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Soggetti	Differential equations, Nonlinear
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Nota di contenuto	1 Null Controllability of a nonlinear population dynamics with age structuring and spatial diusion -- 2 Null controllability of a system of degenerate nonlinear coupled equations derived from population dynamics -- 3 Optimal mass transport for activities location problem -- 4 Cut-o phenomenon for converging processes in the sense of - divergence measures -- 5 Stochastic optimization in a single and multi-site sheries -- 6 A Hurwitz Like Characterization of GUAS Planar Switched Systems -- 7 OPV virus evolution: Assessing the risk of cVDPV outbreak -- 8 A Scalable Engineering Combination Therapies for Evolutionary Dynamic of Macrophages -- 9 Exact steady solutions for a fteen velocity model of gas -- 10 Monotony and comparison principle in non autonomous size structured models -- 11 A boundary value problem of sand transport equations: An existence and homogenization results -- 12 The Role of the Mean Curvature in a Mixed Hardy-Sobolev Trace Inequality -- 13 Coupling between Shape gradient and Topological Derivative in 2D Incompressible Navier-Stokes Flows -- 14 Shape reconstruction in a non-linear problem -- 15 The $\bar{\cdot}$ -problem for the dierential forms with boundary value in currents sense dened in a contractible completely strictly pseudoconvex domain of a complex manifold -- 16 Introduction to the resolution of $d_0d_0$ for the supercurrents in the non-archimedean frame -- 17 Minimal graphs on three-dimensional Walker manifolds --

18 Quantitative result on the deviation of a real algebraic curve from its vertical tangents -- 19 Algebraic points of degree at most 2 on the curve  $y^2 = x^2(x+1)^2$ .

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Sommario/riassunto

This book gathers nineteen papers presented at the first NLAGA-BIRS Symposium, which was held at the Cheikh Anta Diop University in Dakar, Senegal, on June 24–28, 2019. The four-day symposium brought together African experts on nonlinear analysis and geometry and their applications, as well as their international partners, to present and discuss mathematical results in various areas. The main goal of the NLAGA project is to advance and consolidate the development of these mathematical fields in West and Central Africa with a focus on solving real-world problems such as coastal erosion, pollution, and urban network and population dynamics problems. The book addresses a range of topics related to partial differential equations, geometrical analysis of optimal shapes, geometric structures, optimization and optimal transportation, control theory, and mathematical modeling.

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