

Artificial Intelligence for Industry and Environment

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Adaptability and advanced services for industrial manufacturing require an intelligent technological support for understanding the production process characteristics also in complex situations. Quality control is specifically one of the activities in manufacturing which is very critical for ensuring high-quality products and competitiveness on the market.

Similarly, protection of the environment requires ability to adjust the understanding of the current status by considering the natural dynamics of the environment itself and the natural phenomena.

Artificial intelligence can provide additional flexible techniques for designing and implementing monitoring and control systems both for industrial and environmental applications, which can be configured from behavioral examples or by mimicking approximate reasoning processes to achieve adaptable systems.

This talk will analyze the opportunities offered by artificial intelligence technologies to support the realization of adaptable operations and intelligent services in industrial applications, specifically focusing on manufacturing processes and quality control, as well as in environmental monitoring, especially for land management and agriculture.



Vincenzo Piuri has received his Ph.D. in computer engineering at Politecnico di Milano, Italy (1989). He is Full Professor in computer engineering at the Università degli Studi di Milano, Italy (since 2000). He has been Associate Professor at Politecnico di Milano, Italy and Visiting Professor at the University of Texas at Austin and at George Mason University, USA.

His main research interests are: artificial intelligence, computational intelligence, intelligent systems, machine learning, pattern analysis and recognition, signal and image processing, biometrics, intelligent measurement systems, industrial applications, digital processing architectures, fault tolerance, dependability, and cloud computing infrastructures. Original results have been published in more than 400 papers in international journals, proceedings of international conferences, books, and book chapters.

He is Fellow of the IEEE, Distinguished Scientist of ACM, and Senior Member of INNS. He is President of the IEEE Systems Council (2020-21), and has been IEEE Vice President for Technical Activities (2015), IEEE Director, President of the IEEE Computational Intelligence Society, Vice President for Education of the IEEE Biometrics Council, Vice President for Publications of the IEEE

Instrumentation and Measurement Society and the IEEE Systems Council, and Vice President for Membership of the IEEE Computational Intelligence Society.

He is Editor-in-Chief of the IEEE Systems Journal (2013-19), and Associate Editor of the IEEE Transactions on Cloud Computing, and has been Associate Editor of the IEEE Transactions on Computers, the IEEE Transactions on Neural Networks, the IEEE Transactions on Instrumentation and Measurement, and IEEE Access.

He received the IEEE Instrumentation and Measurement Society Technical Award (2002) and the IEEE TAB Hall of Honor (2019). He is Honorary Professor at: Obuda University, Hungary; Guangdong University of Petrochemical Technology, China; Northeastern University, China; Muroran Institute of Technology, Japan; and the Amity University, India.