Record Nr. UNINA9910459831503321 GMDH-methodology and implementation in C / / edited by Godfrey **Titolo** Onwubolu Pubbl/distr/stampa London, [England]:,: Imperial College Press,, 2015 ©2015 **ISBN** 1-84816-611-7 Descrizione fisica 1 online resource (304 p.) Disciplina 003.7 Soggetti **GMDH** algorithms Self-organizing systems - Data processing C (Computer program language) Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Bibliographic Level Mode of Issuance: Monograph Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto 1. Introduction / Godfrey C. Onwubolu -- 2. GMDH Multilayered Iterative Algorithm (MIA) / Godfrey C. Onwubolu -- 3. GMDH multilayered algorithm using prior information / Alexandr Kiryanov --4. Combinatorial (COMBI) algorithm / Oleksiy Koshulko, Anatoliy Koshulko and Godfrey C. Onwubolu -- 5. GMDH harmonic algorithm / Godfrey C. Onwubolu -- 6. GMDH-based modified polynomial neural network algorithm / Alexander Tyryshkin, Anatoliy Andrakhanov and Andrey Orlov -- 7. GMDH-clustering / Lyudmyla Sarycheva and Alexander Sarychev -- 8. Multiagent clustering algorithm / Oleksii Oliinyk, Sergey Subbotin and Andrii Oliinyk -- 9. Analogue complexing algorithm / Dmytro Zubov -- 10. GMDH-type neural network and genetic algorithm / Saeed Fallahi, Meysam Shaverdi and Vahab Bashiri. Group Method of Data Handling (GMDH) is a typical inductive modeling Sommario/riassunto method built on the principles of self-organization. Since its introduction, inductive modeling has been developed and applied to complex systems in areas like prediction, modeling, clusterization, system identification, as well as data mining and knowledge extraction technologies, to several fields including social science, science,

engineering, and medicine. This book makes error-free codes available

to end-users so that these codes can be used to understand the implementation of GMDH, and then create opportunities to further develop the variants of GMDH algorithms. C-language has been chosen because it is a basic language commonly taught in the first year in computer programming courses in most universities and colleges, and the compiled versions could be used for more meaningful practical applications where security is necessary.