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Titolo	An introduction to many-valued and fuzzy logic : semantics, algebras, and derivation systems // Merrie Bergmann [[electronic resource]]
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Nota di contenuto	Review of classical propositional logic -- Review of classical first-order logic -- Alternative semantics for truth-values and truth-functions : numeric truth-values and abstract algebras -- Three-valued propositional logics : semantics -- Derivation systems for three-valued propositional logic -- Three-valued first-order logics : semantics -- Derivation systems for three-valued first-order logics -- Alternative semantics for three-valued logic -- The principle of charity reconsidered and a new problem of the fringe -- Fuzzy propositional logics : semantics -- Fuzzy algebras -- Derivation systems for fuzzy propositional logics -- Fuzzy first-order logics : semantics -- Derivation systems for fuzzy first-order logics -- Extensions of fuzziness -- Fuzzy membership functions.
Sommario/riassunto	Professor Merrie Bergmann presents an accessible introduction to the subject of many-valued and fuzzy logic designed for use on undergraduate and graduate courses in non-classical logic. Bergmann discusses the philosophical issues that give rise to fuzzy logic - problems arising from vague language - and returns to those issues as

logical systems are presented. For historical and pedagogical reasons, three-valued logical systems are presented as useful intermediate systems for studying the principles and theory behind fuzzy logic. The major fuzzy logical systems - Lukasiewicz, Godel, and product logics - are then presented as generalisations of three-valued systems that successfully address the problems of vagueness. A clear presentation of technical concepts, this book includes exercises throughout the text that pose straightforward problems, that ask students to continue proofs begun in the text, and that engage students in the comparison of logical systems.
