

## **Human Factors in Simulation, Planning and Guidance**

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“Human Factors” integrates contributions from numerous scientific disciplines and is concerned with the understanding of interactions among humans and other elements within socio-technical systems. Human Factors aim to identify factors contributing to smooth and safe interactions, e.g. in groups/teams, human-machine-interactions, but also aim for the optimization of an overall system performance and the well-being of humans. Human Factors as a scientific discipline has seen growing interest in simulation and modelling of pedestrians and crowds, especially in evacuations. Before the Human Factors approach had been considered, humans were modelled more or less as homogeneous, without individual emotion, motivation or physical needs. The presentation will provide an overview of recent Human Factors research on pedestrians and crowds from a psychological and sociological perspective. The focus will be on the preconditions for safe and fast evacuations including a discussion of human behavior, cognition, motivation and social variables.