Record Nr. UNINA9910879578903321 Autore Carlucci Francesco Titolo Responsive Envelopes and Climate Change: State of the Art, Design Strategies, and Future Perspectives for Resilient Buildings / / by Francesco Carlucci, Ludovica Maria Campagna, Francesco Fiorito Cham:,: Springer Nature Switzerland:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 3-031-58101-6 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (137 pages) Collana Digital Innovations in Architecture, Engineering and Construction, , 2731-7277 Altri autori (Persone) CampagnaLudovica Maria FioritoFrancesco 720.47 Disciplina 696 Soggetti Sustainable architecture Climatology Sustainability Sustainable Architecture/Green Buildings Climate Sciences Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Introduction -- Climate change and future challenges -- Responsive Nota di contenuto envelope technologies -- Modelling tools for responsive envelopes --Design strategies -- Evaluating the climate resilience: Energy Flexibility Index. Sommario/riassunto This book provides the theoretical background and the practical tools to assess the energy behaviour of different responsive envelope technologies in current and future climate scenarios. Starting from the state of the art of the climate change and of the most innovative responsive technologies, it includes a detailed description of the tools and settings required to run building energy simulations that properly account for the envelope responsiveness in current and future scenarios. The purpose of the book is to help architects, facade

> consultants, researchers, and students of building engineering and environmental design of buildings to understand, simulate, and consider the emerging responsive envelope technologies as viable

solutions to improve the energy consumption and the climate resilience of buildings. Therefore, it bridges the gap between innovative technologies and design practice, providing all the required tools to begin to spread these systems improving the climate resilience of the built environment.