

# Design Problems and Knowledge Management

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### A new book has been published

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On March 1, 2023, **Springer Nature** announced the publication of a book written by Yuri Spirochkin: *Human Factors and Design*. This book is available on <https://link.springer.com/book/10.1007/978-981-19-8832-5>. The following is a summary from the book.

#### Summary

Human involvement in the life cycle of complex technical systems: nuclear power plants, air- and spacecraft, ground vehicles, etc., creates a specific phenomenon known as “human factors”. Existing methods for analyzing this phenomenon and managing it for safety purposes relate mainly to operation of systems. They consider certain features of human nature and allow an assessment of human behavior in interaction with machines, including human errors. The author extends analysis to the design stage of a system. The analysis reveals gaps in the existing approaches to human factors in this stage and identifies possibilities to increase safety from the standpoint of designer. These possibilities cover a shift in the design paradigm, and improvements in the methods used for solving engineering problems and managing design activities. Such a shift and improvements are necessary because of the tightening of safety requirements, which is being carried out largely due to accidents and catastrophes that have caused a great resonance in society. The book is intended primarily for designers, analysis engineers and researchers, as well as managers at organizations working in aviation and space engineering, nuclear power and transportation, or creating other potentially dangerous machines and infrastructure facilities. It can be useful also for students of technical universities and graduate students. Factual data on achievements and ideas in hi-tech industries can attract the attention of other technology-fascinated readers.

#### Citation

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