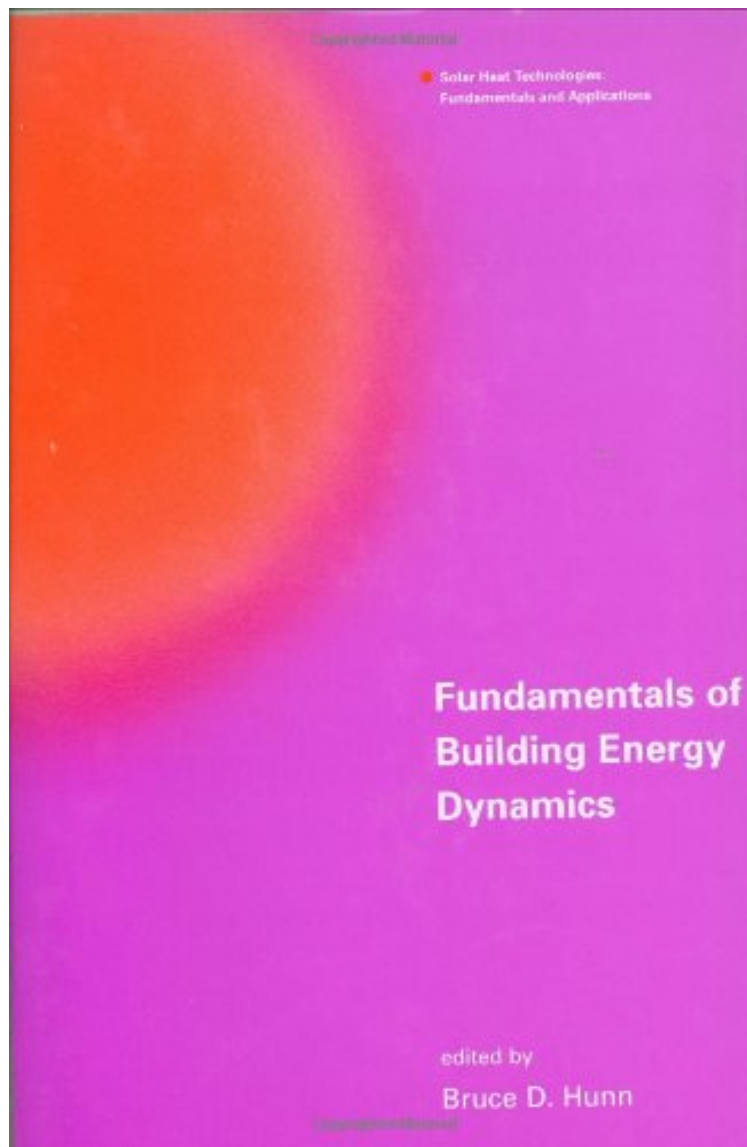


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Fundamentals of Building Energy Dynamics (Solar Heat Technologies)

Bruce D Hunn

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Bruce D Hunn : Fundamentals of Building Energy Dynamics (Solar Heat Technologies) before purchasing it in order to gauge whether or not it would be worth my time, and all praised Fundamentals of Building Energy Dynamics (Solar Heat Technologies):

Fundamentals of Building Energy Dynamics assesses how and why buildings use energy, and how energy use and peak demand can be reduced. It provides a basis for integrating energy efficiency and solar approaches in ways that will allow building owners and designers to balance the need to minimize initial costs, operating costs, and life-cycle costs with need to maintain reliable building operations and enhance environmental quality both inside and outside the building. Chapters trace the development of building energy systems and analyze the demand side of solar applications as a means for determining what portion of a building's energy requirements can potentially be met by solar energy. Following the introduction, the book provides an overview of energy use patterns in the aggregate U.S. building population. Chapter 3 surveys work on the energy flows in an individual building and shows how these flows interact to influence overall energy use. Chapter 4 presents the analytical methods, techniques, and tools developed to calculate and analyze energy use in buildings, while chapter 5 provides an extensive survey of the energy conservation and management strategies developed in the post-energy crisis period. The approach taken is a commonsensical one, starting with the proposition that the purpose of buildings is to house human activities, and that conservation measures that negatively affect such activities are based on false economies. The goal is to determine rational strategies for the design of new buildings, and the retrofit of existing buildings to bring them up to modern standards of energy use. The energy flows examined are both large scale (heating systems) and small scale (choices among appliances). Solar Heat Technologies: Fundamentals and Applications, Volume 4

From the Back Cover Fundamentals of Building Energy Dynamics assesses how and why buildings use energy, and how energy use and peak demand can be reduced. It provides a basis for integrating energy efficiency and solar approaches in ways that will allow building owners and designers to balance the need to minimize initial costs, operating costs, and life-cycle costs with the need to maintain reliable building operations and enhance environmental quality both inside and outside the building. Chapters trace the development of building energy systems and analyze the demand side of solar applications as a means for determining what portion of a building's energy requirements can potentially be met by solar energy. The approach taken is a commonsensical one, starting with the proposition that the purpose of buildings is to house human activities, so that conservation measures that negatively affect such activities are based on false economies. The goal is to determine rational strategies for designing new buildings and retrofitting existing buildings to bring them up to modern standards of energy use. The energy flows examined are both large scale (heating systems) and small scale (choices among appliances.). About the Author Bruce D. Hunn is a Research Engineer and Head of the Building Systems Program at the Center for Energy Studies, the University of Texas at Austin.