Kerstin Lemke · Christof Paar · Marko Wolf (Eds.)

## **Embedded Security in Cars**

Securing Current and Future Automotive IT Applications

With 53 Figures and 25 Tables



## Contents

Part I Introduction
Embedded IT Security in Automotive Application – An Emerging Area Christof Paar
Part II Security in the Automotive Domain
Aspects of Secure Vehicle Software Flashing Winfried Stephan, Solveig Richter, Markus Müller
Secure Software Delivery and Installation in Embedded Systems  André Adelsbach, Ulrich Huber, Ahmad-Reza Sadeghi
Anti-theft Protection: Electronic Immobilizers Kerstin Lemke, Ahmad-Reza Sadeghi, Christian Stüble
A Review of the Digital Tachograph System  Igor Furgel, Kerstin Lemke
Secure In-Vehicle Communication  Marko Wolf, André Weimerskirch, Christof Paar
A Survey of Research in Inter-Vehicle Communications  Jun Luo, Jean-Pierre Hubaux
Part III Embedded Security Technologies
Fundamentals of Symmetric Cryptography Sandeep Kumar, Thomas Wollinger

## VIII Contents