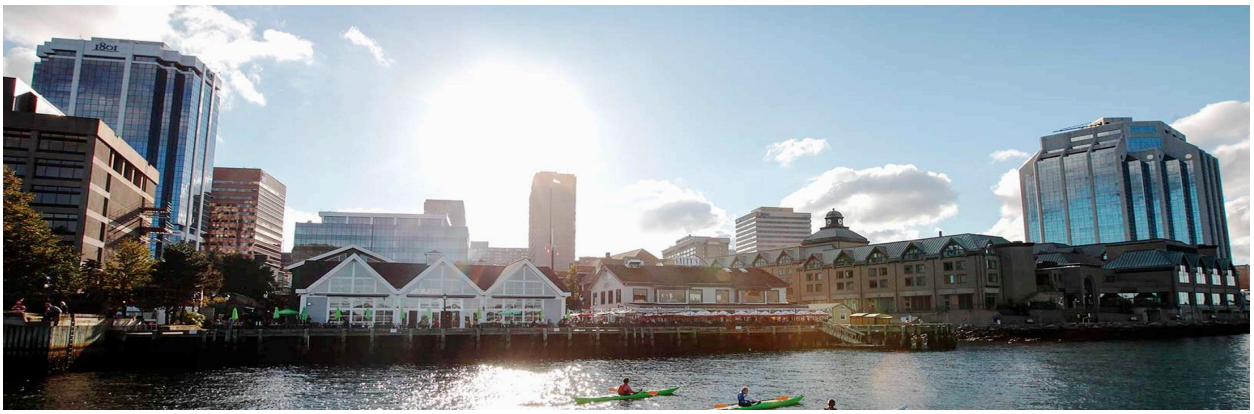
CALL FOR PAPERS



The First Workshop Medical Informatics and Healthcare

(MIH'17)

http://datasys.cs.iit.edu/events/MIH17/index.html

OVERVIEW:
This workshop is on medical data mining to improve healthcare. It aims to provide a forum for data miners, informaticians, data scientists, and clinical researchers to share their latest investigations in applying data mining techniques to healthcare data residing in electronic health records (EHR). The increasing availability of large and complex medical data sets to the research community triggers the need to develop more advanced and sophisticated big data analytical techniques to exploit and manage these big data. The broader context of the workshop comprehends artificial intelligence, information retrieval, machine learning, natural language processing. Submissions are invited to address the need for developing new methods to mine, summarize and integrate the huge volume and diverse modalities of the structured and unstructured biomedical and healthcare data that can potentially lead to significant advances in the field. Accepted papers will be published in the Proceedings of Machine Learning Research (PMLR) and will be posted on the workshop website. We plan to organize a journal special issue and invite extended versions of the accepted papers for that.

AUDIENCE: personnel interested in developing and applying sophisticated computational techniques (e.g. data mining, machine learning, statistics) to medical and healthcare data. Health care providers and practitioners are also welcome to attend.

TOPICS:

- Clustering big data in EHRs to identify patients with similar disease/symptom/treatment
- Building predictive models for diseases from big data in the EHR.
- Generating lexicons/vocabularies of diseases of interest using deep learning algorithms
- Establishing patients' cohorts with targeted diseases using information retrieval techniques
- Discovering risk factors of diseases using natural language processing methods
- Longitudinal analysis of temporal data in EHRs
- EHR summarization
- Topic modeling / detection in large amounts of clinical text data
- Integrating structured (tabulated) and unstructured (text narratives) data in the EHR.
- Developing efficient computational algorithms for mining/analyzing big EHR data
- Novel visualization techniques to facilitate the query and analysis of clinical data
- Statistics and probability in large-scale EHR data mining
- Medical image data mining
- Pharmacogenomics data mining
- Data preprocessing and cleansing to deal with noise and missing data in the EHR.
- Developing decision support approaches (especially with uncertain data) in the EHR
- Multi-view learning of the heterogeneous EHR

IMPORTANT DATES:

- Workshop paper submissions: May 31, 2017 (AoE)
- Workshop paper notifications: June 16, 2017
- Workshop Date: August 14, 2017

SUBMISSIONS:

Authors are invited to submit papers electronically. Submitted manuscripts should be structured as technical papers and may not exceed 8 letter size (8.5 x 11) pages including figures, tables and references using the following templates (http://www.kdd.org/formats/template.doc). Authors should submit the manuscript in PDF format and make sure that the file will print on a printer that uses letter size (8.5 x 11) paper. The official language of the meeting is English. All manuscripts will be reviewed and will be judged on correctness, originality, technical strength, significance, quality of presentation, and interest and relevance to the conference attendees. Papers conforming to the above guidelines can be submitted through the MIH 2017 paper submission system (https://easychair.org/my/conference.cgi?a=13705488;welcome=1;conf=mih17).

Submitted papers must represent original unpublished research that is not currently under review for any other conference or journal. Papers not following these guidelines will be rejected without review. Submissions received after the due date, exceeding length limit, or not appropriately structured may also not be considered. Authors may contact the conference General Chairs for more information.

ORGANIZATION

General Chairs

- Chair: Samah Jamal Fodeh, Yale University, samah.fodeh@yale.edu
- Co-Chair: Daniela Stan Raicu, DePaul University, draicu@cdm.depaul.edu

Technical Program Committee

- Hamidreza Chitsaz, Colorado State University
- Rosa Figueroa, University of Utah
- Adam Gaweda, University of Louisville
- Maryellen Giger, University of Chicago
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- Samuel Armato, University of Chicago
- Jonathan Gemmell, DePaul University
- Henning Mueller, University Hospital of Geneva, Switzerland
- Sameer Antani, NIH, NLM
- Jacob Furst, DePaul University

SHORT BIOS OF THE ORGANIZERS

Dr. Samah Jamal Fodeh is an Assistant Professor at the Department of Emergency Medicine and Yale Center for Medical Informatics (YCMI) at Yale School of Medicine. She is also a research scientist at the Veterans Administration (VA) CT. She is a co-founder of the Data Mining in Biomedical Informatics and Healthcare (DMBIH) workshop that is held in conjunction with ICDM every year. She published several editorials in big biomedical data analytics. Her research has been supported by, NIH and the VA. Her research interests include data mining, machine learning, information retrieval and information extraction. Dr. Fodeh received her M.S. and Ph.D. degrees in Computer Science from Michigan State University in 2006 and 2010, respectively.

Dr. Daniela Stan Raicu is a Professor of School of Computing in the College of Computing and Digital Media at DePaul University, Chicago. She is the founding Director of the DePaul Data Mining and Predictive Analytics (DaMPA) Center and co-director of the Medical Informatics (MedIX) Lab and the Intelligent Multimedia Processing (IMP) Lab. Her research interests include medical imaging, multimedia indexing and retrieval, machine learning and data mining. Daniela's projects have been funded by the National Science Foundation (NSF), Argonne National Laboratory, Department of Education, and McArthur Foundation. Daniela holds a Ph.D. in Computer Science from Oakland University, Michigan, a M.A. in Computer Science from Wayne State University, Michigan, and a B.S. in Mathematics from University of Bucharest, Romania.