Call for Paper

IEIB: Special Issue on

Data Science for Global Crisis: COVID-19 and Beyond

Introduction:
The COVID-19 pandemic is the greatest global crisis since the Second World War affecting billions of people of almost all countries in the world. Far from being just a health hazard, it has led to an unprecedented social crisis. Unlike the crisis or pandemic that has been witnessed in the past, the shock due to this pandemic will be certainly felt in years to come. It is sure to cause fundamental structural changes in our society, trade, economy, and lifestyle. Thus, it is imminent that the scientific community has to come together and invent novel and better models, methods, forecasting techniques and strategies to understand and mitigate the effects of a crisis of as multi-dimensional as this. On the one hand, understanding the evolution and other features of this virus is being focused upon by a group of research communities. And on the other, Mathematicians, statisticians and data scientists focus on methods and principles borrowed from statistical mechanics and nonlinear dynamics or on artificial intelligence techniques to produce predictive analytical models. We hope that the models so devised can be further used to design strategies to control the pandemic, and finally, save lives.

Thematic Tracks:
In this background, we identify the following two broad research directions that can cooperate to deal more successfully with circumstances like the current pandemic:

1) Application of data science to model the characteristics of the pathogen and spread of the disease and
2) Study of social, psychological, economic, impacts of COVID-19 driven by the vast amount of data

We propose to publish a special issue of IEIB journal spanning these two tracks. The aim of the special issue is to share and integrate the efforts of experts for understanding and overcoming the effects of the current pandemic that will also help us to avoid devastations of future pandemics.
Topics of the special issue include but are not limited to the following:

- AI and Data Science for management of post-COVID scenario
- Social network analysis for COVID-19 management
- Diffusion models for characterizing COVID-19 pathogen
- Predictive models of pandemic evolution exploiting AI techniques
- Real time forecast of a pandemic like COVID-19
- Modeling, Estimation and Prediction of Outbreak spreading behavior, contact tracing
- Spatiotemporal disease dynamics
- Multi sensing system for automatic symptoms analysis and prediction of COVID-19
- Models for financial market reactions to COVID-19
- Risk Profiling: forecasting, assessment, and management
- Pandemic prevention and control
- Modeling the direction and volumes of trade flows in global crisis
- Modeling and Forecasting the economic crisis as a result of a pandemic
- Impact of the pandemic on people’s psychology and on social development
- Innovations on online learning for formal education and universities,
- Innovation in Information technology in COVID-19 patient tracking
- Information technologies in hospital management during an epidemic or pandemic
- Applications of the Internet of Things in healthcare to address COVID-19 challenges
- Effective Mass Sanitization
- Access to COVID-19 education and resources
- Access to Remote education
- Impact of Social Distancing, Quarantines and Lockdown
- Effective existing Space conversion and utility
- Supply chain management of necessary commodities
- Impact of lockdown on the bottom of the pyramid
- Post COVID-19 redevelopment/rehabilitation
Editorial Process:
To ensure fast dissemination of the call and for rapid processing, reviewing and decision making, this special issue will be handled by a Guest Editorial Team which will be assisted by the Editorial Board of IEIB and Secretariat of Springer Nature.

Guest Editors:

- Samiran Chattopadhyay (samiran.chattopadhyay@jadavpuruniversity.in, samirancju@gmail.com) Professor, Department of Information Technology, Jadavpur University

Guest Associate Editors:

- K M Bhurchandi (bhurchandikm@ece.vnit.ac.in), Professor and Head, Electronics and Communication Engineering Department, Visvesvaraya National Institute Of Technology, Nagpur
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- Edmond Shu Lim Ho (e.ho@northumbria.ac.uk), Programme Leader for BSc (Hons) Computer Science and Senior Lecturer, Department of Computer and Information Sciences, Northumbria University, Newcastle upon Tyne, UK

The papers for this special issue will be processed using the standard review process of the journal using the Editorial Manager System and will adhere to the plagiarism checking policy of IEIB. Of course, the processing of the papers for the special issue will be prioritized to meet the deadlines below:

**Paper Submission (deadline August 15, 2020)**
Please submit your paper by August 15, 2020 through the Editorial Management System (https://www.editorialmanager.com/ieib/default.aspx). If you are a new user, please create a login and password. During submission, do not forget to select that your paper is for the special issue entitled “Data Science for Global Crisis: COVID-19 and Beyond”

**Peer-review process**
Minimum two referees will review each paper. The special editors will select these referees. The papers will be reviewed according to the journal’s guidelines for peer review publications.