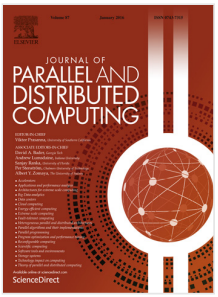
Accepted Manuscript



Cyber physical cloud-oriented multi-sensory smart home framework for elderly people: An energy efficiency perspective

M. Shamim Hossain, Md. Abdur Rahman, Ghulam Muhammad

PII: S0743-7315(16)30123-X
DOI: http://dx.doi.org/10.1016/j.jpdc.2016.10.005
Reference: YJPDC 3543

To appear in: *J. Parallel Distrib. Comput.*

Received date: 31 May 2016
Revised date: 25 August 2016
Accepted date: 3 October 2016

Please cite this article as: M.S. Hossain, M.A. Rahman, G. Muhammad, Cyber physical cloud-oriented multi-sensory smart home framework for elderly people: An energy efficiency perspective, *J. Parallel Distrib. Comput.* (2016), http://dx.doi.org/10.1016/j.jpdc.2016.10.005

***Highlights (for review)**

Highlights

- Our energy-efficient cyber-physical smart home system can efficiently monitor the elderly people
- Smart home event detection using multi-sensory environment to assist the caregiver for making decisions
- An automatic control system using speech or gesture is developed to save energy
- We adopted an energy-aware cloud-based framework for load balancing
- Low-dimensional discriminative features are extracted from the multimedia sensors