



SYMPOSIUM ON INFORMATION DRIVEN SPATIAL REPRESENTATIONS

Symposium Co-Chairs:

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Introduction:

The Symposium on Information Driven Spatial Representations will be held in conjunction with the 5th International Conference on Intelligent Sensors, Sensor Networks, and Information Processing (ISSNIP), in Melbourne, Australia during 7th-10th of December, 2009. This symposium will focus on novel representations and uses of space in wireless sensor networks and autonomous systems.

Summary:

Wireless sensor networks and autonomous systems are naturally spatially aware systems. That is, the functions performed by such systems inherently require the system to maintain some form of spatial representation. The manner in which space is represented, and used, can drastically affect the functional performance of any spatially aware system. The purpose of this symposium is to highlight novel research related to spatially aware systems. In particular, we invite contributions on topics including, but not limited to:

- Geometric localization and tracking methods;
- Sensor placement and movement strategies to improve localization performance;
- Stochastic geometry and property analysis of random sensor networks;
- Novel spatial representations and mapping algorithms for autonomous systems;
- Efficient spatial representations for large-scale and 3D mapping;
- Spatial representations for cognitive robotics, human-robot interaction and spatial reasoning;
- Novel coordinate representations or coordinate transforms for spatially aware systems;
- Sensor array configuration optimization for enhanced sensing;
- Control and planning on spatially interesting manifolds;
- Novel spatial representations for (distributed) geometric control of mobile multi-agent systems.

Articles should be submitted to the symposium via the ISSNIP conference submission website by June 30th, 2009. Visit the website, <http://www.issnip.org/2009/>, for further submission guidelines and author instructions (or email the chairs).

Technical Program Committee:

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