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	Nota di contenuto	The p-adic numbers Qp -- Some classical analysis on Qp -- The Artin-Hasse exponential function -- The completion of the algebraic closure of Qp -- Zeta functions -- Analytic functions on Zp -- Arithmetic differential operators on Zp -- A general view of arithmetic differential operators -- Analyticity of arithmetic differential operators -- Characteristic functions of discs in Zp: p-adic coordinates -- Characteristic functions of discs in Zp: harmonic coordinates -- Some differences between (Se(B-operators over Zp and Zur p.
	Sommario/riassunto	The study of arithmetic differential operators is a novel and promising area of mathematics. This complete introduction to the subject starts with the basics: a discussion of p-adic numbers and some of the classical differential analysis on the field of p-adic numbers leading to

the definition of arithmetic differential operators on this field. Buium's theory of arithmetic jet spaces is then developed succinctly in order to define arithmetic operators in general. Features of the book include a comparison of the behaviour of these operators over the p-adic integers and their behaviour over the unramified completion, and a discussion of the relationship between characteristic functions of p-adic discs and arithmetic differential operators that disappears as soon as a single root of unity is adjoined to the p-adic integers. This book is essential reading for researchers and graduate students who want a first introduction to arithmetic differential operators over the p-adic integers.