1. Record Nr. UNISA996465908403316

Titolo	Formal syntax and semantics of Java / / Jim Alves-Foss, editor
Pubbl/distr/stampa	Berlin ; ; Heidelberg ; ; New York : , : Springer, , [1999] Â©1999
ISBN	3-540-48737-9
Edizione	[1st ed. 1999.]
Descrizione fisica	1 online resource (X, 410 p.)
Collana	Lecture Notes in Computer Science ; ; 1523
Disciplina	005.133
Soggetti	Java (Computer program language) Programming languages (Electronic computers) - Semantics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Formal Grammar for Java -- Formal Grammar for Java -- Type Soundness -- Describing the Semantics of Java and Proving Type Soundness -- Proving Java Type Soundness -- Machine-Checking the Java Specification: Proving Type-Safety -- Semantic Approaches -- An Event-Based Structural Operational Semantics of Multi-threaded Java -- Dynamic Denotational Semantics of Java -- A Programmer’s Reduction Semantics for Classes and Mixins -- A Formal Specification of Java? Virtual Machine Instructions for Objects, Methods and Subroutines -- The Operational Semantics of a Java Secure Processor -- A Programmer Friendly Modular Definition of the Semantics of Java.
Sommario/riassunto	Java, undoubtedly, has its roots in embedded systems and the Web. Nevertheless, it is a fully functional high-level programming language that can provide users with a wide range of functionality and versatility. This thoroughly cross-reviewed state-of-the-art survey is devoted to the study of the syntax and semantics of Java from a formal-methods point of view. It consists of the following chapters by leading researchers: Formal Grammar for Java; Describing the Semantics of Java and Proving Type Soundness; Proving Java Type Soundness; Machine-Checking the Java Specification: Proving Type-Safety; An Event-Based Structural Operational Semantics of Multi-Threaded Java Dynamic Denotational Semantics of Java; A Programmer's Reduction Semantics for Classes and Mixins; A Formal Specification of Java Virtual Machine

Instructions for Objects, Methods and Subroutines; The Operational Semantics of a Java Secure Processor; A Programmer Friendly Modular Definition of the Semantics of Java.