1. Record Nr. UNINA9910300248703321

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| Autore | Stankovic Radomir S. |
| Titolo | Dyadic Walsh analysis from 1924 onwards Walsh-Gibbs-Butzer dyadic differentiation in science volume 1 foundations : a monograph based on articles of the founding authors, reproduced in full / / by Radomir Stankovic, Paul Leo Butzer, , William R. Wade, Weiyi Su, Yasushi Endow, Sandor Fridli, Boris I. Golubov, Franz Pichler |
| Pubbl/distr/stampa | Paris : , : Atlantis Press : , : Imprint : Atlantis Press, , 2015 |
| ISBN | 94-6239-160-2 |
| Edizione | [1st ed. 2015.] |
| Descrizione fisica | 1 online resource (474 p.) |
| Collana | Atlantis Studies in Mathematics for Engineering and Science, , 1875-7642 ; ; 12 |
| Disciplina | 510 |
| Soggetti | Mathematics<br>Computer science - Mathematics<br>Harmonic analysis<br>Abstract Harmonic Analysis<br>Math Applications in Computer Science |
| 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 and index. |
| Nota di contenuto | Early History of Walsh Analysis -- My involvement in Walsh and Dyadic Analysis -- The Origins of the Dyadic Derivative due to James Edmund Gibbs -- Early Contributions from the Aachen School to Dyadic Walsh Analysis with Applications to Dyadic PDEs and Approximation Theory -- Dyadic Derivative, Summation, Approximation -- How I Started My Research in Walsh and Dyadic Analysis -- My Involvement with the Dyadic Derivative -- Hardy Spaces in the Theory of Dyadic Derivative -- Term by Term Dyadic Differentiation of Walsh Series -- Why I got Interested in Dyadic Differentiation -- Dyadic Derivative and Walsh-Fourier Transform -- How I started my research in Walsh and dyadic analysis. |
| Sommario/riassunto | Dyadic (Walsh) analysis emerged as a new research area in applied mathematics and engineering in early seventies within attempts to provide answers to demands from practice related to application of spectral analysis of different classes of signals, including audio, video, |

sonar, and radar signals. In the meantime, it evolved in a mature mathematical discipline with fundamental results and important features providing basis for various applications. The book will provide fundamentals of the area through reprinting carefully selected earlier publications followed by overview of recent results concerning particular subjects in the area written by experts, most of them being founders of the field, and some of their followers. In this way, this first volume of the two volume book offers a rather complete coverage of the development of dyadic Walsh analysis, and provides a deep insight into its mathematical foundations necessary for consideration of generalizations and applications that are the subject of the second volume. The presented theory is quite sufficient to be a basis for further research in the subject area as well as to be applied in solving certain new problems or improving existing solutions for tasks in the areas which motivated development of the dyadic analysis.