



UNIVERSITÀ
DEGLI STUDI
FIRENZE

Research Project for Smart Computing PhD Programme

Model-based quantitative analysis
for on-line diagnosis, prediction
and action scheduling in partially
observable systems

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Motivations

More and more every year we see all around the world an increasing use of *smart systems*, i.e. systems that incorporate the functions of sensing, actuation and control in order to describe and analyse a situation and make decisions based on the available data in a predictive and adaptive manner (i.e. performing *smart actions*).

Smart systems can have very different natures, as they are used in many distinct fields. Smart systems range from sensor networks to smart buildings, from cyber-physical systems to smart cities.

Goals

Approach

References

- [1] L. Carnevali, C. Nugent, F. Patara, and E. Vicario, “A continuous-time model-based approach to activity recognition for ambient assisted living,” in *Quantitative Evaluation of Systems: 12th International Conference (QEST’15)*, September 2015.
- [2] M. Biagi, L. Carnevali, M. Paolieri, F. Patara, and E. Vicario, “A stochastic model-based approach to online event prediction and response scheduling,” in *13th European Workshop on Performance Engineering (EPEW’16)*, October 2016.
- [3] Smartcomp. [Online]. Available: <http://www.smart-comp.org/>