Editorial

Vipin Tyagi

Jaypee University of Engineering and Technology,
Mumbai-Agra National Highway, Raghogarh-Vijaypur,
Madhya Pradesh, India
Email: dr.vipin.tyagi@gmail.com

Mayank Singh*

Consilio Research Lab,
Tallinn, Estonia
Email: dr.mayank.singh@ieee.org
*Corresponding author

P.K. Gupta

Computer Science and Engineering Department,
Jaypee University of Information Technology,
Waknaghat, Himachal Pradesh, India
Email: pkgupta@ieee.org

Shailendra Mishra

Department of Computer Engineering,
College of Computer and Information Sciences,
Majmaah University,
Al Majma'ah, Saudi Arabia
Email: s.mishra@mu.edu.sa

Biographical notes: Vipin Tyagi is working as Dean (Academics & Research) at Jaypee University of Engineering and Technology, Guna, MP, India. He is a reputed academician and researcher. He is Fellow IETE and member Board of Governors of Engineering Council of India. He is Past President of Engineering Science Section of Indian Science Congress Association and Past Hon. Secretary, Regional Vice President of Computer Science of India. He is Regional Coordinator of AICTE National Coordination Committee-Induction Program (Central Region). He was nominated by INSA, New Delhi to visit Czech Republic for 2 weeks under Scientist exchange program.

Mayank Singh is working as Senior Scientist at Consilio Research Lab, Tallinn, Estonia. Prior, he worked as Post-Doctoral Fellow at University of KwaZulu-Natal, Durban, South Africa. He has published a number of research papers in transactions, journals and conferences. He has supervised 14 MTech and 7 PhD students. He has 11 patents published, 2 Indian patents granted and 1 Design patent granted. He is currently also serving as a Senior Member of IEEE and Senior Member of ACM. He has organised several international conferences with reputed publishers like IEEE, Springer, Taylor and Francis, IOP etc.

P.K. Gupta is currently working as a Professor in the Department of CSE at Jaypee University of Information Technology (JUIT), Waknaghat. He is Post-Doctorate from University of Pretoria, South Africa. He has extensive research experience in internet-of-things, cloud computing, image processing, and pattern recognition and authored more than 30 research papers in referred journals and international conferences. He is the recipient of award from Computer Society of India for maximum publications during year 2015–16. He was General Chair for 2015 IEEE International Conference on Computer Graphics, Vision and Information Security (CGVIS).

Shailendra Mishra is working as Professor in the Department of Computer Engineering, College of Computer and Information Science, Majmaah University, Majmaah, Kingdom of Saudi Arabia. His recent research has been in the field of IoT security, advance network architecture, mobile computing, and cloud computing also conducting research on communication systems & computer networks with performance evaluation and design of multiple access protocol for mobile communication network. He received Young Scientist Award in 2006 and 2008 from Department of Science & Technology, UCOST Government of Uttrakhand, India. He has supervised seven PhDs and 30 MS dissertations.

In recent years, the rapid progress of multidisciplinary research in the fields of Information Technology (IT) and Applied Management has paved the way for sustainable development across various sectors. This special issue aims to shed light on cutting-edge advancements in these domains through five accepted papers. These papers explore diverse topics such as secure symmetric key generation, machine learning-based HR appraisal systems, Android application classification, usability and accessibility of educational websites, and the impact of intellectual capital on the performance of SMEs in Saudi Arabia (KSA).

In this special issue, the first paper, 'DNA-SKA', presents an innovative approach to secure symmetric key generation using DNA. This remarkable research bridges the fields of biotechnology and cryptography, showcasing the potential for unconventional computing paradigms. DNA-based algorithms have the potential to revolutionise encryption techniques by leveraging the enormous storage capacity and parallel processing capabilities of DNA molecules. The DNA-SKA algorithm opens up new avenues for enhancing data security and privacy in an era where cyber threats are becoming increasingly sophisticated.

The second paper, 'ML-APS', introduces a machine learning-based HR appraisal system that automates the employee evaluation process. By utilising machine learning techniques, this system can efficiently analyse and assess employee performance, thereby streamlining the appraisal process for organisations. This research contributes to the growing field of artificial intelligence in HR management and demonstrates the potential of machine learning to optimise human resource practices, leading to fairer, more accurate, and unbiased appraisals.

The third paper of this issue focuses on the binary and multi-class classification of Android applications using static features. With the exponential growth of mobile applications, ensuring their security has become a critical concern. This research employs machine learning algorithms to classify apps based on their static features, enabling the

identification of potentially malicious software. By proactively identifying security risks, this work helps to protect users' privacy and data, making a significant contribution to mobile app security.

The fourth paper investigates the usability and accessibility of websites belonging to Indian higher education institutions. With the rapid digitisation of education, it is crucial to ensure that educational websites are designed to be user-friendly and accessible to all individuals, including those with disabilities. This research evaluates the existing websites' usability and accessibility, providing insights and recommendations for improving the user experience. By addressing these issues, educational institutions can enhance inclusivity and enable a more equitable learning environment.

The final paper examines the relationship between intellectual capital efficiencies and the performance of small and medium-sized enterprises (SMEs) in Saudi Arabia (KSA). Intellectual capital, including human, structural, and relational capital, plays a vital role in driving innovation and competitiveness. This research explores how effectively SMEs in KSA manage their intellectual capital and its impact on their performance. The findings provide valuable insights into optimising intellectual capital utilisation, helping SMEs thrive in a knowledge-driven economy.

The papers published in this issue exemplify the recent multidisciplinary research advancements in Information Technology and Applied Management for sustainable development. These studies push the boundaries of traditional approaches, leveraging emerging technologies and methodologies to address critical challenges. By exploring DNA-based secure key generation, machine learning in HR appraisal systems, Android app classification, website usability, and intellectual capital efficiencies, these papers contribute to the broader goal of creating a sustainable and technologically advanced future. It is through such interdisciplinary collaborations and innovative research endeavours that we can unlock new possibilities and drive meaningful change in our society.