1. Record Nr. UNISA996466528103316 Autore Apushkinskaya Darya Titolo Free Boundary Problems [[electronic resource]]: Regularity Properties Near the Fixed Boundary / / by Darya Apushkinskaya Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2018 **ISBN** 3-319-97079-8 Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (XVII, 146 p. 10 illus. in color.) Collana Lecture Notes in Mathematics, , 0075-8434; ; 2218 Disciplina 515.35 Soggetti Mathematical analysis Analysis (Mathematics) Calculus of variations **Analysis** Calculus of Variations and Optimal Control; Optimization Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto This book is concerned with several elliptic and parabolic obstacle-type problems with a focus on the cases where the free and fixed boundaries meet. The results presented complement those found in existing books in the subject, which mainly treat regularity properties away from the fixed boundary. The topics include optimal regularity, analysis of global solutions, tangential touch of the free and fixed boundaries, as well as Lipschitz- and \$C^1\$-regularity of the free boundary. Special attention is given to local versions of various monotonicity formulas. The intended audience includes research mathematicians and advanced graduate students interested in

problems with free boundaries.