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Sommario/riassunto	This edited volume aims at giving an overview of recent advances in the theory and applications of Partial Differential Equations and energy functionals related to the fractional Laplacian operator as well as to more general integro-differential operators with singular kernel of fractional differentiability. After being investigated firstly in Potential Theory and Harmonic Analysis, fractional operators defined via singular

integral are nowadays riveting great attention in different research fields related to Partial Differential Equations with nonlocal terms, since they naturally arise in many different contexts, as for instance, dislocations in crystals, nonlocal minimal surfaces, the obstacle problem, the fractional Yamabe problem, and many others. Much progress has been made during the last years, and this edited volume presents a valuable update to a wide community interested in these topics. List of contributors Claudia Bucur, Zhen-Qing Chen, Francesca Da Lio, Donatella Danielli, Serena Dipierro, Rupert L. Frank, Maria del Mar Gonzalez, Moritz Kassmann, Tuomo Kuusi, Giuseppe Mingione, Giovanni Molica Bisci, Stefania Patrizi, Xavier Ros-Oton, Sandro Salsa, Yannick Sire, Enrico Valdinoci, Xicheng Zhang.
