

# Books in Logic and Computer Science

EGON BÖRGER

## 1 Books

### 1. Berechenbarkeit, Komplexität, Logik.

Eine Einführung in Algorithmen, Sprachen und Kalküle unter besonderer Berücksichtigung ihrer Komplexität.

Verlag Vieweg, Braunschweig 1985 (1), 1986(2): pp. XVIII+469; 1992(3): pp. XVIII+499. ISBN: 978-3-528-08928-3. e-Book Springer ISBN 978-3-322-87777-2

- republished electronically (available as eBook and as printed version) in Springer Book Archives, 2013
- **Computabilità, Complessità, Logica.**  
Vol.1: *Teoria della Computazione*.  
Ital.Translation, Bollati Boringhieri, Torino 1989, pp.369.
- **Computability, Complexity, Logic.**  
English Translation, in: *Studies in Logic and the Foundations of Mathematics*, vol. 128, North-Holland, Amsterdam 1989, pp. XX+592.

See <http://www.di.unipi.it/boerger/cclbook.html> for the table of contents and <http://www.di.unipi.it/boerger/cclbookreviews.html> for 16 reviews.

### 2. The Classical Decision Problem.

(With E.Grädel, Y.Gurevich)

Perspectives in Mathematical Logic, Springer-Verlag Berlin, Heidelberg etc., 1997, pp. XII+482, ISBN 3-540-57073-X. Second printing in "Universitext", Springer-Verlag 2001, ISBN 3-540-42324-9. e-book ISBN 978-3-642-59207-2

See <http://www.di.unipi.it/boerger/decpbllbook.html> for Preface, Introduction, Table of Contents and a review.

Republished electronically (available as eBook and as printed version) in Springer Book Archives

**3. Java and the Java Virtual Machine: Definition, Verification, Validation.**

(With R. Stärk and J. Schmid)

Springer-Verlag (ISBN 3-540-42088-6) Berlin-Heidelberg-New York, 2001, pp.X+381+CD-ROM. Republished in 2003 in Springer's Textbook CD-ROM. Republished electronically (available as eBook and as printed version) in Springer Book Archives ISBN 978-3-642-59495-3

See <http://www.di.unipi.it/~boerger/jbook> for some highlights and downloadable material including slides for lecturing. Pieter Hartel and Luc Moreau dedicate to the discussion of this book an entire section (6.2) of their authoritative review *Formalizing the Safety of Java, the Java Virtual Machine and Java Card* (ACM Computing Surveys, 33(4):517-558 2001, see <http://www.ub.utwente.nl/webdocs/ctit/1/00000050.pdf>). On page 540 of Section 6.2 they resume their review by the statement that the book *gives the most comprehensive and consistent formal account of the combination of Java and the JVM*.

**4. Abstract State Machines. A Method for High-Level System Design and Analysis.**

(With R. Stärk)

Springer-Verlag (ISBN 3-540-00702-4) Berlin-Heidelberg-New York, 2003, pp.X+438+CD-ROM. See <http://www.di.unipi.it/~boerger/AsmBook> for downloadable material including slides for lecturing and a review from *The Computer Journal* 47 (2) 2004, pg. 270-271.

Republished electronically (available as eBook and as printed version) in Springer Book Archives ISBN 978-3-642-18216-7

**5. Subject-Oriented Business Process Management.**

(With A. Fleischmann, W. Schmidt, C. Stary, S. Obermeier)

pg.XV+375, Springer-Verlag, Open Access Book, 2012 (ISBN: 978-3-642-32391-1 (Print), 978-3-642-32392-8 (eBook Online), DOI 10.1007/978-3-642-32392-8). See [springerlink.com](http://springerlink.com) and [www.springer.com/978-3-642-32391-1](http://www.springer.com/978-3-642-32391-1).

Translation of the German original *Subjektorientiertes Prozessmanagement*, Hanser-Verlag, München, pp. 434, 2011. ISBN-10: 3-446-42707-7 and ISBN-13: 978-3-446-42707-5.

See <http://www.hanser.de/buch.asp?isbn=978-3-446-42707-5&area=Wirtschaft>

**6. Modeling Companion for Software Practitioners.**

(With A. Raschke)

XX + 349 pages, Springer 2018. DOI 10.1007/978-3-662-56641-1, eBook ISBN 978-3-662-56641-1, Softcover ISBN 978-3-662-56639-8

**7. Structures of Computing. A Guide to Practice-Oriented Theory.**

(With V. Gervasi)

Springer 2024. eBook ISBN 978-3-031-54358-6, Print ISBN: 978-3-031-54357-9