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and scaling; 2.6 Summary; Chapter 3 Interactive Generation of Fractal Images; 3.1 IFS and Fractals; 3.2 Generation of Fractals; 3.2.1 Multi Lens Copy Machines; 3.3 Computer Implementation; 3.3.1 The Random Algorithm; 3.4 Designing Fractals; 3.4.1 How does the program work; 3.5 Software Package; 3.5.1 Background; 3.5.2 Computer Implementation; 3.5.3 Sample Output; 3.6 Mathematical Expression of IFS; 3.6.1 RIFS; 3.6.2 Modified MRCM; 3.7 Summary; Chapter 4 Generation of a Class of Hybrid Fractals; 4.1 Background 4.1.1 Parallel grammar: A critical review 4.1.2 Rules for biological phenomenon; 4.1.3 Some definitions and examples; 4.1.4 Applications of L-System; 4.1.5 Turtle graphics vs L-System; 4.1.6 Generation of fractal figures; 4.1.7 About L-System; 4.1.8 An L-system example; 4.1.9 Representing mathematical sequence in L-System; 4.2 The Approach; 4.2.1 Assumptions; 4.2.2 Combination of L-Systems; 4.2.3 The new L-System or the Hybrid L-System; 4.2.4 The Algorithm; 4.3 Experimentally Generated Fractals; 4.3.1 Fractal figures for Fibonacci sequence and Koch curve 4.3.2 Fractal figures for Mathematical series 1 to n and Koch curve 4.3.3 Fractal figures based on different combinations; 4.4 Variation on Koch Curves; 4.5 Fractals with other Mathematical Sequences; 4.6 Interpretation of Result; 4.6.1 Comparison of Koch curve with Hybrid system; 4.6.2 Arbitrary Figures; 4.7 Summary; Chapter 5 L-System Strings from Ramification Matrix; 5.1 Definition of Terms; 5.1.1 Modules; 5.1.2 Productions; 5.2 Parallel Rewriting Systems; 5.3 An Elementary L-System Parser; 5.3.1 The structure of an L-System module; 5.3.2 L-System strings 5.3.3 Rewriting the L-System string

Sommario/riassunto

The book covers all the fundamental aspects of generating fractals through L-system. Also it provides insight to various researches in this area for generating fractals through L-system approach & estimating dimensions. Also it discusses various applications of L-system fractals. Key Features: - Fractals generated from L-System including hybrid fractals - Dimension calculation for L-system fractals - Images & codes for L-system fractals - Research directions in the area of L-system fractals - Usage of various freely downloadable tools in this area - Frac
