

**Special Session on
Healthcare: Cyber Security, Bioinformatics and AI Perspective
at
11th World Congress on Information and Communication Technologies (WICT)
On
World Wide Web
December 16-18, 2021**

<http://www.mirlabs.net/wict21/>

Objectives and Scope

The special session "Healthcare: Cyber Security, Bioinformatics and AI Perspective" is designed to describe the fundamental concepts of Machine Learning, blockchain and security and its application in healthcare.

Researchers working in cyber security, medical imaging and healthcare rely on the expertise of clinicians who play a significant role in understanding complex medical data for diagnosis of diseases. Automation of diagnosis procedures for various healthcare problems may help in improving patient care and overall healthcare. Recently, advanced machine learning methods have shown promising results in biomedical and healthcare applications. Therefore, there is a need to explore novel learning methods, optimization and inference techniques for processing biomedical and healthcare data to get performance closer to clinical diagnosis. Advances in machine learning can be used to develop sophisticated and novel applications in the field of biomedical and healthcare domains. This will attract healthcare practitioners who have access to interesting sources of data but lack the expertise in using machine learning techniques effectively. Special attention will be devoted to handling feature selection, class imbalance, model robustness, scalability, distributed and heterogeneous data sources, and data fusion in biomedical and healthcare applications.

Topics

The special session present a well-adjusted view of Bioinformatics (BI), Machine Learning (ML), Cyber Security (CS) as well as Internet of Things (IoT), including Information fusion and knowledge transfer in biomedical and healthcare applications; Information retrieval of medical images; Imaging sensing tools, technologies and applications in biomedical research; Body motion and pose detection in biomedical imaging; Computer aided detection and diagnosis, especially for cancers; Transfer learning in medical imaging; Adversarial training in medical imaging; Medical image reconstruction; Knowledge-assisted image processing; Domain adaptation in medical imaging; Content-based information retrieval; Medical image compression; Distributed training, learning, and

inference for biomedical and healthcare data; Distributed model optimization for biomedical and healthcare data; Federated learning for biomedical and healthcare data.

The paper in this special session provides an in-depth coverage of Bioinformatics, Cyber Security and Machine Learning perspective along with IoT in the field of healthcare applications.

Paper Publications

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (Indexed in SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago)
<https://www.springer.com/series/15179>
- Papers maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at: <https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>

Important Dates

Paper submission due: September 30, 2021

Notification of paper acceptance: October 31, 2021

Registration and Final manuscript due: November 15, 2021

Conference: December 16-18, 2021

Special Session Chair

- Gaurav Gupta, Yogananda School of Artificial Intelligence Computers and Data Science, Shoolini University, Solan Himachal Pradesh, India

Special Session Co-Chairs

- CH Vanipriya, Sir M Visvesvaraya Institute of Technology, Bangalore, India
- Varun Jaiswal, BioNano Technology, Department of Food & Nutrition, Gachon University, Republic of Korea, Korea
- Ankit Gupta, Interactive Technologies Institute (ITI/LARSyS) and M-ITI, Portugal
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