IMS-Bordeaux
Bâtiment A31, Amphi Jean Paul DOM
Conférence le 12-10-2015 à 14h00

Par Edsger Smits, Holst Centre, Eindhoven, The Netherlands

Title: Stretchable RGB LED Display’s using Meander Wiring Technology

Speaker biography

Edsger Smits received his Ph.D. with honors from the University of Groningen in the field of organic electronics, where he was involved in the development of organic and self-assembled monolayer field-effect transistors. In 2009, he started as a researcher at the Holst Centre working on oxide transistors and on the development of low cost sensors for smart packaging. His current work is directed at integration solutions for hybrid and plastic electronics and on the development of laser processes. He is authors and co-author of over 40 peer reviewed articles.

Abstract

Wearable devices such as healthcare monitors and activity trackers are now a part of everyday life for many people. Today’s wearables are separate devices that users must remember to wear. The next step forward will be to integrate these devices into our clothing. Doing so will make wearable devices less obtrusive and more comfortable, encouraging people to use them more regularly and, hence, increasing the quality of data collected. A key step towards realizing wearable devices in clothing is creating displays that can be integrated into textiles to allow interaction with the wearer.

Holst Centre has made the first steps by developing stretchable RGB displays based inorganic LED’s that can be integrated into clothing. In this work we present an overview of the different generations of stretchable displays that have been realized. The stretchability obtained by the meander wire technology as well as the driving schemes (passive and active matrix) that have been employed will be discussed.