Record Nr. UNINA9910483447503321 Autore Bienvenido-Huertas David Titolo Adaptive thermal comfort of indoor environment for residential buildings: efficient strategy for saving energy / / David Bienvenido-Huertas, Carlos Rubio-Bellido Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2021 Pubbl/distr/stampa **ISBN** 981-16-0906-3 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (79 pages): illustrations Collana SpringerBriefs in Architectural Design and Technology, , 2199-5818 Disciplina 230 Soggetti Air conditioning Buildings - Environmental engineering Buildings - Design and construction Sustainable Architecture/Green Buildings Energy Policy, Economics and Management **Building Types and Functions** Engineering Thermodynamics, Heat and Mass Transfer **Building Construction and Design** Inglese Lingua di pubblicazione **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto 1. Building Energy Efficiency and Sustainability -- 2. Adaptive Thermal Comfort Models for Buildings -- 3. Application of Adaptive Thermal Comfort Models for Energy Saving in Buildings -- 4. Energy Savings Obtained with an Adaptive Approach -- 5. Decision Making to Apply Adaptive Approaches. Sommario/riassunto This book is structured in four parts: First, it analyzes the sustainability objectives established for the building stock and the importance of thermal comfort in this aspect. Second, the existing adaptive thermal comfort models and the main energy-saving measures associated with these models are analyzed. Third, the energy savings obtained with these measures are analyzed in several case studies, comparing the results obtained with other energy conservation measures, such as the improvement of the facade. The analysis is carried out from an energy and economic perspective. Finally, a decisionmaking process based on

fuzzy logic is established. As an expected result, the content of the

book contributes to assist architects in designing more efficient buildings from the perspective of user behavior.