

## IWINAC2017: Workshop:

# Physiological Computing in Affective Smart Environments

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Ambient Intelligence is a research field whose goal is to create "smart" environments that react in an attentive, adaptive and proactive way to the presence and activities of humans, in order to provide the services that inhabitants of these environments request or are presumed to need. A Physiological Computing (PC) system is a category of technology where electrophysiological data recorded directly from the central nervous system or muscle activity are used to interface with a computing device. This technology becomes even more relevant when computing can be integrated pervasively in everyday life environments. Thus, an Affective Smart Environment (ASE) should be able to adapt its behaviour according to the Physiological Computing paradigm.

This workshop on "Physiological Computing in Affective Smart Environments" aims at integrating both fields and showing the contributions of PC for ASE. Proposals of researchers who use signals from the brain and/or body to infer people intentions and psychological state in smart environments are welcome. Designing this kind of environment requires combining knowledge and methods of ubiquitous and pervasive computing, as well as physiological data measurement and processing, with those of affective computing. The workshop will provide a meeting point for IWINAC attendees who have a current or developing interest in Physiological Computing and Affective Smart Environments. Papers with a special focus on multidisciplinary approaches and multimodality are especially welcome.

Topics areas include (but are not restricted to):

- Physiological Computing (PC)
  - Brain-Computer Interfaces
  - Biofeedback and Neurofeedback Systems
  - Eye Movements, Gaze Monitoring and Eye Blink Activity
  - Wearable Systems
  - Signal Acquisition, Filtering and Digitization

- Artefact Correction and Feature Extraction
  - Classification
- Affective Smart Environments (ASE)
  - Affective Computing
  - Sentient Computing
  - Ubiquitous and Pervasive Computing
  - Mobile Computing
  - Context Aware Computing
  - Ambient Intelligence
- Applications and Case Studies of PC in ASE