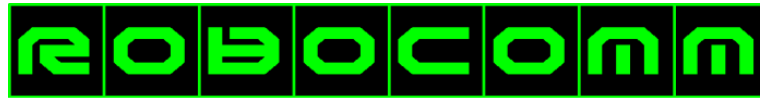




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1<sup>st</sup> international conference on robot communication and coordination  
Technical Co-sponsored by ACM Sigmobility, IEEE RAS and CREATE-NET

[www.robocomm.org](http://www.robocomm.org)

15-17 October, 2007, Athens (Greece)

ROBOCOMM is the First International Conference on Robot Communication and Coordination. As the name suggests, it aims at the convergence of two fields, acting as a common forum for the Robotics and Communications research communities. The expected outcome of the event is to promote cross-pollination of these two areas leading to growth in the capabilities of both.

Robotics is an interdisciplinary field that includes the following key competencies: mechanics, control theory, electronics and communications. Initially the first three areas dominated in their roles. However, in the last two decades we have witnessed the unprecedented growth of wireless communication technologies, with growing attention given to sensor networks and ad-hoc networks, enlarging the possible configurations of a network. Meanwhile, building more than just one or two robots at a time has become cheaper and more common, thus opening a whole new range of applications for multi-robot systems with networking capabilities.

Network robotics offers a framework to study coordination mechanisms for complex systems through communication channels, thus providing the natural common ground for convergence of information processing, communication theory and control theory. Networked robotics poses significant challenges, requiring the integration of communication theory, software engineering, distributed sensing and control into a common framework. Furthermore, robots are unique in that their motion and tasking control systems are co-located with the communications mechanisms. This allows the co-exploitation of individual subsystems to provide completely new kinds of networked or distributed autonomy.

Hence, ROBOCOMM will be a leading-edge conference where prominent researchers with different backgrounds will gather and merge different ideas into a common framework that will enable new applications based on large scale networks of mobile robots.

A partial list of conference themes that will be part of the ROBOCOMM technical program is listed below. We encourage discussion of both wired and wireless networking aspects for robots. Although the intended focus is on networked robotics, papers on advanced communications for single robot systems (for tele-operation for instance) will also be welcome.

- Robotic interactions with sensors
- Communication protocols for tele-operated and tele-reflexive robots
- Intra-sensor communications within individual robots
- Communication protocols for flocks and swarms of networked robots
- Biologically inspired or biomimetic robot communication
- Exploiting the interactions between communications and autonomy
- Localization and tracking using robotic communications
- Distributed coordination of mobile robot teams
- Industrial applications of networked robotics
- Real-time software for mobile robots

The proceedings will be published by ACM and will be available through ACM Digital Library. Selected papers will be published in the ACM Mobile Network (MONET) Journal.

## Important Dates:

**Full paper due:** June 10th 2007, 12.00 p.m. CET- (extended)

**Notification of acceptance:** July 14, 2007

**Final version due:** September 4, 2007

## Submission Instructions

Authors are invited to submit full papers of up to 8 pages in IEEE conference proceedings form, i.e. double column 10pt, through COCUS, online at <http://cocus.create-net.org>