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| Titolo | Parametric experiments in architecture : a connection joint design for sustainable structures in bamboo // Francesco Di Paola and Andrea Mercurio |
| Pubbl/distr/stampa | Cham, Switzerland : , : Springer, , [2023] ©2023 |
| ISBN | 3-030-96276-8 |
| Edizione | [1st ed. 2023.] |
| Descrizione fisica | 1 online resource (XVIII, 127 p. 124 illus., 90 illus. in color.) |
| Collana | UNIPA Springer Series, , 2366-7524 |
| Disciplina | 720.47 |
| Soggetti | Sustainable architecture Bamboo construction |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di contenuto | Algorithmic-generative Architecture -- Bamboo as building material -- Algorithmic modelling and prototyping of a joint for reticular space structures -- Structural patterns for free-form surfaces -- Different possibilities of experimentation Design. |
| Sommario/riassunto | This book offers a comprehensive overview of the use of bamboo in the building industry. It systematically demonstrates bamboo's utility in terms of its properties, describing the material properties of typical industrial bamboo products, and discussing their performance evaluation and optimization as building components and in the creation of building envelopes. The book presents the recent developments regarding the innovative ways to design and represent architecture through parametric survey tools, and describes the experimental geometrical-generative design process of a connection joint for free-form lightweight structures employing beams made of bamboo culms. It examines algorithmic-generative design themes, through processes of optimization, analysis, and geometrical-spatial verification, employing the potential of digital form-finding design and digital manufacturing techniques to validate the defined technological solution. This book appeals to scientists and professionals and is a valuable resource for civil engineers, designers and students interested |

in this unique plant material and its application in the building industry. Videos via app: download the SN More Media app for free, scan an image or a link with play button and access the videos directly on your smartphone or tablet.
