The Hybrid Bricolage - Bridging Parametric Design with Craft through Algorithmic Modularity

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The computational design space, unlimited by its virtual freedom differs from traditional craft, which is bounded by a fixed set of given materials. While researchers have already investigated how to bridge these two creative domains, we study how to introduce the field of parametric design to craftspersons. Our hypothesis is that the arrangement of parametric design in modular representation, in a form of a catalog can assist makers unfamiliar with this practice. We evaluate our hypothesis in the realm of bags design, through a honeycomb smocking embroidery pattern catalog and custom Computer-Aided Smocking (CAS) Design software. A user study validates our initial assumption, while pointing to the link between preliminary expectations to satisfaction from the process and its outcomes.

Hybrid Bricolage process: (a) the designer selects generated patterns using the Honeycomb Catalog (b) applies the patterns using Computer-Aided Smocking (CAS) design software, and (c-d) manually completes the work. (e) A full honeycomb smocking embroidery bags designed by the first author

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