

Keynote

The First Australasian Workshop on Computation in Cyber-Physical Systems (CompCPS-2010)

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Title: Application of compressive sensing in cyber-physical systems

Abstract:

Compressive sensing is a collection of recently proposed sampling methods in Information Theory/Signal Processing. The promise of compressive sensing is that it can obtain a sufficiently accurate approximation of an unknown data field (or sequence) by using a small number of generalised measurements called projections. In this talk, I will first introduce the concept of compressive sensing and then I will talk about two problems in applying compressive sensing to cyber-physical systems. The first problem is how compressive sensing can be used to efficiently acquire information. The second problem is on how to fuse the projected data from compressive sensing in the presence of sensor faults.