Applied Soft Computing

Virtual Special Issue on

[AI and Big Data Analytics to Empower Digital Decision and Smart Manufacturing for High-tech Industries](#)

Aims of this Virtual Special Issue:

As semiconductor products are increasingly employed as critical components in various systems, leading nations have reemphasized the importance of high-tech industry for supply chain resilience. Indeed, semiconductor industry is capital intensive, in which production process is complicated with lengthy reentrant flows. Furthermore, supply chain management is increasingly challenging that necessitates a virtual vertical integration of different companies and digital transformation for the industry ecosystem. Artificial intelligence, Big Data Analytics, 5G, Internet of Things, Cloud, Cyber-Physical Systems, and Digital Twins are empowering manufacturing intelligence and digital decisions for smart production for high-tech industries including semiconductor manufacturing, TFT-LCD, Printed Circuit Board, and Electronics Manufacturing Service. This virtual special issue aims to develop a research agenda and address the critical issues involved in AI and Big Data Analytics to Empower Digital Decision and Smart Manufacturing for High-tech Industries.

Scope of the Special Issue:

This virtual special issue welcomes contributions that may concern to recent advances and future perspectives on novel approaches, integrated solutions, and empirical studies via intelligent technologies to address the needs for digital decision and smart manufacturing for high-tech industries. Original, high quality papers and empirical research papers can be directly submitted, for regular review and potential publication in this virtual special issue. The topics include, but are not restricted to the following aspects of AI and Big Data Analytics to Empower Digital Decision and Smart Manufacturing for High-tech Industries:

- Advanced process control/ Advanced equipment control/ Advanced quality control (APC/AEC/AQC)
- Advanced Planning & Scheduling, Production/Distribution Planning
- Artificial intelligence and deep learning for flexible decision and smart manufacturing
- Automated material handling systems (AMHS) & Automated Guided Vehicles (AGV)
- Big data analytics and data science for smart manufacturing
- Circular Supply Chain, Circular Economy, & Sustainability for Semiconductor Manufacturing
- Cyber-Physical Systems and Digital Twins
- Digital decision and manufacturing intelligence for semiconductor manufacturing

- Engineering Data Analysis (EDA), Yield Enhancement, and e-Diagnosis
- Future Fab and Manufacturing Strategy for Semiconductor Industry
- Industry 3.5 and Industry 4.0
- Internet of Things (IoT), multi-mode sensors, mobile and wireless applications
- Prognostic and Health Management (PHM) and predictive maintenance
- Real-time Decision for e-Manufacturing

Submission Guidelines:

All papers must be original and not published, submitted and/or currently under review elsewhere. All manuscripts should be submitted through the online system at https://www.editorialmanager.com/asoc/default1.aspx. Please choose "**VSI: Dig. DM in Manufact.**". In preparing their manuscript, authors are asked to closely follow the "Instructions to Authors" for *Applied Soft Computing*. Submissions will be refereed according to the Applied Soft Computing standards and requirement. Each paper submitted will be subject to a blind peer-reviewed by at least two referees, in accordance with usual Applied Soft Computing procedures. If accepted, a Word file of the final paper must be emailed to the assistant editor. Papers accepted become the property of Applied Soft Computing publisher.

Publication Schedule:

SI opens for submissions:	**1 September, 2022**
SI closes for submissions:	**31 March, 2023**
SI finished:	**31 March, 2024**
Approximation publication date:	on-line first upon acceptance

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