

Keynote: Long-term Affect and Activity Assessment on the Wrist

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Abstract—As inertial sensors have matured and sensors that pick up the wearer’s vital signs are steadily improving, I will focus in this talk on the underlying information that can be deduced from the vast array of sensor signals that is currently embedded in the latest generations of smartwatches. Especially the fact that smartwatches allow the long-term and continuous monitoring of their wearer’s state opens up a plethora of medical applications. Through examples from recent studies, where wristwatches can spot epileptic seizures, stress, smoking episodes, sleep, and activity, I will try to illustrate why more future users will not want to put their watches off.

I. AUTHOR BIOGRAPHY

Kristof Van Laerhoven is full Professor for Ubiquitous Computing at the University of Siegen (Germany) and researches

systems that combine wirelessly connected and wearable sensors with embedded machine learning techniques. Previously, he was Professor for Embedded Systems at the University of Freiburg, and has led the Embedded Sensing Systems Research Group at the Technical University of Darmstadt. He obtained his PhD at the University of Lancaster (UK) and studied Computer Science at the University of Brussels (VUB) in Belgium. He co-chaired the UbiComp/ISWC conference last year, is Associate Editor for the ACM IMWUT journal, and heads the wearables department of the IEEE Pervasive Computing magazine. More info on: <http://ubicomp.eti.uni-siegen.de>