
Editorial

Ephraim Suhir

Department of Mechanical and Materials Engineering,
Portland State University,
P.O. Box 751, Portland, OR 97207-0751, USA
and
Institute of Sensor and Actuator Systems,
E366, TU-Vienna, Gussausstrasse 27-29,
A-1040, Wien, Austria
Email: suhire@aol.com

Biographical notes: Ephraim Suhir is a foreign full member of the National Academy of Engineering, Ukraine; Life Fellow of the IEEE, the ASME and the SPIE; Fellow of the APS, the IoP (UK), the IMAPS and the SPE; and Associate Fellow of the AIAA. He has authored 400+ publications, presented numerous keynote and invited talks worldwide, and received many professional awards, including the 1996, Bell Labs Distinguished Member of Technical Staff Award and the 2004, ASME Worcester Read Warner Medal for outstanding contributions to the permanent literature of engineering. He is the third Russian American, after Timoshenko and Sikorsky (!), who received this prestigious award.

Cognitive or intellectual ability to better perform work tasks, make better and more timely decisions, improve problem-solving capacity and other work-related human qualities can be enhanced dramatically if the impact of human factors is quantified, predicted and, if possible and appropriate, even specified. Some promising methods for solving thorny problems of the never-completely-unlikely human errors are highlighted in papers of this special issue. These papers provide a useful step forward on the way to narrowing the gap between the work of human psychologists and system engineers, when human factors and the performance of equipment or instrumentation contribute jointly to the outcome of a complex mission or an extraordinary situation. Quantification of the role of the human factor is also an important step forward on the way to the development of fully integrated, practical and effective human-in-the-loop predictive models. Such models will lead to safer, more successful and more cost-effective systems and enterprises.