Record Nr. UNINA9910337652503321 Lectures on Visco-Plastic Fluid Mechanics / / edited by Guillaume **Titolo** Ovarlez, Sarah Hormozi Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2019 **ISBN** 3-319-89438-2 Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (265 pages) Collana CISM International Centre for Mechanical Sciences, Courses and Lectures, , 0254-1971;; 583 Disciplina 532.0533 Soggetti Fluid mechanics Fluids Mathematical physics **Engineering Fluid Dynamics** Fluid- and Aerodynamics Mathematical Applications in the Physical Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Background lectures on ideal visco-plastic fluid flows -- Viscoplastic asymptotics and other analytical methods -- Computational methods for viscoplastic fluid flows -- Rheometry of visco-plastic fluids --Rheology of visco-plastic suspensions -- Industrial applications of yield stress fluids. Sommario/riassunto The book is designed for advanced graduate students as well as postdoctoral researchers across several disciplines (e.g., mathematics, physics and engineering), as it provides them with tools and techniques that are essential in performing research on the flow problems of visco-plastic fluids. The following topics are treated: analysis of classical visco-plastic fluid models mathematical modeling of flows of visco-plastic fluids computing flows of visco-plastic fluids rheology of visco-plastic fluids and visco-plastic suspensions application of viscoplastic fluids in engineering sciences complex flows of visco-plastic fluids.