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A Finite Element Based Level-Set Method for Multiphase Flows
 1 Introduction ; 2 The Navier-Stokes Equations
 ; 3 The Level-Set Method ; 4 Numerical Integration of
 a Discontinuous Function ; 5
 Numerical Simulations using the Level-Set Method
 ; 6 Alternative Methods ; References
 The GHOST Fluid Method for Viscous Flows
 1 Introduction ; 2 Equations ; 3 The GFM for
 Inviscid Flow ; 4 Generalization of the Ghost Fluid
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 ; 6 Examples ; 7 Acknowledgements ;
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 Flow
 1 Introduction

Sommario/riassunto

This book consists of 20 review articles dedicated to Prof. Philip Roe on the occasion of his 60th birthday and in appreciation of his original contributions to computational fluid dynamics. The articles, written by leading researchers in the field, cover many topics, including theory and applications, algorithm developments and modern computational techniques for industry.
Contents:

- "A One-Sided View": The Real Story (B van Leer)
- Collocated Upwind Schemes for Ideal MHD (K G Powell)
- The Penultimate Scheme for Systems of Conservation Laws: Finite