Editorial

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Biographical notes: Suresh Ponnan graduated in Electronics and Communication Engineering, from Anna University in 2008, Master's in Embedded System Technologies from Anna University of Technology and Doctoral degree from Anna University in 2014. He is an IEEE senior member and associated with many technical societies. He worked in various institutions over 13 years, designated in various positions, currently working as Professor and Dean – International Relations in Veltech Rangarajan Dr Sagunthala R and D Institute of Science and Technology, India. His research interests are in the field of artificial intelligence, autonomous systems, embedded syetms, reconfigurable computing, silicon photonics and system on chip. He has published more than 100 research articles and collaborated with international professors from various countries.

Celestine Iwendi received his second Master's in Communication Hardware and Microsystem Engineering from the Uppsala University, Sweden, in 2008, and PhD in Electronics from University of Aberdeen, UK, in 2013. He is currently a Visiting Professor at the Coal City University Enugu. He is also an ACM Distinguished Speaker, Senior Lecturer with the School of Creative Technology, University of Bolton, UK, and over 22 years technical, teaching and research expertise. He is a board member of the IEEE Sweden Section. He is a highly motivated and hardworking researcher with more than 100 publications and a Fellow of the Higher Education Academy, UK.

Artificial intelligence (AI) and simulation overlap increasingly as computer hardware prices fall and software sophistication increases. AI programming methods permit more realistic and robust simulation models and help the user develop, run and interpret simulation experiments. Simulation algorithms permit expert systems to reason about complex models that change over time or include interacting stochastic elements. This article describes basic concepts in AI and highlights expected benefits in each field over the next decade.

AI is a kind of simulation that involves a model intended to represent human intelligence or knowledge. An AI-based simulation model typically mimics human intelligence such as reasoning, learning, perception, planning, language comprehension, problem-solving and decision-making. Theory of modelling and simulation has been reconsidered recently based on two new paradigms: the computational iterative system paradigm and the computational activity paradigm. The computational iterative system paradigm allows modelling abstractly input/output systems, which are then explicitly refined until their computational mechanisms with AI.

Additionally, the introduction of AI-related capabilities into various computing devices with traditional means that these traditional processor classes are evolving to the point where they are no longer recognisable as distinct categories. Increasingly, designers of AI-enabled systems are using highly integrated heterogenous processing solutions, such application-specific integrated circuits (ASICs) and system-on-chip (SoC) solutions (Electronics Industry in the World of Tariffs & Trade).

Embedded development is often driven by the need to deploy highly optimised and efficient systems. AI has the potential to disrupt businesses by enabling new approaches to solve complicated problems or by posing a threat to the status quo for entire industries or job kinds.

Having a basic understanding of AI and its potential applications should be part of your strategic planning process, whether you understand what the excitement is all about and how it will be applied to your market or you

struggle to understand how you might take advantage of the technology. Despite the hoopla, it is important to realise that AI is not a one-size-fits-all solution. It is a tool that a magician can use to do a few tricks. AI's application to embedded systems is gaining traction, with a focus on how to plan for deployment in these more limited domains.

AI is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision. As computer hardware prices fall and software sophistication rises, AI and simulation are increasingly overlapping. AI programming methodologies provide for more realistic and robust simulation models, as well as assisting the user in the development, execution, and interpretation of simulation experiments. Expert systems can use simulation methods to reason about complex models that vary over time or have interacting stochastic elements. This book article collection covers the fundamentals of AI and the predicted benefits in each industry over the next ten years.

AI is a simulation in which a model is used to simulate human intelligence or knowledge. The reasoning, learning, perception, planning, language understanding, problem-solving, and decision-making abilities of an AI-based simulation model are often mimicked. The computational iterative system paradigm and the computational activity paradigm have lately been used to re-evaluate modelling and simulation theory. The computational iterative system paradigm allows for the abstract modelling of input/output systems, which are then explicitly revised until their computational mechanisms are discovered via AI. Furthermore, the incorporation of AI-related capabilities into various computing devices using traditional processors means that these traditional processor classes are developing to the point where they are no longer distinguishable. Electronics Industry in the World of Tariffs & Trade reports that designers of AI-enabled systems are increasingly employing highly integrated heterogeneous processing solutions, such as ASICs and SoC solutions.

In this issue, the authors have discussed about the 'Design optimisation and development of thresher machine using artificial intelligence and machine learning' which finds the useful application for the real time issues discussed. The 'High speed energy efficient multiplier for signal processing' which may give the better signal performance which may give the suitable solutions. 'Load cell-based PID method controlled Segway system modelling and simulation' have been discussed. The 'Prediction of Euclidean distance between existing and target product for software product line testing using FeatureIDE' gives the best performance. 'An empirical study on user buying behaviour in fashion industry using logistic regression' model with the standard implementation model. The 'Real time prediction of solar radiation of Indore region using machine learning algorithms' which may give the best model. 'Analysing chickpea physical characteristics emphasising on count, shape and size using computer vision' for best model prediction. In this, 'A comprehensive survey on aspect-based sentiment analysis' also discussed. Also, the 'Emotional intelligence – creating a new roadmap for artificial intelligence' and 'Dolphin echolocation algorithm for small-signal stability analysis of DFIG-based wind power system'.