



The ISSA Section Machine and System Safety,
 Working Group Human Factors, Ergonomics and Safe Machine
 <<https://www.safe-machines-at-work.org/human-factors>>

- presented their activities at the 10th International Conference on Applied Human Factors and Ergonomics (AHFE), affiliated 6th International Conference on Safety Management and Human Factors, July 24-28, 2019, Washington D.C., USA.
- published recent research findings as:
 Peter Nickel, Peter Bärenz, Siegfried Radandt, Michael Wichtl, Urs Kaufmann, Luigi Monica, Hans-Jürgen Bischoff & Manobhram Nellutla (2020). Human-system interaction design requirements to improve machinery and systems safety. *Advances in Intelligent Systems and Computing (AISC)* 969, pp. 3-13.
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Human-system interaction design requirements to improve machinery and systems safety

Abstract: The Human-System Interaction (HSI) approach focuses on analysis, design, and evaluation of work systems for humans to interact with technical systems ergonomically designed for human use. An initial framework is developed for human factors and ergonomics (HFE) design requirements with regard to occupational safety and health (OSH). The framework refers to concept, criteria and intended user populations in work systems design. Some future work systems in industry 4.0 and cyber-physical systems call for emphasising human information processing with interchange of information variable and dynamic in quantity, quality and time. Taking into account new solutions and challenges in digital manufacturing, selected requirements, explanations, examples and references should inform manufacturers and health and safety experts at the shop floor level about HFE and OSH. Information presented at an internet platform, should assist in how to integrate these factors into construction of machinery or other technical installations, in workplace, equipment and software design and for practical use in HSI. <https://doi.org/10.1007/978-3-030-20497-6_1>