

H.-O. Peitgen, P.H. Richter

The Beauty of Fractals

Images of Complex Dynamical Systems

1986. 184 figures, many in colour.
XII, 199 pages.
Hard cover. DM 78,- (North America \$ 29.50)
ISBN 3-540-15851-0

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This book represents an unusual attempt to publicize the field of Complex Dynamics. The editors report on this rapidly developing discipline in terms of computer graphical pictures that resulted from their own studies of iterated maps. Such maps arise, e.g., in the problem of root finding, or in the renormalization group theory of phase transitions. They define highly complex boundaries between various domains of attraction, also known as Julia sets for rational maps of the complex plane. Detailed investigation into the changes of these boundaries under parameter variations reveals that Mandelbrot's set embodies an universal principle of their morphology.



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