

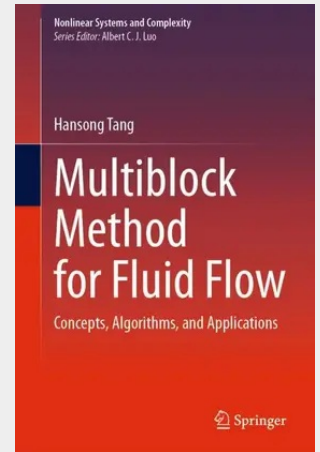
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Multiblock Method for Fluid Flow

Concepts, Algorithms, and Applications

This book presents the multiblock method, also known by other names such as the zonal method and the domain decomposition method. The multiblock method offers a systematic approach to tackle large-scale, intricate problems by breaking them down into smaller, more manageable sub-problems. The method addresses each sub-problem individually while accounting for its interconnections with the others, ultimately arriving at a comprehensive solution. The book provides a cohesive overview of the multiblock method's concepts and principles, particularly in the context of fluid flows, encompassing diverse fields including computational science, aerospace engineering, civil engineering, physical oceanography, and machine learning. It delves into foundational mathematics, studies model problems, elucidates numerical algorithms, and offers practical examples relevant to fluid dynamics. With its comprehensive coverage, this book serves as a resource for both learners and practitioners, catering to students, researchers, and modelers alike, whether as a textbook for structured learning or as a reference for applied problem-solving.

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