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Autore	Greene, Thomas M.
Titolo	The disciplines of criticism : essays in literary theory, interpretation and history / ed. by Pater Demetz, Thomas Greene and Lowry Nelson jr.
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Altri autori (Persone)	Demetz, Peter Nelson, Lowry <jr.>
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Lingua di pubblicazione	Inglese
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Autore	Omondi Amos R
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Collana	Advances in computer science and engineering: Texts ; v. 2
Altri autori (Persone)	PremkumarBenjamin
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>Contents; Preface ; Acknowledgements; 1. Introduction; 1.1 Conventional number systems; 1.2 Redundant signed-digit number systems; 1.3 Residue number systems and arithmetic; 1.3.1 Choice of moduli; 1.3.2 Negative numbers; 1.3.3 Basic arithmetic; 1.3.4 Conversion; 1.3.5 Base extension; 1.3.6 Alternative encodings; 1.4 Using residue number systems; 1.5 Summary; References; 2. Mathematical fundamentals; 2.1 Properties of congruences; 2.2 Basic number representation; 2.3 Algebra of residues; 2.4 Chinese Remainder Theorem; 2.5 Complex residue-number systems; 2.6 Redundant residue number systems</p> <p>2.7 The Core Function2.8 Summary; References; 3. Forward conversion; 3.1 Special moduli-sets; 3.1.1 {<math>2n-1</math>, <math>2n</math>; <math>2n+1g</math>} moduli-sets; 3.1.2 Extended special moduli-sets; 3.2 Arbitrary moduli-sets: look-up tables; 3.2.1 Serial/sequential conversion; 3.2.2 Sequential/parallel conversion: arbitrary partitioning; 3.2.3 Sequential/parallel conversion: periodic partitioning; 3.3 Arbitrary moduli-sets: combinational logic; 3.3.1 Modular exponentiation; 3.3.2 Modular exponentiation with periodicity; 3.4 Summary; References; 4. Addition; 4.1 Conventional adders; 4.1.1 Ripple adder</p> <p>4.1.2 Carry-skip adder4.1.3 Carry-lookahead adders; 4.1.4 Conditional-sum adder; 4.1.5 Parallel-prex adders; 4.1.6 Carry-select adder; 4.2 Residue addition: arbitrary modulus; 4.3 Addition modulo <math>2n-1</math>; 4.3.1 Ripple adder; 4.3.2 Carry-lookahead adder; 4.3.3 Parallel-prefix adder; 4.4 Addition modulo <math>2n + 1</math>; 4.4.1 Diminished-one addition; 4.4.2 Direct addition; 4.5 Summary; References; 5. Multiplication; 5.1 Conventional multiplication; 5.1.1 Basic binary multiplication; 5.1.2 High-radix multiplication; 5.2 Conventional division; 5.2.1 Subtractive division; 5.2.2 Multiplicative division</p> <p>5.3 Modular multiplication: arbitrary modulus5.3.1 Table lookup; 5.3.2 Modular reduction of partial products; 5.3.3 Product partitioning; 5.3.4 Multiplication by reciprocal of modulus; 5.3.5 Subtractive division; 5.4 Modular multiplication: modulus <math>2n-1</math>; 5.5 Modular multiplication: modulus <math>2n + 1</math>; 5.6 Summary; References; 6. Comparison, overflow-detection, sign-determination, scaling, and division; 6.1 Comparison; 6.1.1 Sum-of-quotients technique; 6.1.2 Core Function and parity; 6.2 Scaling; 6.3 Division; 6.3.1 Subtractive division; 6.3.1.1 Basic subtractive division</p> <p>6.3.1.2 Pseudo-SRT division6.3.2 Multiplicative division; 6.4 Summary; References; 7. Reverse conversion; 7.1 Chinese Remainder Theorem; 7.1.1 Pseudo-SRT implementation; 7.1.2 Base-extension implementation; 7.2 Mixed-radix number systems and conversion; 7.3 The Core Function; 7.4 Reverse converters for <math>f_{2n-1}</math>; <math>2n</math>; <math>2n+1g</math> moduli-sets; 7.5 High-radix conversion; 7.6 Summary; References; 8. Applications; 8.1 Digital signal processing; 8.1.1 Digital filters; 8.1.1.1 Finite Impulse Response Iters; 8.1.1.2 Infinite Impulse Response Filters; 8.1.2 Sum-of-products evaluation</p> <p>8.1.3 Discrete Fourier Transform</p>
Sommario/riassunto	Residue number systems (RNSs) and arithmetic are useful for several reasons. First, a great deal of computing now takes place in embedded processors, such as those found in mobile devices, for which high speed and low-power consumption are critical; the absence of carry propagation facilitates the realization of high-speed, low-power arithmetic. Second, computer chips are now getting to be so dense that full testing will no longer be possible; so fault tolerance and the general area of computational integrity have become more important.

RNSs are extremely good for applications such as digital

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