

1. Record Nr.	UNINA9910437562903321
Titolo	Industrial Deployment of System Engineering Methods // edited by Alexander Romanovsky, Martyn Thomas
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2013
ISBN	9783642331701 364233170X
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (x, 259 pages) : illustrations (some color)
Collana	Gale eBooks
Altri autori (Persone)	RomanovskyAlexander ThomasMartyn
Disciplina	004 005.1 005.131 620.001
Soggetti	Software engineering Machine theory Industrial engineering Production engineering Software Engineering Formal Languages and Automata Theory Industrial and Production Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- DEPLOY Integrated Project -- Experience of Deployment in the Automotive Industry -- Improving Railway Data Validation with ProB -- Deployment in the Space Sector -- Business Information Sector -- Formal Methods as an Improvement Tool -- Critical Software Technologies Experience with Formal Methods -- Experiences Developing Event-B in an Industrial Microprocessor Development -- Industrial Deployment of Formal Methods: Trends and Challenges -- Introducing Formal Methods into Existing Industrial Practices Tooling -- Technology Transfer -- After and Outside DEPLOY: the DEPLOY Ecosystems -- Industrial Software Engineering and Formal

Methods.- App. A An Introduction to the Event-B Modelling Method --  
App. B Evidence-Based Assistance for the Adoption of Formal  
Methods in Industry.

---

## Sommario/riassunto

A formal method is not the main engine of a development process, its contribution is to improve system dependability by motivating formalisation where useful. This book summarizes the results of the DEPLOY research project on engineering methods for dependable systems through the industrial deployment of formal methods in software development. The applications considered were in automotive, aerospace, railway, and enterprise information systems, and microprocessor design. The project introduced a formal method, Event-B, into several industrial organisations and built on the lessons learned to provide an ecosystem of better tools, documentation and support to help others to select and introduce rigorous systems engineering methods. The contributing authors report on these projects and the lessons learned. For the academic and research partners and the tool vendors, the project identified improvements required in the methods and supporting tools, while the industrial partners learned about the value of formal methods in general. A particular feature of the book is the frank assessment of the managerial and organisational challenges, the weaknesses in some current methods and supporting tools, and the ways in which they can be successfully overcome. The book will be of value to academic researchers, systems and software engineers developing critical systems, industrial managers, policymakers, and regulators.

---