

Springer

1st
edition1st ed. 2021, XIII, 404 p.
148 illus., 83 illus. in color.**Printed book**

Hardcover

Printed book

Hardcover

ISBN 978-3-030-62135-3

£ 44,99 | CHF 66,61 | 49,99 € |

54,99 € (A) | 53,49 € (D)

Available

Discount group

Standard (0)

Product category

Professional book

Computer Science : Software Engineering

Böhm, W., Broy, M., Klein, C., Pohl, K., Rumpe, B., Schröck, S. (Eds.)

Model-Based Engineering of Collaborative Embedded Systems

Extensions of the SPES Methodology

- Presents methodologies for the effective and efficient development of collaborative embedded systems
- Provides techniques to specify controlled forms of dynamic structure
- Emphasizes reliability and variability of individual as well as networked systems of systems
- Provides applications in automotive systems robotics, industrial production and power generation

This Open Access book presents the results of the "Collaborative Embedded Systems" (CrES) project, aimed at adapting and complementing the methodology underlying modeling techniques developed to cope with the challenges of the dynamic structures of collaborative embedded systems (CESs) based on the SPES development methodology. In order to manage the high complexity of the individual systems and the dynamically formed interaction structures at runtime, advanced and powerful development methods are required that extend the current state of the art in the development of embedded systems and cyber-physical systems. The methodological contributions of the project support the effective and efficient development of CESs in dynamic and uncertain contexts, with special emphasis on the reliability and variability of individual systems and the creation of networks of such systems at runtime. The project was funded by the German Federal Ministry of Education and Research (BMBF), and the case studies are therefore selected from areas that are highly relevant for Germany's economy (automotive, industrial production, power generation, and robotics). It also supports the digitalization of complex and transformable industrial plants in the context of the German government's "Industry 4.0" initiative, and the project results provide a solid foundation for implementing the German government's high-tech strategy "Innovations for Germany" in the coming years.

Order online at [springer.com/booksellers](https://www.springer.com/booksellers)**Springer Nature Customer Service Center GmbH**

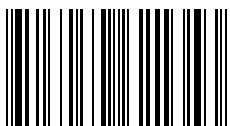
Customer Service

Tiergartenstrasse 15-17

69121 Heidelberg

Germany

T: +49 (0)6221 345-4301

row-booksellers@springernature.com

ISBN 978-3-030-62135-3 / BIC: UMZ / SPRINGER NATURE: SCI14029

Prices and other details are subject to change without notice. All errors and omissions excepted. Americas: Tax will be added where applicable. Canadian residents please add PST, QST or GST. Please add \$5.00 for shipping one book and \$ 1.00 for each additional book. Outside the US and Canada add \$ 10.00 for first book, \$5.00 for each additional book. If an order cannot be fulfilled within 90 days, payment will be refunded upon request. Prices are payable in US currency or its equivalent.