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## Pattern Generation for Computational Art

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By Stefan Hollos, J Richard Hollos

Abrazol Publishing, United States, 2013. Paperback. Book Condition: New. 216 x 140 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.This book shows how to turn computer generated number sequences into intricate visual patterns. The sequences are strings of the binary numbers 0 and 1 which are translated into drawing instructions to produce beautiful patterns. These patterns provide a glimpse of the hidden platonic world of mathematics. The book starts with Christoffel words and Sturmian sequences which are derived from the continued fraction expansion of rational and irrational numbers. How this is done is explained very clearly in the book and very little mathematical background is required from the reader. The book moves on to Automatic sequences such as the Thue-Morse and Rudin-Shapiro sequences which are various ways of calculating digital roots of the integers. The first part of the book ends with sequences generated by folding paper. Translating a sequence into drawing instructions is done using a finite automaton. This is a very general method for translating sequences that allows the same sequence to produce many different patterns. No prior experience with finite automata is necessary. All the background needed is explained in the book. The...



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