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## Editorial

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**Biographical notes:** H.S. Behera is working as an Associate Professor in the Department of Computer Science Engineering and Information Technology, Veer Surendra Sai University of Technology (VSSUT), Burla, Odisha. He has received MTech from NIT, Rourkela (formerly REC) and PhD in Engineering from Biju Pattnaik University of Technology (BPUT), Odisha, respectively. He has published more than 80 research papers in international journals and conferences, edited 11 books and is acting as a Member of the Editorial/Reviewer Board of various international journals. He is proficient in the field of Computer Science Engineering and served the capacity of program chair, tutorial chair and acted as an advisory member of committees of many national and international conferences. His research interest includes data mining, soft computing, machine intelligence, evolutionary computation and distributed systems.

A. Saxena is working as a Professor and Head in the Department of Computer Science and Information Technology, Guru Ghasidas Central University, Bilaspur, India. He has received his both Bachelor and Master degree from Bundelkhand University, Jhansi, MCA degree from Jiwaji University of Gwalior and PhD in Computer Science from Guru Ghasidas Central

University, Bilaspur, India. He has more than 25 years of both teaching and research experience in the field of computer science. Being an Indian Editor of *International Journal of Data Mining, Modelling and Management (IJDMMM)*, Inderscience, he has published a good number of national and international journals. He has visited many abroad countries including Malaysia, Kuwait, Singapore, San Francisco – USA, Palma De Mallorca – Spain, Taiwan etc. He has more than 100 numbers of projects of Master degree, one UGC project and two PhD theses go to his credit. His research interest includes data mining, soft computing, evolutionary computation etc.

G. Jena, PhD, FIE, SMIEEE, LMISTE, MCSI, after completing BSc from Utkal University did his Chartered Engineering from the Institute of Engineers, India in 1988 and completed the Master degree in Engineering in CSE from NIT, Rourkela, Orissa in 2001. He has completed PhD from FM University, Balasore, Orissa. He is also ratified as a Professor by JNTUK, Kakinada, AP. He conducted a number of Staff workshops WIPRNC, WERTS 2K11, student symposium 2K7, 2K8, 2K9, 2K10, is working as President CSI student chapter, NBA coordinator. He worked as Convener and resource person for national level workshop WIPRNC 2K8 and worked as chairperson for international *IEEE Conference IACC09*, Thapar University, Patiala. He is the Editor of two international journals. He is working as research guide (PhD) for FM University and KLU, Guntur. His areas of interest include image processing, signal processing and adaptive channel equalisers using time-frequency domain transform and neural techniques.

J.K. Mandal got his MSc in Physics from Jadavpur University in 1986, MTech in Computer Science from University of Calcutta; he was awarded PhD (Engg) in Computer Science and Engineering by Jadavpur University in 2000. Presently, he is working as a Professor of Computer Science and Engineering and former Dean, Faculty of Engineering, Technology and Management, Kalyani University, Kalyani, Nadia, West Bengal for two consecutive terms. He started his career as a Lecturer at NERIST, Arunachal Pradesh in September, 1988. He has teaching and research experience of 25 years. His research areas include coding theory, data and network security, remote sensing and GIS based applications, data compression, error correction, visual cryptography and steganography. He has produced 17 PhD, one submitted (2013) and eight are ongoing. He has supervised three MPhil and 26 MTech Dissertation and more than 60 MCA projects. He has chaired 17 sessions in various international conferences and delivered 20 expert/invited lectures. He has attended 22 conferences and delivered 4 × 5 days expert lectures as guest faculty and organised 15 national and international conferences during last three years. He is a Reviewer of various international journals and conferences, since 1994. He is Chief Editor of various national/international journals of AIRCC, Editor of various national/international conferences and proceedings. He has published more than 380 papers out of which 148 papers in various national and international journals. He has published six books from LAP Germany and IGI Global.

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Data mining is a powerful new technology with great potential to help researchers focus on the most important information in the data they have collected. Machine learning is not just a database problem, it is a part of artificial intelligence. To be intelligent, a system that is in a changing environment should have the ability to learn.

If the system can learn and adapt to such changes, the system designer need not foresee and provide solutions for all possible situations. Machine learning is programming computers to optimise a performance criterion using example data or past experience. Research in machine learning is now converging from several sources and from data mining field. These different traditions each bring different methods and different vocabulary which are now being assimilated into a more united discipline. This issue focuses on the key research problems emerging at the junction of machine learning and data mining, serves as a broad forum for rapid dissemination of the latest advancements in the area. The major goal of this special issue is to bring together the researchers in machine learning and data mining to illustrate pressing needs, demonstrates challenging research issues, and showcase the state-of-the-art of data mining research, development and applications. The issue will be helpful to promote original research papers on theoretical, experimental and practical aspects of machine learning approaches.

This special issue comprises of some interesting and important papers such as: ‘An optimal policy for a deteriorating item with generalised deterioration rate and time-dependent demand under permissible delay in payment’, ‘Improved real time A\*-fuzzy controller for improving multi-robot navigation and its performance analysis’, ‘Integrated framework for semantic text mining and ontology construction using inference engine’, ‘A modified fruit fly optimisation for classification of financial distress using FLANN’. The papers are well described and are the real reflections of some recent advances in machine learning techniques. This special issue covers both the theory and applications of the above-mentioned techniques embedded to the diversified spanning fields of machine learning, optimisation algorithms, neural network, fuzzy concepts etc. The wider use and successful applications in various diversified problem domains discussed in this special issue show the efficiency of these methods. As guest editors, we hope that spectrum of research works covered under this special issue will be of value for the whole host of readers/researchers working in the domain of data mining and related areas. It is important to have a good balance of different paper type within the special issue. We are grateful to our authors who have contributed their valued research to this special issue and always supported us during the reviewing of the papers. The technical standards and quality of published papers in this special issue are based on the strength and expertise of the reviewer board members who have been grossly involved in providing high-quality reviews for the submitted papers. Our special thanks to the Editor-in-Chief of the *International Journal of Data Science* for all his continued guidance and input on the policies of the journal as well as for her volunteered significant time despite his busy schedules. Also, we are thankful to the editorial support members and teams for their constant effort for successful publication of the issue.