamic volume as a biomarker for disorders of consciousness

M. Rubaux, J. J. Mahalingam, F. Gomez, M. Nelson, A. Vanhaudenhuyse, M. Bruno, O. Gosseries, S. Laureys, A. Soddu and N. Lepore
Children's Hospital Los Angeles, University Hospital of Lige, Universidad Central de Colombia and University of Western Ontario.

A T1 and DTI fused 3D Corpus Callosum analysis in pre- vs. post-season contact sports players

Yi Lao, Meng Law, Jie Shi, Niharika Gajawelli, Lauren Haas, Yalin Wang and Natasha Lepore
Children's Hospital Los Angeles, University of Southern California and Arizona State University.

2:00 pm - 3:20 pm

Medical And Biomedical Imaging III: Registration

Simultaneous registration of structural and diffusion weighed images using the full DTI information

Hélène Nadeau, Yaqiong Chai, Paul Thompson and Natasha Leporé
Dawson College, Children's Hospital of Los Angeles and University of Southern California.

Non-Rigid Image Registration under Non-Deterministic Deformation Bounds

Qian Ge, Namita Lokare and Edgar Lobaton
North Carolina State University. Raleigh, USA.

An overview of alignment issues in in-vivo image guided proton therapy

Benoit Macq and Jonathan Orban de Xivry
Université Catholique de Louvain. Belgique.

Registration of Radiological Heart Images Using SURF Points and Matching

Braian Moreno, Angélica Atehortúa, German Corredor and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Towards ontology personalization to enrich social conversations on AAC systems

Daniela Mancilla, Sebastián Sastoque and Marcela Iregui
Universidad Militar Nueva Granada. Bogotá, Colombia.

Towards incorporating affective computing to virtual rehabilitation; surrogating attributed attention from posture for boosting therapy adaptation

Jesús J. Rivas, Patrick Heyer, Felipe Orihuela-Espina and Luis Enrique Sucar
Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE). Puebla, México.

An open access thyroid ultrasound-image database

Lina Pedraza, Carlos Vargas, Fabián Narváez, Oscar Durán, Emma Muñoz and Eduardo Romero
Universidad Nacional de Colombia and IDIME - Instituto de Diagnóstico Médico. Bogotá, Colombia.

Pulse Oximeter for Cyclist in Smartphone

L. Martins, O. Gaidos and I. dos Santos
University of Brasília. Brasília D.F., Brazil.

E-Health And Telemedicine I

Tracks

Thursday - October 16

10:00 am - 11:20 am

E-Health And Telemedicine II:

Software Development

Imaging Of Biosignals II:

Segmentation

Analysis Of Medical Procedures Through Imaging II:

Movement

Biomedical Image Analysis I:

Image Enhancement

Low-cost uncalibrated video-based tool for tridimensional reconstruction oriented to assessment of chronic wounds
Leslie Casas, Sylvie Treuillet, Braulio Valencia, Alejandro Llanos and Benjamín Castañeda
Pontificia Universidad Católica del Perú, Université d'Orléans and Universidad Peruana Cayetano Heredia.

SemVisM: Semantic Visualizer for Medical Image
Luis Landaeta, Alexandra La Cruz, Alexander Baranya and María-Esther Vidal
Universidad Simón Bolívar. Caracas, Venezuela.

TractRender: a new generalized 3D medical image visualization and output platform
Darryl H. Hwang, Sinchai Tsao, Niharika Gajawelli, Meng Law and Natasha Leporé
University of Southern California and Children's Hospital Los Angeles. Los Angeles, USA.

A Matlab user interface for the statistically assisted fluid registration algorithm and tensor-based morphometry
Fernando Yepes-Calderon, Caroline Brun, Nishita Sant, Paul Thompson and Natasha Leporé
University of Southern California and Children's Hospital Los Angeles. Los Angeles, USA.

Improved edge detection for object segmentation in ultrasound images using Active Shape Models
F. Arámbula Cosío, Héctor G. Acosta and Edgar Conde
Universidad Nacional Autónoma de México and Universidad Veracruzana.

Segmentation of humeral head axial proton density weighted shoulder MR images
Aysun Sezer, Hasan Basri Sezer and Songul Albayrak
Yildiz Technical University and Sisli Hamidiye Etfl Training and Research Hospital. Istanbul, Turkey.

Watermarked cardiac CT image segmentation using deformable models and the Hermite transform
Boris Escalante-Ramírez and Jorge Brieva
Universidad Nacional Autónoma de México and Universidad Panamericana. Ciudad de México, México.

Stent Segmentation in IOCT-TD images Using Gradient Combination and Mathematical Morphology
Diego Armando Cardona Cárdenas, Matheus Cardoso Moraes and Sérgio Shiguemi Furui
University of São Paulo. São Paulo, Brazil.

2:00 pm - 3:20 pm

Characterizing the eye trajectory during the gait towards Parkinson stage identification
David Trujillo, Fabio Martínez and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Automatic Characterization of the Parkinson Disease by Classifying the ipsilateral coordination and spatiotemporal gait patterns
Fernanda Sarmiento, Fabio Martínez and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

Simulation of parkinsonian gait by fusing trunk learned patterns and a lower limb first order model
Luisa Cárdenas, Fabio Martínez and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

A 3D endoscopy reconstruction as a saliency map for analysis of polyp shapes
Josue Ruano, Fabio Martínez, Martín Gómez and Eduardo Romero
Universidad Nacional de Colombia. Bogotá, Colombia.

MRI Fast high resolution reconstruction in multi-slice and multi-view cMRI
Nelson Velasco Toledo and Eduardo Romero
Universidad Nacional de Colombia and Universidad Militar Nueva Granada. Bogotá, Colombia.

Programmable Diffractive Optical Elements for Extending the Depth of Focus in Ophthalmic application
Lenny A. Romero, María S. Millán, Zbigniew Jaroszewicz and Andrzej Kołodziejczyk
Universidad Tecnológica de Bolívar, Universitat Politècnica de Catalunya and Warsaw University of Technology

Improving the blind restoration of retinal images by means of point-spread-function estimation assessment
Andrés G. Marrugo, María S. Millán, Michal Sorel, Jan Kotera and Filip Šroubek
Universidad Tecnológica de Bolívar, Universitat Politècnica de Catalunya and Academy of Sciences Pod Vodarenskou vezi 4.

Speckle reduction in echocardiography by temporal compounding and anisotropic diffusion filtering
Jader Giraldo-Guzmán, Oscar Porto-Solano, Alberto Cadena-Bonfanti and Sonia H. Contreras-Ortiz
Universidad Tecnológica de Bolívar and Clínica de la Costa. Colombia.