



IEEE CBMS 2020: The 33rd IEEE International Symposium on Computer-Based Medical Systems

(CBMS) Mayo Clinic, Rochester, MN, USA (July 28-30, 2020)

Program available: <http://cbms2020.org/program.html>

Day 2: July 29, 2020 and **Time zone: GMT-4:00**

Important: Zoom links are provided to registered authors/speakers and sessions chairs via email.

Hour (GMT-4)	Event
8:00-9:00	Keynote address (<i>Linlin Shen</i>) Zoom: Room 4 <Chair, Paolo Soda>
9:00-9:30	Presentation booster Zoom: Room 4 <Chair, Paolo Soda>
9:30-9:45	Break
9:45-10:45	Session 1
10:45-11:00	Break
11:00-12:00	Session 2
12:00-13:00	Lunch break/Steering Committee Meeting
13:00-14:00	Session 3
14:00-18:00	Networking (social activity)
18:15-19:15	Session 4



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Session 1 (Chair, Telemedicine Systems

Paolo Soda) **Zoom: Room 1**

- 20 An Open Source Software Architecture and Ready-To-Use Components for Health IoT
- 41 Application of TPRMine method for Identification of Temporal Changes on Patients with COPD: A Case Study in Telehealth
- 92 Virtual assistance for cyber sickness care
- 94 An M-health Application for Remote Monitoring of People with Bipolar Disorder through Digital Phenotyping and Smartphone Dependency
- 114 TremorTrack: A Privacy-Aware Solution for Monitoring Parkinsonian and Essential Tremors

Session 1 (Chair, Deep Learning Applications in Medical Care

Klaus Schoeffmann) **Zoom: Room 2**

- 164 Ensemble Learning based on Convolutional Neural Networks for the Classification of Retinal Diseases from Optical Coherence Tomography Images
- 63 Deep Neural Network for Foreign Object Detection in Chest X-rays
- 141 A New Strategy for Detect Diabetic Retinopathy using a Smartphone App and Machine Learning Methods Embedded on Cloud Computer
- 99 A Deep Profiling and Visualization Framework to Audit Clinical Assessment Variation

Session 1 (Chair, Data Analysis and Knowledge Discovery



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Ermanno
Cordelli) **Zoom: Room 3**

- 175 Accurate Chronic Wound Area Measurement using Structure from Motion
- 138 Ontology-Based Management of Cranial Computed Tomography Reports
- 36 iASiS Open Data Graph: Automated Semantic Integration of Disease-Specific Knowledge

Session 2 (Chair, Decision Support and Recommendation Systems
Paulo Barbosa) **Zoom: Room 1**

- 61 MCRB: A multiclassifier tool for risk of bias assessment in a systematic review to produce health evidence to decision making
- 134 Evaluating Local Interpretable Model-Agnostic Explanations on Clinical Machine Learning Classification Models
- 59 Real-time Feedback for Colonoscopy in a Multi-center Clinical Trial

Session 2 (Chair, Technological and Data-Driven Innovations in Cancer Care
Kiran Bastola) **Zoom: Room 2**

- 106 Lung Cancer Diagnosis Extraction from Clinical Notes Written in Spanish
- 27 O2PF: Oversampling via Optimum-Path Forest for Breast Cancer Detection
- 32 DermaDL: advanced Convolutional Neural Networks for automated melanoma detection
- 95 Cyber Autopsies: The Integration of Digital Forensics into Medical Contexts



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Session 2 (Chair, Biomedical Signal and Image Processing and Machine Vision

Alba Gracia) **Zoom: Room 3**

- 52 Fully-Automated Analysis of Scoliosis from Spinal X-Ray Images
- 151 Epileptic Seizure Prediction based on Region Correlation of EEG Signal
- 178 Classification of Electroencephalogram Signals for Detecting Predisposition to Alcoholism using Computer Vision and Transfer Learning

Session 3 (Chair, Computer-based solutions in clinical support

Alba Gracia) **Zoom: Room 1**

- 44 Improved Deep Learning Classification of Human Sleep Stages
- 107 Nano Currents and the Beginning of Renal Damage: A Theoretical Model
- 110 Real-time detection of glomeruli in renal pathology

Session 3 (Chair, Data Analysis and Knowledge Discovery

Rosa Sicilia) **Zoom: Room 2**

- 188 Adaptation of IDPT system based on patient-authored text data using NLP
- 93 Identifying Post-Traumatic Stress Symptoms Using Physiological Signals and Data Mining
- 86 Mental Health Ubiquitous Monitoring: Detecting Context-Enriched Sociability Patterns Through Complex Event Processing

Session 3 (Chair, Deep Learning Applications in Medical Care

Mirela) **Zoom: Room 3**



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Cazzolato)

- 75 A Novel Approach on Segmentation of AgNOR-Stained Cytology Images Using Deep Learning
- 167 DoubleU-Net: A Deep Convolutional Neural Network for Medical Image Segmentation
- 34 Pixel-Based Tool Segmentation in Cataract Surgery Videos with Mask R-CNN
- 31 Lig-Doctor: real-world clinical prognosis using a bi-directional neural network

Session 4 (Chair, Serious Games for Healthcare Hubert Cecotti) **Zoom: Room 1**

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- 15 Gamification of Balance Exercises with Intervention Techniques and Feedback System using Intervention, Motivation, and Game Design Analyses: A Pre-clinical Study
- 37 Exploring Visual Attention and Machine Learning in 3D visualization of medical temporal data

Session 4 (Chair, Deep Learning Applications in Medical Care Enrique Gracia-Ceja) **Zoom: Room 2**

- Deep Learning-Based Estimation of Non-Specific Uptake in Amyloid-PET Images from Structural MRI for
- 38 Improved Quantification of Amyloid Load in Alzheimer's Disease
- 155 Deep Learning Architectures for Medical Image Segmentation
- 55 Automatic Primary Gross Tumor Volume Segmentation for Nasopharyngeal Carcinoma using ResSE-UNet