

**A STUDY ON THE DEVELOPMENT OF AN INTERPRETER  
FOR MAPPING HUMAN SENSIBILITY AND DESIGN  
PARAMETERS ON AUTOMOTIVE INTERIOR**

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**ABSTRACT**

In the preliminary design stage of an automotive interior, human sensibility is first analyzed and applied to design parameters for satisfying consumers needs using optimization and engineering judgement. Then designers try to design components that meet these needs using empirical and trial-and-error procedures. This process usually yields poor results because it is difficult to find a feasible design that satisfies the targets by trial-and-error (a feasible design is one that satisfies consumers needs and design constraints). To improve this process, we need tools to link the human sensibility with the design parameters that define the geometry of the components of an automotive interior. A methodology is presented for developing a tool for design guidance of an automotive interior. This tool translates the human sensibility into the design parameters that define the geometry of the components of an automotive interior. This tool, called interpreter, rapidly predicts the human sensibility of a given automotive interior and presents design parameters that meet or exceed given human sensibility to satisfy consumers needs and design constraints. The methodology is demonstrated on the interior design of an actual automotive.