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Nota di contenuto	Part I: 1.2-d minimal surface ow with the oblique condition and translators(L. Ma and Y. Pan) -- 2. Graphical portraits of the solutions of binary first order nonlinear ordinary differential equation near their singular point(P. Popivanov and A. Slavova) -- 3. Physics informed cellular neural networks for solving partial differential equations(A. Slavova and E. Litsyn) -- 4. Several Relationships Connected to a Special Function used in the Simple Equations Method(SEsM)(N.K. Vitanov) -- 5. On the Exact Solutions of a Sequence of Nonlinear Differential Equations Possessing Polynomial Nonlinearities(Z.I. Dimitrova) -- 6. Improved Hardy inequality with logarithmic term(N. Kutev and T. Rangelov).-7. Robin boundary value problem for some nonlinear

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Sommario/riassunto

This book convenes peer-reviewed, selected papers presented at the Tenth International Conference New Trends in the Applications of Differential Equations in Sciences (NTADES) held in Saints Constantine and Helena, Bulgaria, July 17–20, 2023. Contributions are devoted to many applications of differential equations in different fields of science. A number of phenomena in nature (physics, chemistry, biology) and in society (economics) result in problems leading to the study of linear and nonlinear differential equations, stochastic equations, statistics, analysis, numerical analysis, optimization, and more. The main topics are presented in the five parts of the book - applications in mathematical physics, mathematical biology, financial mathematics, neuroscience, and fractional analysis. In this volume, the reader will find a wide range of problems concerning recent achievements in both theoretical and applied mathematics. The main goal is to promote the exchange of new ideas and research between scientists, who develop and study differential equations, and researchers, who apply them to solve real-life problems. The book promotes basic research in mathematics leading to new methods and techniques useful for applications of differential equations.
