

ENCYCLOPEDIA OF MATHEMATICS AND ITS APPLICATIONS

# ITERATIVE FUNCTIONAL EQUATIONS

MAREK KUCZMA, BOGDAN CHOCZEWSKI  
and ROMAN GER



# Iterative Functional Equations

**Janusz Brzdek, Krzysztof  
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## **Iterative Functional Equations:**

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**ON THE STABILITY OF A FUNCTIONAL EQUATION FOR GENERALIZED TRIGONOMETRIC FUNCTIONS** ROMAN Badora  
Instytut Matematyki Uniwersytetu Śląskiego ul. Bankowa 14 PL 40 007 Katowice Poland e-mail robadora@math.us.edu.pl

**Abstract** In the present paper the stability result concerning a functional equation for generalized trigonometric functions is presented Z

**Linear Iterative Functional Equations with Random-valued Functions** Janusz Marian Morawiec,2023

**On Functions and Functional Equations** Smital,1988-01-01 On Functions and Functional Equations introduces the main topics in iteration theory and the theory of functional equations with emphasis on applications in the fields of mathematics physics biology chemistry and electronics and mechanical engineering The book contains many classical results as well as important more recent results It also includes numerous exercises and some problems that have yet to be resolved The book is accessible to readers having a secondary level mathematical education **Functional Equations of Iterative Type** Mariusz Bajger,1996 **Functional Equations in a Single Variable** Marek Kuczma,1968 **A Two Parameter Family of Operators and Iterative Functional Equations** H.-H. Kairies,2000 **Introduction to Functional Equations** Costas Efthimiou,2011-10-13 Functions and their properties have been part of the rigorous precollege curriculum for decades And functional equations have been a favorite topic of the leading national and international mathematical competitions Yet the subject has not received equal attention by authors at an introductory level The majority of the books on the topic remain

unreachable to the curious and intelligent precollege student The present book is an attempt to eliminate this disparity The book opens with a review chapter on functions which collects the relevant foundational information on functions plus some material potentially new to the reader The next chapter presents a working definition of functional equations and explains the difficulties in trying to systematize the theory With each new chapter the author presents methods for the solution of a particular group of equations Each chapter is complemented with many solved examples the majority of which are taken from mathematical competitions and professional journals The book ends with a chapter of unsolved problems and some other auxiliary material The book is an invaluable resource for precollege and college students who want to deepen their knowledge of functions and their properties for teachers and instructors who wish to enrich their curricula and for any lover of mathematical problem solving techniques In the interest of fostering a greater awareness and appreciation of mathematics and its connections to other disciplines and everyday life MSRI and the AMS are publishing books in the Mathematical Circles Library series as a service to young people their parents and teachers and the mathematics profession     **A**

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