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Applying colour science in colour design

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Abstract

Although colour science has been widely used in a variety of industries over the years, it has not been fully explored in the field of product design. This paper will initially introduce the three main application fields of colour science: colour specification, colour-difference evaluation and colour appearance modelling. By integrating these advanced colour technologies together with modern colour imaging devices such as display, camera, scanner and printer, some computer systems have been recently developed to assist designers for designing colour palettes through colour selection by means of a number of widely used colour order systems, for creating harmonised colour schemes via a categorical colour system, for generating emotion colours using various colour emotional scales and for facilitating colour naming via a colour-name library. All systems are also capable of providing accurate colour representation on displays and output to different imaging devices such as printers.

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Keywords

Colour science; Colour specification; Colour-difference; Colour appearance; CIELAB; CIELUV; Colour selection; Munsell; NCS; Pantone

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