



CALL FOR PAPERS

IMPORTANT DATES

Call for Papers Deadlines (EXTENDED)

June 27th, 2019

Paper submission due

July 15th, 2019

Notification of Acceptance

August 15th, 2019

Camera-ready paper due

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Machine Learning for Rare Event Detection in Healthcare

Healthcare systems face a growing need for quality medical treatments, a problem exacerbated by our aging populations. To address these challenges, there is an increased adoption of health technologies bolstered by the dramatic decrease in hardware costs in this IOT era, increased availability of health-related monitoring devices, and recent corporate entrants in the health consumer markets. Consequently, this leads to an influx of health-related data. This volume of information has many advantages, however it commensurately increases the challenge of extracting actionable knowledge. Many **clinical events of interest are rare**, whether we consider temporal events among time-series data or **rare diagnoses** among large-scale screening tests. The emergence of computational methods and contemporary machine learning architectures to identify **rare events** promises to address the challenges of a data-laden and highly-instrumented healthcare system.

We invite authors to submit papers describing signal or information processing methods for the detection of rare events at any point in the healthcare continuum (e.g. diagnostics, monitoring, automated administration of care).

Topics of Interest

- » Adaptive Signal Processing
- » Biomedical Image Processing
- » Body Sensor Networks
- » Deep Learning in Healthcare
- » Distributed Signal Processing in Medical Data
- » Dynamic and Non-Linear Time-Series Analysis
- » Ethical Challenges of Machine Learning in Healthcare
- » Machine Learning for:
 - > Data Mining in Healthcare
 - > Medical Diagnoses
 - > Problems Faced with Class Imbalance
- » Physiological Data Analysis
- » Signal Processing for Wearable Systems
- » Smart Homes for Aged Care
- » Smart Wearable Systems in Continuous Health Monitoring

Paper Submission

Prospective authors are invited to submit full-length papers up to 5 pages (5th page containing only references) and extended abstracts (up to 2 pages, for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2019 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. Accepted full papers will be indexed in IEEE Xplore, accepted abstracts will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture or poster sessions.