

2<sup>nd</sup> World Congress on

# Automation and Robotics

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## Design and development of human-analogous control systems via real-time human-in-the-loop (RTHL) simulation

**Mehran Mehrandezh**

University of Regina, Canada

In the animal kingdom, humans learn by acting on their environment, observing the consequence or effect of their acts and learning to adjust their actions accordingly over time to improve the output generated by their actions. They also learn to optimize their actions through reinforced learning. The ability of humans to optimize their behavior in natural systems can be expanded to that in man-made engineered systems as well. There is a world-wide effort towards developing control systems that are inspired from human intellect. Dr. Mehrandezh's research revolves around the development of new algorithms to control systems with unknown dynamics. He has applied his algorithms on scenarios such as: Model-free control of an inverted pendulum, as a test-bench control systems and control of an adaptable and re-configurable climbing robot.

[mehranmehrandezh@gmail.com](mailto:mehranmehrandezh@gmail.com)

## Automation and robotics for a sustainable future

**Eduard Babulak**

Institute of Technology and Business in Ceske Budejovice, Czech Republic

This presentation is about the future computing, automation, robotics and its impacts on economy, industry, business, academia and daily life for everyone. How the process of automation and future computerization, will become essential part of all that we do, use and depend on 24/7 all over the world will be discussed. I will also discuss, "What's Beyond the Internet"? I promote an interactive discussion to make sure that everyone regardless of their own field of studies or specializations may contribute to discussion in light of the importance of future automation and its direct impact on society today and tomorrow.

[ebabulak@mum.edu](mailto:ebabulak@mum.edu)