DESCRIPTION

A presentation of real examples of industrial uses for formal methods such as SCADE, the B-Method, ControlBuild, Matelo, etc. in various fields, such as railways, aeronautics, and the automotive industry, the purpose of this book is to present a summary of experience on the use of these “formal methods” (such as proof and model-checking) in industrial examples of complex systems.

It is based on the experience of people who are currently involved in the creation and evaluation of safety critical system software. The involvement of people from within the industry allows us to avoid the usual problems of confidentiality which could arise and thus enables us to supply new useful information (photos, architecture plans, real examples, etc.).

ABOUT THE AUTHOR

Jean-Louis Boulanger is currently an Independent Safety Assessor (ISA) in the railway domain focusing on software elements. He is a specialist in software engineering (requirement engineering, semi-formal and formal method, proof and model-checking). He also works as an expert for the French notified body CERTIFER in the field of certification of safety critical railway applications based on software (ERTMS, SCADA, automatic subway, etc.). His research interests include requirements, software verification and validation, traceability and RAMS with a special focus on SAFETY.