Research and Innovation Trends in Artificial Intelligence



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Room 522 Classroom & Business Building (CBB) 4742 Calhoun Rd., Houston, TX 77204

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ABSTRACT:

Research on artificial intelligence (AI) has been on the rise as companies and governments have identified AI as a core technology, enabling innovation and profits across a diverse range of applications. Given this, there are many questions that can be asked, including: which countries produce the most amount of AI research, is there one country that stands out from other countries, and what application areas are influenced the most by AI? This talk presents a study of AI research based on both conference and journal publications published on IEEE Xplore and indexed by Web of Science, and patents in the USPTO over the past ten years. Trends in research and applications are presented.

BIOGRAPHY:

Prof. Michael Pecht has a BS in Physics, an MS in Electrical Engineering and an MS and PhD in Engineering Mechanics from the University of Wisconsin at Madison. He is a Professional Engineer, an SAE Fellow, an IEEE Fellow, and an ASME Fellow. He is the editor-in-chief of IEEE Access, and served as chief editor of the IEEE Transactions on Reliability for nine years, and chief editor for Microelectronics Reliability for sixteen years. He has also served on three National Academy of Science studies, and two US Congressional investigations in automotive safety. He is the founder and Director of CALCE (Center for Advanced Life Cycle Engineering) at the University of Maryland, which is funded by over 150 of the world's leading electronics companies at more than US\$6M/year. The CALCE Center received the NSF Innovation Award in 2009 and the National Defense Industries Association Award. He is currently a Chair Professor in Mechanical Engineering and a Professor in Applied Mathematics at the University of Maryland. He has written more than twenty books on product reliability, development, use and supply chain management. He has also written a series of books of the electronics industry in China, Korea, Japan and India. He has written over 700 technical articles and has 8 patents. He consults for 22 international companies. In 2015 he was awarded the IEEE Components, Packaging, and Manufacturing Award for visionary leadership in the physics-of-failure-based development and of prognostics-based approaches to electronics reliability. In 2010, he received the IEEE Exceptional Technical Achievement Award for his innovations in the area of prognostics and systems health management. In 2008, he was awarded the highest reliability honor, the IEEE Reliability Society's Lifetime Achievement Award.