

**Topic of the Speech:**

Colour Evaluation for Textile Products

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Professor Tetsuya Sato is teaching colour technology at the post-graduate course of in Kyoto Institute of Technology (KIT), Japan. He is the head of Ph.D Course of Engineering Design and the head of Master Course of Design Engineering Management. He is also the head of International Division at the Centre of Fiber and Textile Science of KIT.

He graduated from KIT with a master degree in colour chemistry, and obtained his Ph.D from Otsuma Women's University with his research on colorimetric method for assessing colour fastness of textiles. He is interested in colour science, psychology, human interface, material technology, LOHAS technology, fashion business and so on, which are relating to textile and clothing. Therefore, he is extending his research in colour psychology, colour culture and colour business. Now he is trying to bridge the gap between researches on physical properties and human sensations in colour and textile fields.

ABSTRACT SUBMISSION



-For invited speaker only

Colour Evaluation for Textile Products

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ABSTRACT (NO MORE THAN 500 WORDS:)

Colour is one of the most important properties for textiles and clothing. The colours of textile products are planned first by colourists including designers. The textile products are coloured at dyeing factories, and they become end-products through some processes afterwards. Finally, they are purchased by the consumer's interests, and the colours will give various impressions. Therefore, for the textile products, there are some colour matters shown as below.

Colour matching: In order to check colour matching, it is needed to check the colour difference between target and trial colours, such as 'same or different' and 'pass or fail'. The prediction of the colour difference has been done by using instrumental measurement and colour difference value.

Colour fastness: Colour fastness is one of the most important qualities of textiles and clothing. Generally, colour fastness is assessed through visual assessment using Grey Scale. The prediction of the colour fastness rating has been suggested by using instrumental methods.

Colour impression: The colours of textiles and clothing give us various impressions. The impressions are made in our brain, and the colour impressions are greatly influenced by consciousness. It is difficult to know the level of the colour impressions. However, some numerical expression of the colour impressions has been tried.

Colour design: In the colour design, the colour designers plan and propose suitable colours for textiles and clothing that the consumers buy. To design more highly and easily, many methods supporting the design are proposed with the advancement of the digital instruments and techniques.

In order to analyse the colour properties of textiles and clothes, we have to research with physical and/or chemical viewpoints, also with sensational view point. However, there is a big gap between physical and sensational researches. In the approach of the physical viewpoint, the researchers are paying attention to the physical and/or chemical characteristics of the materials. On the other hand, human responses are paid to attention in the sensational research. I think that it is important to bridge between the two sides. I would like to talk about those above colour matters and some psycho-physical trials in our presentation.

Attention: This abstract is summarised using my previous papers and abstracts such as Annual Report Meeting for 'Neo-Fiber Technology' Project; T.Sato, S.Kitaguchi, The 7th Asia/Africa Academic Seminar, p.65-66 (2011, 3).