

Chair: Jorge Brieva Room: Auditorium	<b>Registration &amp; Opening</b>		8:00
Chair: Natasha Leporé Room: Auditorium	<b>Keynote Speaker: Dr. Celia Cintas</b> <b>Talk: "Towards Fairness &amp; Robustness in Dermatology Machine Learning Applications"</b>		9:30
<b>Coffee break</b>			10:30
<b>1. Brain Imaging I</b> Chair: Ricardo Gutierrez Room: Auditorium		<b>2. Global Health</b> Chair: Celia Cintas Room: R37	
Machine learning-based classification of children affected by malnutrition using multimodal MRI and DTI brain images Presenter: Daniel Colin	Detection of Malaria Parasites in Thick Blood Smear Images using Shallow Neural Networks and Digital Image Processing Techniques Presenter: Cicero Costa		
Self-calibrated convolution towards glioma segmentation Presenter: Felipe Crispim da Rocha	Plasmodium Life Cycle-Stage Classification on Thick Blood Smear Microscopy Images using Deep Learning: A Contribution to Malaria Diagnosis Presenter: Cicero Costa		
Comparative Skull Stripping Techniques on Pediatric Magnetic Resonance Presenter: Anik Das	Moment-alignment domain adaptation in the few-shot and low-resource context Presenter: Lauren Erdman		
Multi-Site Statistical Mapping of Along-Tract Microstructural Abnormalities in Bipolar Disorder with Diffusion MRI Tractometry* Presenter: Leila Nabulsi	Comparison of interpolation techniques for 3D freehand ultrasound: A phantom experiment Presenter: Danitza Bermejo		
Unsupervised harmonization of brain MRI using 3D CycleGANs and its effect on brain age prediction* Presenter: Dheeraj Komandur	An Ultrasound Transducer Tracking System Enhanced by Artificial Intelligence: A Camera-Based Approach Presenter: Esteban Avilés		
	A transfer learning applied for Malaria disease detection on blood smear images Presenter: Luis Alejandro Guillén Álvarez,		
<b>Lunch</b>			12:30
Chair: Pamela Guevara Room: Auditorium	<b>Keynote Speaker: Dr. Christopher Woods</b> <b>Talk: "Service, research and training in support of the national and international bioimaging community"</b>		14:00
<b>Coffee break</b>			15:00
<b>Special sessions</b>			15:30
Chair: Fernando Arámbula Room: Auditorium	<b>SESSION 1: Program for early detection of gastric cancer in Nariño.</b> <b>Speaker: Dr. Eduardo Romero</b>		
	<b>SESSION 2: Industry-Research Linkage: Mexican Experiences and Challenges</b> <b>Speakers: Dr. Boris Escalante, Dr. Fabián Torres, and MSc. Francisco Rodriguez</b>		16:00
<b>3. Digital Pathology</b> Chair: Christopher Wood Room: Auditorium		<b>4. Representation based Biosignal Analysis</b> Chair: Ernesto Moya Room: R37	
Finding the best channel for tissue segmentation in whole-slide images Presenter: Adrien Foucart	Brain-Computer Interfaces for Imagined Phoneme Speech Recognition Using ITC framework Presenter: Diego Lopez		
Assessing Local Descriptors for Feature-Based Registration of Whole-Slide Images Presenter: Arthur Elskens	Generative Data by $\beta$ -Variational Autoencoders Help Build Stronger Classifiers: ECG Use Case Presenter: Yousef Nademi		
An automatic stratification of metaplasia in gastric histopathology images Presenter: Jerson Mauricio Caviedes	Epileptic Seizure Classification using Multidimensional EEG Spectrograms Presenter: Syed Muhammad		
Estimation of the Survival Time of Ovarian Serous Carcinoma by approximating a Tumor Microenvironment Presenter: Eileen Montoya	sEMG based hand gesture recognition for rehabilitation prosthetics based on machine learning methods Presenter: Andrés Escobedo		
A comparative analysis between fully convolutional networks and U-Net for semantic segmentation of histopathology breast cancer images Presenter: Johan Sneider Albarracín	Gaussian Processes Spectral Kernels Recover Features of Metastable Oscillatory Modes in Human-Connectome-Coupled Model of the Brain* Presenter: Pamela Guevara		
Room: Anexo 507	<b>Welcome Reception</b>		18:30
			19:30

\* Virtual presentation

		<b>Registration</b>	8:30
Chair: Leticia Rittner Room: Auditorium	<b>Keynote Speaker: Dr. Mariam Aboian</b> Talk: "Translation of Artificial Intelligence into Radiology Clinical Practice"		9:00
		<b>Coffee break</b>	10:00
<b>5. Cancer Imaging</b> Chair: Ricardo Gutierrez Room: Auditorium		<b>6. Heart and Lung</b> Chair: Alejandro López Room: R37	
Automatic Localization of Pancreatic Tumoral Regions in Whole Sequences of Echoendoscopy Procedures Presenter: Maria Jaramillo	Correlation of intraventricular blood patterns with the Ejection Fraction in ultrasound images Presenter: Andres Felipe Carrera		
Discriminant Radiomic Feature Selection for PD-L1 Prediction in Clear Cell Renal Cell Carcinoma Presenter: Darryl Hwang	Automatic estimation of the ejection fraction from diastole and systole ultrasound images by a simplified end-to-end U-Net neural network Presenter: Leonard Toro		
Breast Lesion Classification using Radiomics-derived Regions of Interest on Mammograms Presenter: Shubham Guja	High Accuracy and Cost-Saving Active Learning 3D WD-UNet for Airway Segmentation* Presenter: Shiyi Wang		
Pectoral Muscle Segmentation from Digital Mammograms Using a Transformative Approach Presenter: Dhanush Jain Mahaveera	Style Transfer and Self-Supervised Learning Powered Myocardium Infarction Super-Resolution Segmentation* Presenter: Lichao Wang		
A deep learning classifier using sliding patches for detection of mammographical findings Presenter: Diego Mellado	Study of hyperparameters in semantic segmentation for heart sounds* Presenter: Christian Matias Escobar Arce		
UltraCytomic: A cross-scale exploration to improve risk estimation of the malignant thyroid nodule* Presenter: Jonnathan Steve Tarquino Gonzalez	Classification of Coronary Stenosis using a Support Vector Machine with Automatic Parameter Tuning* Presenter: Miguel Angel Gil		
<b>7. Biosignals</b> Chair: Felix Martinez Room: R37		<b>8. Brain Imaging 2</b> Chair: Andrea Lara Room: Auditorium	
A Photoplethysmography Signal Encryption Approach Based on the Modular Derivative and Langton's Ant Presenter: Andres Romero Arellano	Comparison of Convolutional Neural Network Performances in Pain Facial Expression Recognition Presenter: Cicero Costa		
Comparison between U-Net and DeepLabV3 for Crawling Waves Sonoelastography approach Presenter: Alexys Ramiro Caytano	Default Mode Network Segregation Decreases in Healthy Brain Aging Presenter: Richard Frayne		
Modified Continuous Wavelet Transform Estimator for Crawling Waves Sonoelastography Using Normal Propagation Presenter: Hans Trujillo	Magnetic Resonance Spectroscopy Fitting through Spectrogram and Vision Transformers Presenter: Leticia Rittner		
A non-contact oxygen saturation estimation using Video Magnification and a Deep Learning method Presenter: Andres Escobedo	Can Structural MRIs be used to Detect Amyloid Positivity using Deep Learning?* Presenter: Tamoghna Chattopadhyay		
A Hermite Transform based Method for Physiological Signal Watermarking Presenter: Ernesto Moya			
		<b>Lunch</b>	13:30
<b>9. Brain Imaging 3</b> Chair: Leticia Rittner Room: R33		<b>10. Image Analysis</b> Chair: Adan Guerrero Room: R37	
Multiscale cortical parcellation based on geodesic distance and hierarchical clustering Presenter: Yarelis Prieto	Effects of Reconstruction Filter Kernels in Computed Tomography on Radiomic Image Features Presenter: Kate Sweetland		
Exploring anatomical brain heterogeneity in subjects with mild cognitive impairment Presenter: German Alejandro Pabón	Image Perturbation Analysis to Study the Effect of Noise on Radiomics Metrics: Phantom Study Presenter: Shubham Guja		
Exploring ADHD anatomic patterns by a multiresolution curvelet analysis Presenter: Jully Gonzalez	Characterizing International Biomarker Standardization Initiative Image Features using Brodatz Textures Presenter: Kate Sweetland		
Predicting decline in clinical assessments of alzheimer's disease with machine learning and 3D brain MRI* Presenter: Nikita Goel	Improving FLIM Resolution with Mean-Shift Super-Resolution Microscopy, an analytical approach Presenter: Mario González Gutiérrez		
Large-scale Normative Modeling of Brain Microstructure* Presenter: Julio Villalón	Near-Infrared Spectroscopy Driven Human-Machine Interface based on Convolutional Neural Networks Presenter: Edwin González		
Chair: Jorge Brieva Room: Anexo 507	<b>Poster session &amp; coffee break</b>		16:30
		17:30	
		19:30	
<b>SIPAIM Dinner</b>			

\* Virtual presentation

Friday - November 17

Mexico Time

## Registration

9:00

Chair: Marius Linguraru

Room: Auditorium

**Keynote Speaker:** Dr. Alejandro López

**Talk:** "Using AI tools and virtual technology to improve survival in children with critical heart disease"

9:30

10:30

## Coffee break

### 11. Brain Imaging 4

Chair: Richard Frayne  
Room: Auditorium

### 12. Body Imaging

Chair: Lauren Erdman  
Room: R37

11:00

**Automated Segmentation of the Hippocampus in Pediatric Imaging\***  
Presenter: Rahimeh Rouhi

**Comparing White Matter Fiber Bundle Segmentation Methods for Autism Prediction**  
Presenter: Pamela Guevara

**DTI-based Corpus Callosum parcellation using the Tensorial Morphological Gradient and Self-Organizing Maps**  
Presenter: Caio Pinheiro Santana

**White Matter Bundles Linked to Cognitive Impairment in Alzheimer's Patients and Intermediate Stages**  
Presenter: Claudio Román

**Along-Tract Parameterization of White Matter Microstructure using Medial Tractography Analysis (MeTA)\***  
Presenter: Iyad Ba Gari

**Identification of Digestive Tract Abnormalities on Endoscopic Images**  
Presenter: Cicero Costa

**In Vivo Human Vertebra Image Reconstruction and Mechanical Simulation**  
Presenter: Roberto Gonzalez

**Automated Anatomical Classification and Quality Assessment of Endoscopy by Temporal-Spatial Analysis**  
Presenter: Diego Bravo

**Generating synthetic endoscopy videos following a systematic screening protocol**  
Presenter: Josue Ruano

**Evaluating Radiologic Metrics of Sarcopenia and Body Fat in Parastomal Hernia Development After Cystectomy and Ileal Conduit Urinary Diversion**  
Presenter: Darryl Hwang

**Automatic Region of Interest Detection as a Complement for Reverberant Shear Wave Elastography Assessment in Foot**  
Presenter: Stefano Romero

Chairs:

Room: Auditorium

## Closing ceremony and Awards

12:30

Room: Anexo 507

## LUNCH MEXICAN TACOS

13:00

15:00

\* Virtual presentation