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 1: July 28, 2020 and Time zone: GMT-4:00

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

Hours (GMT-4)	**Event**
7:45-8:00	Welcome
8:00-9:00	Keynote address (*Daniela Stan Raicu*) **Zoom: Room 4** <Chair, KC Santosh>
9:00-9:30	Presentation booster **Zoom: Room 4** <Chair, KC Santosh>
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
13:00-14:00	Session 3
	Networking (social activity)
18:15-19:15	Session 4

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Session 1 (Chair, Szilard Vajda) **Serious Games for Healthcare**
Zoom: Room 1

176 Sensory Effects in Cognitive Exercises for Elderly Users: Stroop Game
76 A Gamification-based Framework for mHealth Developers in the Context of Self-Care
161 Towards monitoring patients with Alzheimer's Disease activity using distributed tangible tabletops and dual reality
163 An Online Learning Approach for Dengue Fever Classification

Session 1 (Chair, Kiran Bastola) **Technological and Data-Driven Innovations in Cancer Care**
Zoom: Room 2

123 PRINCESS: Prediction of Individual Breast Cancer Evolution to Surgical Size
10 BreastNet: Breast Cancer Categorization Using Convolutional Neural Networks
140 A Computational Method for Breast Abnormality Detection Using Thermographs

Session 1 (Chair, Alba Gracia) **Biomedical Signal and Image Processing and Machine Vision**
Zoom: Room 3

111 A Coarse-to-Fine Data Generation Method for 2D and 3D Cell Nucleus Segmentation
66 Efficient Segmentation of Cell Nuclei in Histopathological Images
74 Segmentation, Detection and Classification of Cell Nuclei on Oral Cytology Samples Stained with Papanicolaou

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Session 2 (Chair, Bridget Kane) **Computer-based solutions in clinical support**
Zoom: Room 1

135 PSYKOSE: A Motor Activity Database of Patients with Schizophrenia
85 Event-Driven Framework for Detecting Unusual Patterns in AAL Environments
100 B-Move: A transmission scheduler based on human body movements for WBANs

Session 2 (Chair, Jongwoo kim) **Biomedical Signal and Image Processing and Machine Vision**
Zoom: Room 2

125 Exploring hippocampal asymmetrical features from magnetic resonance images for the classification of Alzheimer's disease
57 3D Convolutional Neural Networks for Diagnosis of Alzheimer's Disease via structural MRI
62 Segmentation of Anterior Tissues in Craniofacial Cone-Beam CT Images

Session 2 (Chair, Panagiotis Pappetrou) **Data Analysis and Knowledge Discovery**
Zoom: Room 3

64 Subgrouping Rare Disease Patients Leveraging the Human Phenotype Ontology Embeddings
65 Characterizing Sub-Cohorts via Data Normalization and Representation Learning
158 A Clustering Framework for Patient Phenotyping with Application to Adverse Drug Events
26 Analysis of new nosological models from disease similarities using clustering

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Session 3 (Chair, Agma Traina) **Biomedical Signal and Image Processing and Machine Vision**
Zoom: Room 1

117 Grading Quality of Color Retinal Images to Assist Fundus Camera Operators
29 Mobile Fluorescence Imaging and Protein Crystal Recognition
79 Image classification of cyanobacteria Microcystis aeruginosa in raw water samples in <hidden info>'s region

Session 3 (Chair, Allan Tucker) **Data Analysis and Knowledge Discovery**
Zoom: Room 2

19 Assessment of Medical Reports Uncertainty through Topic Modeling and Machine Learning
126 A data-driven approach for analyzing healthcare services extracted from clinical records
105 Bag-of-Attributes Representation: a Vector Space Model for electronic health records analysis in OMOP
72 The Feynman Propagator to Model Molecular Communications Between an Engineered Nanodevice and Beta Cells

Session 3 (Chair, Zalelem Temesgen) **Computer-based Solutions in Clinical Support**
Zoom: Room 3

7 Machine Learning Early Warning System: a Multicenter Validation in Brazilian Hospitals
33 Optimal spectral bands for instrument detection in microscope-assisted surgery
43 InTracker: An Integrated Detector-tracker Framework for Cell Detection and Tracking

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Session 4 (Chair, Yanshan Wang) **Telemedicine Systems**
Zoom: Room 1

35 Semi-Automatic Ulcer Segmentation and Wound Area Measurement Supporting Telemedicine
71 Mobile Supported Health Services: Experiences in Orthopaedic care
84 Towards Supporting Childhood Atopic Dermatitis Management: A User-Centered Design Approach
~~13 Implementing equitable shared cancer patient care between general practitioners and radiation oncologists: the promise of technology.~~

Session 4 (Chair, Jayanthi Kb) **ST 2: Deep Learning Applications in Medical Care**
Zoom: Room 2

58 Cross-Population Train/Test Deep Learning Model: Abnormality Screening in Chest X-rays
96 Improved Skin Disease Classification Using Generative Adversarial Network
146 OCTx: Ensembled Deep Learning Model to Detect Retinal Disorders

Session 4 (Chair, Justin Smith) **Biomedical Signal and Image Processing and Machine Vision**
Zoom: Room 3

148 Detection of muscle fatigue by fusion of agonist and synergistic muscle sEMG signals
69 PROSISY: PRospective Stroke Identification SYstem Based on Cognitive Radio Theory and Machine Learning
3 Periodic Change Detection in Fetal Heart Rate Using Cardiotocograph
154 Semantic features aided multi-scale reconstruction of inter-modality magnetic resonance images.