E-Textiles Network

E-Textiles for Healthy Ageing

Manchester Metropolitan University, 14th February 2019
Benzie Building, Higher Chatham Street, Manchester, M15 6ED

9.30	Registration & coffee
10.00	Welcome and Introduction
10.10	Short presentation – Dr Laura Brown "What is Healthy Ageing?" *The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This highlights the importance of taking a broad and holistic view when deciding what the target outcomes of healthy ageing interventions should be. This talk will provide an overview of some of the common health issues associated with ageing, and will also consider definitions of healthy ageing from a variety of perspectives.*
10.30	Short presentation – Prof. William Harwin "Classification and assessment of movements from inertial sensors." *Low energy inertial sensors make it feasible to embed mesh networks of sealed sensors. With sufficient sensors and an ability to store and transmit information, it would be easy to determine activities and quantify movement quality. These measurements are of value in healthcare, the safety industry, sports science, and military as well as providing a valuable mechanism for ongoing research. This presentation will consider how data from multiple inertial sensors that can be incorporated into casual clothing could be processed and used for applications in healthcare and allied research.*
10.50	Panel discussion – Q&A and general discussion
11.10	Facilitated workshop session: (excluding e-textiles) What could technology do for healthy ageing
12.00	Lunch and networking
12.45	Short presentation – Tim Brownstone (Kymira) "How e-textiles can change domestic health care forever" *The original computer programmes where inspired by automated binary code used by the textiles industry. Today computing and sensing functionality is being built into the textiles themselves giving rise to entirely new methods of generating data. Perhaps the greatest ramifications of these advances will be seen in healthcare which has fallen behind other industries with its adoption of wearable electronics due to a lack of accuracy and functionality. Do e-textiles hold the answer?*
13.05	Short presentation – Prof. Cathy Treadaway "Keeping the person at the heart - designing for dementia and cognitive impairment" *Over the last 6 years Professor Cathy Treadaway has been leading international design research, informing the development of playful*

	products for older people living with cognitive impairment as a result of dementia and stroke. The presentation will describe how e-textiles have been used in the design of highly personalised sensory products that enhance the quality of life of people living with advanced dementia with severe cognitive and communication difficulties.
13.25	Short presentation – Mark Pedley (Smartlife) "Insight to live better, everyday" *Smartlife have developed innovative textile sensors and electronics which can be integrated into any close-fitting garment and are capable of detecting the body's biophysical signals (e.g. ECG, EMG, respiration), and mechanical forces on the body.* *Smartlife technology is discreet, comfortable, cost-competitive, and its accuracy has been independently verified by leading academic institutions.*
13.45	Panel discussion – Q&A and general discussion
14.05	Coffee break
14.15	Facilitated workshop session: The research challenges in converting the identified technologies into e-textile embodiments and timeframe for implementation
15.50	Wrap up and next steps
16.00	Close