

Autonomous Robots

~Special Issue Call for Papers~

Robot Communication Challenges: real-world problems, systems, and methods

GUEST EDITORS

Michael Otte, University of Maryland, USA (otte@umd.edu)

Robert Fitch, University of Technology Sydney, Australia (robert.fitch@uts.edu.au)

Don Sofge, Naval Research Laboratory, USA (donald.sofge@nrl.navy.mil)

Autonomous Robots invites papers for a special issue on **Robot Communication Challenges: real-world problems, systems, and methods**.

SCOPE

Robots and multi-robot teams use communication to facilitate data sharing, coordination, and cooperation with other robots and human users. Real-world communication is often unreliable, expensive, non-ideal, and/or otherwise challenging in a variety of ways. These challenges lead to interesting theoretical and practical ramifications for the design, analysis, and deployment of robotic systems, algorithms, and hardware. This issue aims to foster a better understanding of the communication challenges faced by robots/teams, and how we analyze them, model them, and overcome their negative effects in practice.

Topics are expected to have well defined assumptions, constraints, or experimental observations that reflect the real-world communication challenges faced by robots/teams, but may come from any sub-field of robotics and be motivated by any robotic problem.

Example topics may include, but are not limited to:

- Communication assumed/observed to be intermittent, lossy, difficult to model, highly asymmetric, partial, blocked, expensive, compressed, encrypted, or non-ideal in other ways.
- Any-Com algorithms (graceful performance declines vs. decreasing quality).
- Robotic systems that adapt to communication constraints.
- Robotic hardware designed to overcome communication issues common in robotics.
- More accurate modeling of real-world communication.
- Overcoming real-world communication constraints in practice (e.g., undersea, air, ground, space environments).

IMPORTANT DATES

- **Initial Submission EXTENDED: August 29, 2018**
- **First Decision: November 12, 2018**
- **Revised Papers: December 12, 2018**
- **Final Decision: January 12, 2019**

PAPER SUBMISSION:

- Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals.
- All papers will be reviewed following standard reviewing procedures for the Journal.
- Papers must be prepared in accordance with the Journal guidelines: www.springer.com/10514
- Submit manuscripts to: <http://AURO.edmgr.com>. Choose “Robot Communication Challenges” as the article type.

Autonomous Robots www.springer.com/10514

Gaurav Sukhatme, Editor-in-Chief

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