SweatAtoms: Understanding Physical Activity through Material Artifacts

Abstract
In this video, we present a novel approach of representing physical activity in the form of material artifacts. By designing such material representations, our aim is to understand what these artifacts might offer in terms of reflecting upon physical activity. For example, what types of affect do material artifacts, representing ones’ physical activity over time create for the user? In order to advance this understanding, we have designed a system called SweatAtoms that transforms the physical activity data based on heart rate into 3D printed material artifacts and provides 5 different material representations of their physical activity. This video offers few reflections on designing material representations for physical activity. We hope that our work will inspire designers to consider new possibilities afforded by digital fabrication to support user’s experience with physical activity by utilizing interactive technologies at our disposal.

Author Keywords
Physical activity; biofeedback; 3D printing.

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Acknowledgements: We specially thank Ruwan De Silva and all the members from Exertion Games lab for the support and help with this work.