Improvements of smart garment electronic contact system

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Electro-textile interface is indispensable in producing smart clothing, but it is very difficult to integrate the electronic products and fabric products because their manufacturing processes and their physical properties differ greatly. Due to these differences there are several problems in projecting smart garment therefore unconventional solving technologies and methods are necessary. Solutions of flexible textile interface obtaining are searched, replacing bulky wires and solid breadboards with more clothing-suitable versions.

Experiments with several conductive fabrics and other flexible materials are done what would be suitable for designing construction of electronic circuits in smart and interactive clothing. During research several electronic pathways are built what differs with composition and geometrical parameters of material, conductivity of material, pathway shape, attaching technology etc. Developed flexible pathways are proved for exploitation and durability, making some tests, for example - durability of attrition and durability of washing. Reaction of flexible circuits on isolation with different materials is studied as well. Results of the research will be analyzed and compared, evaluating preferable solutions what is possible to use in construction of smart garment system.