International Society of Innovation Methods

The 10th International Conference on Systematic Innovation
2019.07.08~11, Liverpool, United Kingdom
Icsi2019@i-sim.org;   www.i-sim.org/icsi2019

Keynote Speech

Integrating SI and AI for New Research and Applications

Speaker Name: D. Daniel Sheu

President, International Society of Innovation Methods
Editor-in-chief, International Journal of Systematic Innovation (SCOPUS indexed)
Area Editor, Computers & Industrial Engineering (SCI indexed, top 4% impact factor)
Professor Emeritus, National Tsing Hua University

Speaker Biography:

Daniel has 9 years of industrial experience primarily in the electronic industries with Hewlett-Packard, Motorola, and Matsushita prior to joining National Tsing Hua University as a professor where he served for 23 years. He is Professor Emeritus of National Tsing Hua University and a Visiting Professor at Shanghai Jiao Tong University. Professor Sheu is the President of International Society of Innovation, Editor-in-chief of International Journal of Systematic Innovation, Area editor of Computers & Industrial Engineering in Engineering Design and Innovation Methods. He has expert knowledge in systematic Innovation including TRIZ. He has developed more than 20 new TRIZ++ tools. Daniel has taught/facilitated more than 100 sessions of industry training/consulting courses in more than 70 companies. He is a certified TRIZ Expert in Training and problem-solving consultation. Daniel Conducted 24 national/cross-strait conferences and 9 international conferences in the areas related to systematic innovation/Manufacturing Engineering. He has been invited to deliver keynote/plenary speeches 12 times in international conferences and 15 times in national conferences. Daniel published 44 peer reviewed journal papers, 174 conference papers, authored 11 books, and translated 4 books. Daniel holds 10 patents from Taiwan, China, and USA.

Abstract

Innovation is vital to any entity's survival even flourishment. SI (Systematic Innovation) and AI (Artificial Intelligence) are two major broad branches of modern breakthrough technologies. SI is primarily based on logic science and have nothing to do with quantitative optimization. On the contrary, the software side of AI is primarily based on data science and primarily on optimization. SI and AI do not seem to get together. This talk is about proposed methods to fuse the knowledge of SI and AI for synergetic fusion of SI and AI characteristics expanding to new areas of research and applications

Outline

- SI characteristics and areas for improvement
- AI characteristics and limitations
- Elements for integrating SI and AI
    - How AI can help SI developments
    - How SI can help AI developments
- Summarize new directions for SI+AI researches and applications