# 9th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA 2021) June 25 - 26, 2021

### National Institute of Technology Mizoram, India

## Special Session on "Role of Advanced Deep learning techniques and Continuous Deep Analytics for Biomedical and Health Informatics."

### Session Chair(s):

Dr. Sowmya, CEN, Amrita School of Engineering, Coimbatore, Amrita Vishwa Vidyapeetham, India.

Dr. Vinayakumar Ravi, Center for Artificial Intelligence, Prince Mohammad Bin Fahd University, Khobar, Saudi Arabia.

Dr. Ajay Arunachalam, Centre for Applied Autonomous Sensor Systems (AASS), Örebro University, Örebro, Sweden.

Dr. Gopalakrishnan. E.A., CEN, Amrita School of Engineering, Coimbatore, Amrita Vishwa Vidyapeetham, India

Dr. Soman K.P, CEN, Amrita School of Engineering, Coimbatore, Amrita Vishwa Vidyapeetham, India.

Dr. Syed Ahmad Chan Bukhari, St. John's University, USA.

### Theme of Session:

Nowadays, deep learning approaches have been used largely for biomedical and healthcare applications. These models have achieved better performances than the classical machine learning approaches. Most commonly applied deep learning approaches are stacked autoencoders (SAE), deep belief networks (DBN), convolutional neural networks (CNN), and recurrent neural networks (RNN). However, these models require large amounts of training data and training time. Also, further minimizing generalization error in the learning algorithm irrespective of the data distribution, number of classes, choice of algorithm, number of models, complexity of the datasets is a non-trivial task. The literature survey shows that there are new methods in deep learning typically called advanced deep learning. Some methods are deep transfer learning, deep reinforcement learning, deep generative adversarial networks, deep imitation learning, deep federated learning, deep graph neural networks, deep edge computing, explainable AI, and deep reasoning in AI. The aim of the proposed Special Issue is to promote research and reflect the most cutting-edge advances focused on Deep learning Models and deep analytics for Biomedical and Health Informatics.

### Topics of Interest:

We invite original (un-published) research contributions based on the above-mentioned theme including following topics **but not limited to**:

- Advanced deep learning for biomedical image processing data analysis.
- Advanced deep learning for natural language processing and text mining in healthcare.

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- Advanced deep learning for biomedical and healthcare data visualization & representation.
- Advanced deep learning for biomedical signal processing.
- Advanced deep learning for security and privacy in biomedical and healthcare.
- Advanced deep learning for decision support systems in biomedical and healthcare.
- Advanced deep learning for biomedical engineering.
- Advanced deep learning for big data & streaming analytics in biomedical and healthcare.
- Advanced deep learning for data mining for biomedical and healthcare.
- Advanced deep learning in software-defined network with biomedical and healthcare.
- Advanced deep learning for IoT in biomedical and healthcare.
- Advanced deep learning for biomedical and healthcare data pre-processing, cleansing, management and mining.
- Designing novel approaches of advanced deep learning in biomedical and healthcare.
- Advanced deep learning for indexing and retrieval of biomedical images.
- Advanced deep learning for predicting the spread of infectious diseases.
- Advanced deep learning for biomedical and healthcare database preparation.
- Advanced deep learning for pandemic data analysis.

**Paper Submission Process:**
Please submit your paper (in word/pdf format) at
email: sowmiamrita@gmail.com
with '**Deep Analytics for Biomedical and Health Informatics**' mentioned in the subject line.

**Last Date for Submission: March 01, 2021.**
**Notification of Acceptance:   May 01, 2021.**

**For more details, please visit:** https://www.ficta.org/

**Program Committee:**

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Dr. Quoc-Viet PHAM, Pusan National University, South Korea.

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Dr. Syed Bilal Hussain Shah, School of Software, Dalian University of Technology, China.

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Dr. Nitin Gupta, National Institute of Technology Hamirpur, India.

Dr. Neeraj Kumar, Thapar Institute of Engineering and & Technology, India.

Dr. Gopinath Rajendiran, CSIR- Central Scientific Instruments Organisation (CSIO), Chennai,India.

Dr. Tony Thomas Kallivayalil, Indian Institute of Information Technology and Management,Kerala, India.

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Dr. Priya Ranjan, SRM AP University, India.

Dr. Thippa Reddy G, VIT University, India.

Dr. Suresh Chandra Satapathy, KIIT University, Orissa, India.

Dr. Anoop V.S, Rajagiri College of Social Sciences, Kerala, India.

Dr. Gururaj H L, Vidyavardhaka College Of Engineering, Mysore, India.

**For any further queries related to this special session, please contact the session chairs at:**

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