

INVITED SESSION SUMMARY

Title of Session:

Cognitive Systems and Conversational Agents in Healthcare

Name, Title and Affiliation of Chair:

Aniello Minutolo, National Research Council of Italy (ICAR-CNR), Naples, Italy

Massimo Esposito, National Research Council of Italy (ICAR-CNR), Naples, Italy

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Details of Session (including aim and scope):

Cognitive systems are AI driven systems aimed to mimic the way the human brain works and continue to learn in order to support and improve human decision making when problems are affected by uncertainties and potential solutions require computing intensive tasks. Conversational Agents are intelligent programs which emulate conversation with humans through natural language and they are actually deployed on personal or home devices or embedded in humanoid robots, and try to enable social interactions between computers and humans in order to assist, enable, or entertain.

In the last years, cognitive systems and conversational agents have been more and more used in healthcare to build intelligent assistants able to support patients and clinicians in improving the provision and collection of health-related information, the adherence to therapy of remote patients, the promotion of behavior change interventions in users about their health, and many other healthcare goals.

This session is intended to provide an overview of the research being carried out in the areas of Conversational AI approaches and systems for Healthcare with the goal of identifying their effectiveness and limitations, adverse events, and open issues for future research. To this aim, researchers are encouraged to submit original research contributions, which include, but not limited to:

- Natural language processing
- Cognitive and Social Robotics
- Chatbots
- Conversational Systems/Interfaces
- Clinical Decision Support Systems
- Mobile-Health (MHealth)
- Symptom checkers
- Virtual assistant, nursing, or coach
- Conversational AI for the triage
- Conversational AI for the rehabilitation therapy
- Conversational AI for education and training in Healthcare
- Conversational AI for remote patient monitoring
- Conversational AI for Wellness and Well-being
- Conversational AI for improving the patients' literacy
- Datasets, data platforms and modelling approaches aimed at facilitating and supporting the development of cognitive systems and conversation agents in healthcare

Main Contributing Researchers / Research Centres (tentative, if known at this stage):**Website URL of Call for Papers (if any):****Email & Contact Details:**

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