Special Session
on

("Emerging Technologies in Computing")

International Conference on Computational Intelligence and Data Science (ICCIDS 2018)

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at

The NorthCap University, Gurugram

Aim and Objective:

As our technologies increase in complexity, it takes more and more time for technologists to start to comprehend new technologies, so this special session aims to bring research articles from research scholars, academicians from both academia and industry to focus on the developments in the emerging technologies of computing.

The proliferation of **Mobile computing** around the world clearly indicates that a focus on **Next Generation wireless technologies** would be absolutely necessary. Proposals in this regard would be meaningful. The goal of **Pervasive computing** is to make devices "smart," thus creating a sensor network capable of collecting, processing and sending data, and, ultimately, communicating as a means to adapt to the data's context and activity. The papers could include its applications in military, safety, consumer, healthcare, production and logistics. Though the technology advancements are inevitable but related to these are the issues of sustainability of all living things. **Sustainable computing** would include green computing, development of smart cities, its applications in various sectors like Transport, environment, Energy, Housing, Waste Management and so on. Research papers with innovations would be an asset for this session. **High-performance computing** (HPC) is the use of parallel processing for running advanced application programs efficiently, reliably and quickly. Original research papers with regard to High Performance Computing could include the use of supercomputers to solve complex modeling problems in a spectrum of disciplines. Software techniques that apply to classes of problems often cross disciplines; articles should focus on the exchange of such techniques, as well as present methods for analyzing, measuring and applying algorithms and

solution schemes related to particular application areas. **Cognitive computing** is a multidisciplinary field of research aiming at devising computational models and decision making mechanisms based on the neurobiological processes of the brain, cognitive sciences, and psychology. The objective of cognitive computational models is to endow computer systems with the faculties of knowing, thinking, and feeling. **Cloud Computing:** Computing is being transformed to a model consisting of services that are commoditized and delivered in a manner similar to traditional utilities such as water, electricity, gas, and telephony. In such a model, users access services based on their requirements without regard to where the services are hosted or how they are delivered. Several computing paradigms have promised to deliver this *utility computing* vision and these include cluster computing, Grid computing, and more recently *Cloud computing*. **Educational Computing:** "Education" refers to the use of computer-based technologies at all levels of the formal education system, business and industry, home-schooling, lifelong learning, and unintentional learning environments. "Computing" refers to all forms of computer applications and innovations - both hardware and software. For example, this could range from mobile and ubiquitous computing to immersive 3D simulations and games to computing-enhanced virtual learning environments. **Semantic Computing:** Semantic computing is a field of computing that combines elements of semantic analysis, natural language processing, data mining and related fields. Use of Semantics in IT Applications: Multimedia, IoT, cloud computing, SDN, wearable computing, mobile computing, search engines, question answering, web services, security and privacy .Use of Semantics in Interdisciplinary Applications such as biomedicine, healthcare, manufacturing, engineering, education, finance, entertainment, business, science, humanity. **Emerging Hardware for Computing:** The future of computer hardware is very fragile due to problems between software and hardware engineers and software now that cannot keep up with the material; the material may be decreasing as the software has priority. One thing to note is that the material cannot be totally eliminated. The market will always be a demand for faster hardware, lighter, more coherent and comprehensive. Papers in this regard are highly solicited.

Equally important is a spectrum of other related research papers such as applications of computing that can have ecological, societal and economical impacts.

Topics of Interest:

The topics of interest may include the following or their applications in emerging areas of computing:

1. Pervasive Computing
2. Sustainable Computing / Green Computing.
3. Cloud Computing
4. Mobile Computing / Next Generation Wireless Computing
5. Semantic Computing
6. Soft Computing
7. Cognitive Computing
8. High Performance Computing
9. Educational Computing Systems
10. Emerging H/W for Computing

With the advances of information communication technologies, it is critical to improve the efficiency and accuracy of modern and emerging computing technologies. The past decade has witnessed the tremendous technical advances in Sensor Networks, Internet/Web of Things, Cloud Computing, Mobile/Embedded Computing, Spatial/Temporal Data Processing, and these technologies have provided new opportunities and solutions to extensive computing techniques. Original and research articles are solicited in all aspects including theoretical studies, practical applications, and experimental prototypes. Research proposals could focus on research innovations, advantages and benefits, opportunities, issues and challenges related to computing.

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