Abstract

This work focuses on integrated product design and computation, and proposes methodologies and tools to build product designs integrating CAD-CAM technologies. The designs belonging to different eras are generated automatically with the help of developed algorithms and their fabrication methodologies, thus, helping the designer to reach his objective. Although most of the designs that are produced using this method, are non functional, the decorative aspect of the final product serves a great purpose when looked at in terms of the product's visual and emotional attractiveness to the end consumer. This is achieved through the use of different forms and patterns. This proposed work presents different decorative design patterns as formative concepts to support the design computation. The design of any pattern in a particular art-form, is identified by the physical shape of the primitives of the motifs/compound and motifs/patterns, as well as its attending spatial interactions. By using this little "trick," mathematical models or parametric modeling of the design patterns can thus be formulated. The variability and embeddedness in the design patterns can be explored by this methodology.
References

An Innovative Approach to Recognize and Generate the Design Patterns as Formative Concepts to Support the Design Computation

- Ronald Strebelow, Mirco Tribastoney, Christian Prehofer "Performance Modeling of Design Patterns for Distributed Computation"

**Index Terms**

Computer Science
Software Engineering

**Keywords**

CAD/CAM  Design  Motif  Pattern  Recognize