Scalable Computing: Practice and Experience

A Special Issue on: Quantum Machine Learning for future AI applications

CALL FOR PAPERS

Aims and Scope:

Powerful improvements in Machine Learning and a fast-moving arms race to construct Quantum hardware are two of the most fascinating areas of scientific and technical innovation today. The integration of the two fields is at the heart of a new interdisciplinary research effort, quantum machine learning. Quantum Machine Learning (QML) fills in the gaps between theoretical advances in quantum computing and applied machine learning science. It focuses on offering a synthesis that describes the most relevant machine learning algorithms in a quantum framework, reducing the complexity of the disciplines involved. Quantum symbolical AI algorithms on a quantum computer will be faster because they can simultaneously encode many inputs of a problem and perform the calculation on all inputs in the time it takes to do one of the calculations classically. Quantum algorithms that solve tasks in machine learning, thereby improving and often expediting classical machine learning techniques. It is an emerging technology addressing complex and challenging real-time machine learning problems, including computer aided diagnostics, machine vision, health informatics, and processing big medical health records in ways that classical machine learning cannot.

This Special Issue on Quantum Machine Intelligence focusing to solve complex problems and introduce research innovations of AI based applications through the submissions of high-quality and unpublished articles. In particular, the special issue aims to provide a collection of high-quality research articles on both theoretic and practical application aspects of QML for future AI applications.

The topics of interest include, but are not limited to:

• Enhanced pattern recognition and classification using QML
• Pattern recognition in tele-monitoring, e-health, mobile healthcare and point of care technologies using QML
• Creating complete connected security through the merging of IoT and blockchain
• Classical machine learning applied to quantum systems
• Simulation of quantum computers on classical systems
• High performance and high throughput quantum learning and applications
• Developments and trends in quantum machine learning hardware and devices
• Molecular modeling to discover new drugs and medical research
• Creation of new materials through molecular and atomic maps

**LIST OF IMPORTANT DATES**

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**SUBMISSION GUIDELINES**

Original and unpublished works on any of the topics aforementioned or related are welcome. The SCPE journal has a rigorous peer-reviewing process and papers will be reviewed by at least two referees. All submitted papers must be formatted according to the journal's instructions, which can be found at:


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Dr. V.Vinoth Kumar is presently on Faculty of Engineering and technology, Jain University, India. His current research interests include Artificial Intelligence, Internet of Things, machine learning and wireless networks. He is the author/co-author of papers in international journals and conferences including SCI indexed papers. He has published as over than 35 papers in IEEE Access, Springer, Elsevier, IGI Global, Emerald etc.. He is a reviewer for Elsevier, IEEE Access, IEEE Transactions, and Springer journal. He has demonstrable experience in leading large-scale research projects and has achieved many established research outcomes that have been published and highly cited in many significant Journals and Conferences. He is the Associate Editor of International Journal of e-Collaboration (IJeC) and Editorial member of various journals. He has also been a guest editor of several international journals including, Journal of Intelligent Manufacturing (Springer), International Journal of Intelligent Computing and Cybernetics, International Journal of e-Collaboration (IJeC), International Journal of Pervasive Computing and Communications(IJPCC), International Journal of System of Systems Engineering(IJSSE), International Journal Speech Technology (IJST)-Springer, Journal of Reliable Intelligent Environments (JRIE), International journal of Information Technology and Web Engineering (IJITWE),International Journal of Machine Learning and Computing (IJMLC),International Journal of Cloud Computing (IJCC),International Journal of Information Quality (IJIQ) Journal of Computational and Theoretical Nanoscience and International Journal of Intelligent Enterprise (IJIE).

He has been professional society member of ISTE, IACIST and IAENG. He has co-chaired major Conferences Program Committees such as: ICACB’18, ICAISS’19 etc. He has filed 3 IPR patents in IOT applications and currently doing funding project to CSIR and ISRO.
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Dr. Lipo Wang received the bachelor’s degree from National University of Defense Technology (China) and PhD from Louisiana State University (USA). He is presently on the faculty of the School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore. His research interest is artificial intelligence with applications to image/video processing, biomedical engineering, communications, control, and power systems. He has 350+ publications, a U.S. patent in neural networks and a patent in systems. He has co-authored 2 monographs and (co-)edited 15 books. He has 9,600+ Google Scholar citations, with H-index 45. He was keynote speaker for 36 international conferences. He is/was Associate Editor/Editorial Board Member of 30 international journals, including 4 IEEE Transactions, and guest editor for 15 journal special issues. He was a member of the Board of Governors of the International Neural Network Society, IEEE Computational Intelligence Society (CIS), and the IEEE Biometrics Council. He served as CIS Vice President for Technical Activities and Chair of Emergent Technologies Technical Committee, as well as Chair of Education Committee of the IEEE Engineering in Medicine and Biology Society (EMBS). He was President of the Asia-Pacific Neural Network Assembly (APNNA) and received the APNNA Excellent Service Award. He was

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Joy Iong-Zong Chen was born in Taiwan. He received his B.Sc. degrees in electronics engineering from the National Taiwan Technical University, Taipei, Taiwan, and M.Sc. degrees in electrical engineering from the Da-Yeh University, Chung-hua, Taiwan, in 1985 and 1995, respectively, and Ph.d. degrees in electrical engineering from National Defense University, Tao-Yuan, Taiwan, in 2001. He is currently a full significant professor of Department of Communication Engineering Da-Yeh University at Chang-Hua Taiwan. Prior to joining the Da-Yeh University, he worked at the Control Data Company (Taiwan) as a technical manger since Sep. 1985 to Sep. 1996. Dr. Chen has published about 40 international Journal papers form scholar till now, and ever acts as Guest Editor for several famous international Journals. His research interests include AI, IoT Development, Wireless Communications, Spread