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## Proceedings of the Annual Meeting of the Cognitive Science Society

**Title**
Context in distributed situated cognition

**Permalink**
https://escholarship.org/uc/item/7ss2s1jm

**Journal**
Proceedings of the Annual Meeting of the Cognitive Science Society, 32(32)

**ISSN**
1069-7977

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**Publication Date**
2010

Peer reviewed

# Context in distributed situated cognition

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**Abstract:** Ambient Intelligence (AmI) can be understood as a research effort towards physical environments that can use artificial intelligence techniques, in order to serve people in an intelligent, pro-active manner. AmI environments provide a unique, novel platform for studying and applying concepts of situated cognition and self-organization. In particular, we find that representations of context are crucial for AmI systems to perform these tasks. We follow the idea that the notion of context plays a central role with respect to economy, evolution, and architecture of cognitive systems. In particular, context can be understood to bridge the gap between the sensory stream and goal-directed reasoning. We present a logical language in which contexts, and not objects, properties, or propositions, are the primary entities. We show that, from this logical formalism, a corresponding symbolic-connectionist hybrid model of distributed, situated cognition can be derived.