

Record in the Commens Bibliography. Retrieved from
http://www.commens.org/bibliography/journal_article/maarten-de-rijke-1995-logic-peirce-algebras, 21.06.2025.

Type: Article in Journal
Author: Maarten, De Rijke
Title: The Logic of Peirce Algebras
Year: 1995
Journal: Journal of Logic, Language and Information
Volume: 4
Issue: 3
Pages: 227-250
Keywords: Peirce algebras, Modal logic, Algebraic logic, Relation algebras, Logics of programs, Knowledge representation
Abstract: Peirce algebras combine sets, relations and various operations linking the two in a unifying setting. This paper offers a modal perspective on Peirce algebras. Using modal logic a characterization of the full Peirce algebras is given, as well as a finite axiomatization of their equational theory that uses so-called unorthodox derivation rules. In addition, the expressive power of Peirce algebras is analyzed through their connection with first-order logic, and the fragment of first-order logic corresponding to Peirce algebras is described in terms of bisimulations.
DOI: 10.1007/BF01049414
Language: English