

Invited Speaker 14

## Sustainable societies and industries 5.0

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### Abstract

Today's cities have transcended their historical simplicity into multifaceted ecosystems teeming with challenges and opportunities. The quest for environmentally conscious and sustainable societies has never been more pressing, led by industries that profoundly influence our urban fabric. From the spectre of CO<sub>2</sub> emissions to the challenge of using eco processes or from the promotion of product circulation to the task of waste management or reuse of natural resources (e.g., water) extensive usages, cities grapple with complex issues that reverberate through the lives of their inhabitants. The population remains largely unaware of the tangible repercussions of their daily actions. We must be alert to these issues, reduce our carbon footprint, and decrease natural resource usage. Unfortunately, there is no single solution to the earth's problems. Still, Information and Communication Technologies (ICT), particularly Artificial Intelligence (AI) and Gamification can help make it a better place to live. This presentation aims to draw attention to some of society's problems and show some solutions that are being developed to help create a more sustainable environment in the future. From predictive analytics to intelligent resource management systems, AI is key to unlocking unprecedented insights and efficiencies in our quest for greener, more sustainable urban environments. Gamification is a complementary key because it can help engage citizens and motivate them to perform more green actions. Raising people's awareness and endowing them with the correct technologies are the keys to an increasingly sustainable society and even more digital and resource-optimized industry.

**Keywords:** information and communication technologies; artificial intelligence; gamification; sustainable societies; resource-optimized industry

### Acknowledgments

This work received no external funding.



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