

Autonomous Agents and Multi-Agent Systems Applied in Health Care

Special Issue of “*Artificial Intelligence in Medicine*”

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Aims and Scope

The Autonomous Agents and Multi-Agent Systems Applied in Health Care Special Issue intends to provide a discussion forum on the most recent and innovative work regarding the study and application of agent-based technology to convincing healthcare scenarios. A healthcare facility faces diverse and complex everyday challenges, ranging from equipment and drug inventory management to patient clinical record and follow-up management, or even patient monitoring in either a hospital or home environment, and patient transportation scheduling. At the same time, the progressive maturity of agent technology methodologies and tools has led to the development of applications in many complex real-world domains. Covering a wide spectrum of research areas, this special issue intends to bring together communities from Computer Science and Clinicians working on Healthcare, Medicine and Biomedicine, providing a presentation and discussion forum for researchers in the area, highlighting innovative and convincing healthcare applications of the agent-based systems and defining future research directions.

Topics of Interest

Submissions should concern the use of agents (virtual or physics) encompassed in the healthcare context - e.g. ranging from equipment and drug inventory management to patient clinical record and follow-up management, or even patient monitoring in either a hospital or home environment, and patient transportation scheduling.

Topics of interest include, but are not limited to:

- ❖ Medical Data Management
- ❖ Information Retrieval and Knowledge Management
- ❖ Agent-based Information Provider Services
- ❖ Remote Care, Telemedicine
- ❖ Mobile Agents in Hospital Environments
- ❖ Robotics in Healthcare (Prosthetics / Surgical Robotics)
- ❖ Impact of Agents and Robots in Patient Quality of Life

- ❖ Patient Empowerment through Personalized Agent-based Systems
- ❖ Patient Management (e.g. through agent cooperation, distributed patient scheduling)
- ❖ Planning and Resource Allocation
- ❖ Medical Agent-based Decision Support Systems, including Recommender Systems, Patient Diagnosis and Monitoring Systems
- ❖ Agent-based Patient Monitoring and Diagnosis
- ❖ Agent-based Medical Training and Education (e.g. tutoring systems)
- ❖ Healthcare applications of Multi-Agent Based Simulations

Furthermore we strongly recommend the inclusion of a clinical assessment on the usefulness and potential impact of the submitted work. The evaluation should demonstrate the feasibility of the presented newly developed formal methods and applications in medicine.

Important Dates

Submission deadline	October 15, 2017
Author notification	November 30, 2017
Completion of first revision	January 15, 2018
Author notification	February 15, 2018
Camera ready version due	March 15, 2018
Planned publication date	April 2018

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