1. Record Nr. UNINA9910863141803321

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Titolo	Advances in Building Services Engineering : Studies, Researches and Applications / / by Ioan Sarbu
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-64781-1
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XXX, 891 p. 246 illus., 27 illus. in color.)
Disciplina	696
Soggetti	Sustainable architecture Water Hydrology Buildings - Environmental engineering Pollution Renewable energy sources Sustainable Architecture/Green Buildings Building Physics, HVAC Renewable Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Assurance of Indoor Environment Quality in Buildings -- Chapter 3. Modelling, Optimisation and Modernisation of Heating Systems -- Chapter 4. Efficient Refrigeration and Air-Conditioning Systems -- Chapter 5. Solar Heating and Cooling Systems -- Chapter 6. Heat Pump Systems -- Chapter 7. Thermal Energy Storage -- Chapter 8. Hydraulic Simulation and Optimisation of Water Distribution Systems -- Chapter 9. Sewage Treatment Plants -- Chapter 10. Hydraulic Calculation of Open Channels and Sewer Columns in Buildings -- Chapter 11. Numerical Modelling of Heat Transfer.
Sommario/riassunto	This book provides a comprehensive, systematic overview of original theoretical, experimental, and numerical studies in the building services engineering domain. It brings together different strands of the topic, guided by the two key features of energy savings and reduction

of the pollutant emissions. Technical, economic, and energy efficiency aspects related to the design, modelling, optimisation, and operation of diverse building services systems are explored. This book includes various theoretical studies, numerical and optimisation models, experiments, and applications in this field, giving an emphasis to: indoor environment quality assurance; energy analysis, modelling, and optimisation of heating systems; improving the energy performance of refrigeration and air-conditioning systems; valorising the solar and geothermal energies; analysis of thermal energy storage technologies; hydraulic simulation and optimisation of water distribution systems; and improving the energy efficiency of water pumping. With 11 pedagogically structured chapters, containing numerous illustrations, tables, and examples, this book provides researchers, lecturers, engineers, and graduate students with a thorough guide to building service engineering.