

1. Record Nr.	UNINA9910830052303321
Autore	Brunetti Gian Luca
Titolo	Design and construction of bioclimatic wooden greenhouses . Volume 4 : architectural integration and quantitative analyses // Gian Luca Brunetti
Pubbl/distr/stampa	London, England ; ; Hoboken, New Jersey : , : ISTE, Ltd. : , : John Wiley & Sons, Incorporated, , [2023] ©2023
ISBN	1-394-19219-3 1-394-19217-7
Descrizione fisica	1 online resource (351 pages)
Disciplina	728.96
Soggetti	Greenhouses - Design and construction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Cover -- Title Page -- Copyright Page -- Contents -- Introduction -- Chapter 1. Greenhouse Typologies -- 1.1. Stand-alone greenhouse typologies -- 1.1.1. At the core of the stand-alone solar greenhouse conception -- 1.1.2. Cold frames -- 1.1.3. Solar pit greenhouses -- 1.1.4. Tall stand-alone greenhouses -- 1.1.5. "Non-solar" stand-alone greenhouses -- 1.2. Greenhouses serving buildings -- 1.2.1. Integrating the direct gain strategy -- 1.2.2. Integrating the indirect gain scheme from attached solar greenhouses -- 1.2.3. Atria -- 1.2.4. Greenhouses as buffer spaces -- 1.2.5. The house-in-greenhouse scheme -- 1.2.6. Solutions using the ground as primary thermal storage -- 1.3. Additional readings -- Chapter 2. Calculation Approaches -- 2.1. Thermal calculations -- 2.1.1. Calculation of the heat transmission through an opaque panel -- 2.1.2. Determination of the average temperature of a greenhouse in steady state -- 2.1.3. A simplified calculation method of the steady-state temperature in a stand-alone solar greenhouse (experimental) -- 2.1.4. Thermal flux through an indirect solar gain system like a solar wall -- 2.1.5. Thermal flux through an attached greenhouse -- 2.2. Computer simulation as a calculation approach -- 2.3. Environmental simulation by means of open-source tools -- 2.3.1. Basic thermal modeling and simulation

criteria -- 2.4. Structural calculations -- 2.4.1. Preliminary structural sizing -- 2.4.2. Preliminary structural sizing with open-source simulation tools -- 2.4.3. Techniques for exploring the design options on the basis of the simulated performances -- 2.4.4. Metamodeling -- Chapter 3. Design Studies -- 3.1. What is still to be said in greenhouse design -- 3.2. Calimali's greenhouse in Fagnano Olona, Italy. By Greenhouse Design Workshop -- 3.3. House "D" in Nantes. Xavier Fouquet.
3.4. Bioclimatic house in Villeneuve-Tolosane, France - Nycholas Eydoux -- 3.5. House in Vals, Italy. Studio Albori -- 3.6. Rehabilitation and extension of the house "AT" in Fagnano Olona. Paolo Carlesso -- 3.7. Greenhouse from recycled windows at "Casamatta", Gurone, Malnate (Varese), Italy. Marta Robecchi -- 3.8. House "GdA" in Cairate, Italy. Paolo Carlesso -- 3.9. A conference greenhouse at Cascina Cuccagna in Milan -- Conclusion -- Afterword -- Appendices -- Appendix 1: Thermal and Acoustic Properties of Construction Materials -- Appendix 2: Strength of Timber According to the Norm EN 338 -- Appendix 3: Properties of Transparent Materials -- References -- Index -- Summaries of other volumes -- EULA.
