For assessing the energy consumption of an embedded system, typically measurements on a shunting resistor are conducted in a laboratory environment. While such measurements can be easily performed with high precision for stationary setups, obtaining data on the energy-consumption of mobile devices, such as body-worn electronics (wearables) is a significantly more challenging task, since the power consumption depends on the behavior of the user. For example, consider an activity sensor which transmits the detected activity type (e.g., walking, running, resting) wirelessly to a smartphone whenever the activity changes. Clearly, more current is drawn for the transmission whenever the activity needs to be updated. Connecting the device with long wires to a stationary measurement platform distorts the results and restricts the motion of the user. Therefore, the measurement platform needs to be mobile itself to measure in-situ. This imposes multiple challenges on such a system, e.g., the limited power budget for obtaining samples of the current consumption and the need for miniaturized electronics. In this paper, we propose EG0N, a mobile current measurement platform for wearables. While
addressing the mentioned challenges, it supports useful advanced features, such as collaborative, context-aware measurements on the device-under-test (DUT).

**Kongress-/ Buchtitel:**
International Symposium on VLSI Design and Test (VDAT)

**Kongress/Zusatzinformationen:**
Guwahati, India

**Jahr:**
2016

**Occurences:**
- Hochschulbibliographie > 2016 > Fakultäten > Elektrotechnik und Informationstechnik > Realzeit-Computersysteme (Prof. Chakraborty)
- Einrichtungen > Fakultäten > Fakultät für Elektrotechnik und Informationstechnik > Lehrstühle und Professuren > Realzeit-Computersysteme (Prof. Chakraborty) > 2016

entries: