1. Record Nr. UNINA9910299993903321

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| Titolo | Handbook of Functional Equations : Stability Theory / / edited by Themistocles M. Rassias |
| Pubbl/distr/stampa | New York, NY : , : Springer New York : , : Imprint : Springer, , 2014 |
| ISBN | 1-4939-1286-0 |
| Edizione | [1st ed. 2014.] |
| Descrizione fisica | 1 online resource (394 p.) |
| Collana | Springer Optimization and Its Applications, , 1931-6828 ; ; 96 |
| Disciplina | 515.75 |
| Soggetti | Difference equations<br>Functional equations<br>Mathematical optimization<br>Applied mathematics<br>Engineering mathematics<br>Special functions<br>Functional analysis<br>Physics<br>Difference and Functional Equations<br>Optimization<br>Mathematical and Computational Engineering<br>Special Functions<br>Functional Analysis<br>Mathematical Methods in Physics |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Description based upon print version of record. |
| Nota di bibliografia | Includes bibliographical references at the end of each chapters. |
| Nota di contenuto | On Some Functional Equations (M. Adam, S. Czerwik, K. Krol) -- Remarks on Stability of the Equation of Homomorphism for Square Symmetric Groupoids (A. Bahyrycz, J. Brzdek) -- On Stability of the Linear and Polynomial Functional Equations in Single Variable (J. Brzdek, M. Piszczek) -- Selections of Set-Valued Maps Satisfying Some Inclusions and the Hyers-Ulam Stability (J. Brzdek, M. Piszczek) -- Generalized Ulam-Hyers Stability Results: A Fixed Point Approach (L. Caradiu) -- On a Wake Version of Hyers-Ulam Stability Theorem in Restricted Domain (J. Chung, J. Chang) -- On the Stability of Drygas |

Functional Equation on Amenable Semigroups (E. Elqorachi, Y. Manar, Th.M. Rassias) -- Stability of Quadratic and Drygas Functional Equations, with an Application for Solving an Alternative Quadratic Equation (G.L. Forti) -- A Functional Equation Having Monomials and its Stability (M.E. Gorgji, H. Khodaei, Th.M. Rassias) -- Some Functional Equations Related to the Characterizations of Information Measures and their Stability (E. Gselmann, G. Maksa) -- Approximate Cauchy-Jensen Type Mappings in Quasi- Normed Spaces (H.-M. Kim, K.-W. Jun, E. Son) -- An AQCQ-Functional Equation in Matrix Paranormed Spaces (J. R. Lee, C. Park, Th.M. Rassias, D.Y. Shin) -- On the GEneralized Hyers-Ulam Stability of the Pexider Equation on Restricted Domains (Y. Manar, E. Elqorachi, Th.M. Rassias) -- Hyers-Ulam Stability of Some Differential Equations and Differential Operators (D. Popa, I. Rasa) -- Results and Problems in Ulam Stability of Operational Equations and Inclusions (I.A. Rus) -- Superstability of Generalized Module Left Higher Derivations on a Multi-Banach Module (T.L. Shateri, Z. Afshari) -- D'Alembert's Functional Equation and Superstability Problem in Hypergroups (D. Zeglami, A. Roukbi, Th.M. Rassias).

Sommario/riassunto

This handbook consists of seventeen chapters written by eminent scientists from the international mathematical community, who present important research works in the field of mathematical analysis and related subjects, particularly in the Ulam stability theory of functional equations. The book provides an insight into a large domain of research with emphasis to the discussion of several theories, methods and problems in approximation theory, analytic inequalities, functional analysis, computational algebra and applications. The notion of stability of functional equations has its origins with S. M. Ulam, who posed the fundamental problem for approximate homomorphisms in 1940 and with D. H. Hyers, Th. M. Rassias, who provided the first significant solutions for additive and linear mappings in 1941 and 1978, respectively. During the last decade the notion of stability of functional equations has evolved into a very active domain of mathematical research with several applications of interdisciplinary nature. The chapters of this handbook focus mainly on both old and recent developments on the equation of homomorphism for square symmetric groupoids, the linear and polynomial functional equations in a single variable, the Drygas functional equation on amenable semigroups, monomial functional equation, the Cauchy–Jensen type mappings, differential equations and differential operators, operational equations and inclusions, generalized module left higher derivations, selections of set-valued mappings, D’Alembert’s functional equation, characterizations of information measures, functional equations in restricted domains, as well as generalized functional stability and fixed point theory.