

4th International Workshop in Design and Engineering

19th – 23rd 2012, Ecole des Mines, Saint-Etienne, France

Smart, adaptable, functional textiles

More than any other family of engineering materials, technical textiles are a domain where the industry is facing increasing difficulties at keeping up with the pace of technical innovations. The possibilities offered by technical functional textiles seem unlimited and, apart from sports gear which offer a value-added but somewhat limited application area for these novelties, implementing these innovations in viable products and services requires more than just technical skills and production capabilities. Numerous semi-failures in the field of “smart clothing” and garments demonstrate yet again that the social acceptance of technical gizmos is not granted and that a user centric approach is needed here, maybe more than anywhere else. More promising realizations seem to emerge in the fields of building, architecture and consumer goods (e.g.: luggage), but there still is ample room for relevant innovations that successfully combine usage, scenario, context, technology and business model.

Following the 4 years old tradition of the Design and Engineering Workshops held at Ecole des Mines de Saint-Etienne in collaboration with Brunel University, we will briefly review the current and upcoming possibilities, then assume that technology is not the limiting factor and quickly forget the technicalities to concentrate on relevant usage scenarios for these new families of materials, with the only constraint of staying away from clothing and fashion. Deploying the methodology elaborated during these recent years, we will investigate questions like: “if one size fits all, then what becomes possible?” or explore the moving boundaries between home and away, temporary and permanent, hardware and software.

This workshop will be the second of a series of three in 2012, which form the project “Emballez-moi ! Une création Industrielle” (<http://www.ccsti-larotonde.com/Emballez-moi-Une-creation>). The results will be presented to the general public in March 2013 during Saint-Etienne’s Design Biennal.

*Design and Engineering Workshops are part of the minor in Industrial Design offered to engineering students of Ecole des Mines de Saint-Etienne since 2009. In collaboration with Brunel University of West London, EMSE formalised a methodology for these multidiscipline workshops, which are now offered to the industry under the brand name “L*unchBox Workshop”. Over 120 students from both institutions, joined in 2010 by Politecnico di Milano and in 2011 by Ecole Supérieure d’Art et de Design de Saint-Etienne, experienced this one-week intensive training in Design-led innovation in multi-discipline and multi-cultural environments. Some valuable concepts emerged from these workshops like, in 2009, a service combining social networks and geo-localisation - six months ahead of the launching of Foursquare - or, in 2010, several viable usage scenarios for the management of digital identities and personal data on social media, over a year before the introduction of Google+ circles and Facebook groups features.*

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