

## Craft and Manufacture of Modular Thin-Tile Shells

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### Abstract

Time and location have an implicit influence on the form, construction, and structure of load-bearing shells. Manufacturing building components is usually imagined as being accompanied by heavy machinery and advanced tools. In the case of tile vaults, craft can be central to their manufacture. In this paper, we examine two tile-vaulted projects in which the craft of the artisan is either digitally transferred or pushed to the edge of mechanization. In *FR2* (Chicago, USA), the work of a stone mason in Cambridge (UK) was digitized and remanufactured in Chicago to serve as a mold. In *FabricArte* (Valencia Spain), a three-vault walk-through pavilion built for the Ceramic Expo 2018, we investigated offsite construction of the vaults, slicing them into pieces and transferring the resulting modules to the site for reassembly. In *FR2* and *FabricArte*, typical construction of tile vaulting was challenged by constraints of skill and time. The designs explore the interface between craft, computation, and construction in tile vaults.