From idea to shape, from algorithm to design

A framework for the generation of contemporary façades

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Abstract. Nowadays, there is a growing interest in buildings' envelops presenting complex geometries and patterns. This interest is related with the use of new design tools, such as Generative Design, which promotes a greater design exploration. In this paper we discuss and illustrate a structured and systematic computational framework for the generation of facade designs. This framework includes (1) a classification of facades into different categories that we consider computationally relevant, and (2) an identification and implementation of a set of algorithms and strategies that address the needs of the different designs.

Keywords: generative design, facades, algorithms.

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