Record Nr. UNISA996465604303316 Aliasing in Object-Oriented Programming [[electronic resource]]: Titolo Types, Analysis and Verification / / edited by David Clarke, Tobias Wrigstad, James Noble Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, Pubbl/distr/stampa **ISBN** 3-642-36946-4 Edizione [1st ed. 2013.] 1 online resource (VIII, 515 p. 134 illus.) : digital Descrizione fisica Programming and Software Engineering; ; 7850 Collana 005.117 Disciplina Soggetti Computer programming Operating systems (Computers) Software engineering Programming languages (Electronic computers) Computers **Programming Techniques Operating Systems** Software Engineering Programming Languages, Compilers, Interpreters History of Computing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Minimal Level Cataloging Plus. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Beyond the Geneva Convention on the Treatment of Object Aliasing. - The Geneva Convention on the Treatment of Object Aliasing. - Ownership Types: A Survey.- Notions of Aliasing and Ownership. - Understanding Ownership Types with Dependent Types.- Object Graphs with Ownership Domains: An Empirical Study.- Alias Control for Deterministic Parallelism.- Alias Analysis for Object-Oriented Programs.- Immutability.- Fractional Permissions.- Object Ownership in Program Verification.- State Based Encapsulation for Modular Reasoning about Behavior-Preserving Refactorings.- Separation Logic for Object-Oriented Programming. - VeriFast for Java: A Tutorial --Confined Roles and Decapsulation in Object Teams — Contradiction or Synergy.- Location Types for Safe Programming with Near and Far

References.- The Future of Aliasing in Parallel Programming.- Aliasing Visions: Ownership and Location. - Alias Analysis: Beyond the Code. - How, Then, Should We Program.- A Retrospective on Aliasing Type Systems: 2012-2022.- Structured Aliasing. The Geneva Convention on the Treatment of Object Aliasing. - Ownership Types: A Survey. - Notions of Aliasing and Ownership.- Understanding Ownership Types with Dependent Types.- Object Graphs with Ownership Domains: An Empirical Study.- Alias Control for Deterministic Parallelism.- Alias Analysis for Object-Oriented Programs.- Immutability.- Fractional Permissions.- Object Ownership in Program Verification.- State Based Encapsulation for Modular Reasoning about Behavior-Preserving Refactorings.- Separation Logic for Object-Oriented Programming. - VeriFast for Java: A Tutorial -- Confined Roles and Decapsulation in Object Teams — Contradiction or Synergy.- Location Types for Safe Programming with Near and Far References.- The Future of Aliasing in Parallel Programming. - Aliasing Visions: Ownership and Location. - Alias Analysis: Beyond the Code.- How, Then, Should We Program.- A Retrospective on Aliasing Type Systems: 2012-2022.- Structured Aliasing. .

## Sommario/riassunto

This book presents a survey of the state-of-the-art on techniques for dealing with aliasing in object-oriented programming. It marks the 20th anniversary of the paper The Geneva Convention On The Treatment of Object Aliasing by John Hogg, Doug Lea, Alan Wills, Dennis de Champeaux and Richard Holt. The 22 revised papers were carefully reviewed to ensure the highest quality. The contributions are organized in topical sections on the Geneva convention, ownership, concurrency, alias analysis, controlling effects, verification, programming languages, and visions.