Record Nr. UNINA9910337613303321 Handbook of Multiphase Flow Science and Technology [[electronic Titolo resource] /] / edited by Guan Heng Yeoh, J. B. Joshi Pubbl/distr/stampa Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 Descrizione fisica 1 online resource (1200 p. 240 illus., 40 illus. in color.) Disciplina 620.1064 Soggetti Fluid mechanics Fluids Thermodynamics Heat engineering Heat - Transmission Mass transfer Applied mathematics **Engineering mathematics** Amorphous substances Complex fluids Mechanics **Engineering Fluid Dynamics** Fluid- and Aerodynamics Engineering Thermodynamics, Heat and Mass Transfer Mathematical and Computational Engineering Soft and Granular Matter, Complex Fluids and Microfluidics Classical Mechanics Lingua di pubblicazione Inglese **Formato** Materiale a stampa

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Nota di contenuto

From the Contents: Part I Theory -- Introduction.- Fundamentals -- Part II Modelling and Measurement -- Modelling -- Measurement -- Part III Applications.

Sommario/riassunto

This Handbook provides readers with the current cutting edge of

multiphase flow technology. It reviews the rapid development of

multiphase flow technology, demonstrates the latest development of the technology, and showcase the very latest applications. It provides readers with comprehensive updated reference information covering theory, modelling and numerical methods, design and measurement, and new applications in multiphase flow systems. The Handbook consists of three parts or volumes: 1. Theory: describes the fundamentals including the concepts and definitions of multiphase flows. Classifications of multiphase flows. Basic understanding of different length scales involved - micro/nano, meso and macro. Treatment of such flows by different solution frameworks. 2. Modelling and Measurement: covers both classical and state-of the-art measurement and modelling approaches to resolve different classifications of multiphase flows. 3. Applications: highlights the very latest applications of measurement and modelling approaches in tackling different classification of multiphase flows in a variety of natural, biological and industrial systems and different length scales.