1. Record Nr. UNINA9910731403603321 Autore Henriksen Troels **Titolo** ARRAY 2023: Proceedings of the 9th ACM SIGPLAN International Workshop on Libraries, Languages and Compilers for Array Programming / / Troels Henriksen, Artioms Sinkarovs New York, NY:,: Association for Computing Machinery,, 2023 Pubbl/distr/stampa Descrizione fisica 1 online resource (74 pages) Disciplina 005.133 APL (Computer program language) Soggetti Compilers (Computer programs) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Welcome to the 2023 edition on the ACM SIGPLAN Workshop on Sommario/riassunto Libraries, Languages and Compilers for Array Programming, co-located with PLDI 2023. Array programming unites two uncommon properties. As an abstraction, it directly mirrors mathematical concepts commonly used in many fields from natural sciences over engineering to financial modeling. As a language feature, it exposes regular control flow, exhibits structured data dependencies, and lends itself to many types of program analysis. Furthermore, many modern parallel computer architectures are well-suited to efficiently execute array operations. The ARRAY series of workshops explores all aspects of array programming, such as languages, formal semantics, array theories, productivity/performance tradeoffs, libraries, notation such as including axis- and index-based approaches, intermediate languages,

and efficient compilation.