

## Spatial representations in Human Factors/Ergonomics research

Francesco Di Nocera

**Abstract** Human Factors/Ergonomics (HF/E) researchers have investigated the cognitive representation of space in various forms. Application of spatial metaphors to information systems is a well-known example of such research activities. Indeed, spatial metaphors have been used to alleviate disorientation in both 2D and 3D displays, and a great deal of studies has been conducted in the field. Another popular example is the Proximity Compatibility Principle introduced by Carswell and Wickens over 10 years ago. This principle specifies that displays relevant to a common task or mental operation should be rendered close together in perceptual space. In

general, HF/E researchers contributed very much to the development of theories and models of spatial cognition, and the application of those theories and models to real world issues represents a relevant part of HF/E professionals' knowledge. This symposium will be devoted at discussing the topic of spatial representation in relation to three very different applications: head-up displays, auditory displays, in-car devices.

**Keywords** Attention • Space • Interfaces • Human factors • Ergonomics • Human effectiveness

