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## **Prevention through Design (PtD): A Novel and Sustainable Strategy for Improving Occupational Safety, Health and Ergonomics**

**Professor Sang D. Choi<sup>1\*</sup>(Ph.D., CSP, CPE)**

<sup>1</sup>Korea Advanced Institute of Science and Technology (KAIST) Department of Industrial & Systems Engineering

<sup>2</sup>University of Wisconsin (UW) - Whitewater Department of Occupational & Environmental Safety & Health

### **ABSTRACT**

This plenary talk introduces the National Institute for Occupational Safety and Health (US NIOSH)'s Prevention through Design (PtD) initiatives, addressing occupational safety, health and ergonomics needs by eliminating hazards and minimizing risks to workers throughout the life cycle of work premises, tools, equipment, machinery, substances, and work processes including their construction, manufacture, use, maintenance, and ultimate disposal or re-use. This presentation provides the effective applications of PtD to offer systematic and practical interventions for occupational safety and health (OSH) professionals. The Research to Practice to Research (RtPtR) model is also introduced to show how the prevention through design "good practices" can be effectively adapted to the workplace. Moreover, this session demonstrates the essential role of transferring occupational ergonomics and safety knowledge and interventions into highly effective prevention practices for improving the worker well-being and operational excellence in the workplace.

**Keywords:** Prevention through Design, PtD, Research to Practice to Research, RtPtR, Occupational Safety Ergonomics and Health