

INTERACCIÓN 2018 -- SPECIAL TRACK

ADVANCES AND CHALLENGES IN HCI IN AGRICULTURE

Special track Organizers

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Brief Description

There is growing interest in the use of modern ICT to improve agriculture and its dependent food production systems. Agriculture ICT, that until recently was largely represented by complex precision farming machinery and ad-hoc farm management systems, now welcomes a variety of solutions of multiple levels of complexity. New proposals take advantage of recent developments in areas such as Ubiquitous Computing, Internet of Things, Big Data, and Robotics. The term Smart Farming is now frequently heard in academic and non-academic communities. Growing interest of both industry and academia can also be perceived in recent calls of public funding programs such as the European H2020.

Agriculture has its own specific characteristics that become constraints/requirements for the design and use of ICT. Connectivity cannot be ensured in many agricultural scenarios. The environment is harsh (dust, temperature, humidity, shocks) for mainstream technologies. Work context (frequently on the move; outdoors; hands being frequently busy; using gloves and security equipment) rules out common interaction techniques such as mouse and keyboard, and precise touch screens. On top of that, it cannot be assumed that users will have all the required digital competences.

The map of ICT in agriculture is changing fast. As technologies become available and affordable, industry pushes solutions to the market and farmers (and other actors in the agriculture value chain) face a new challenge: how to get on this new train and integrate ICT into their established practices in an effective and smooth manner. This situation can be both an opportunity for improvement, and the context for the emergence of a new digital divide.

Objectives

The goal of this special session is to attract representatives of industry and academia that can provide insight into the challenges and advances of effectively bringing ICT to agriculture, from the perspective of HCI. The session is organized by members of the H2020

RUC-APS project (www.ruc-aps.eu), whose goal is to enhance and implement knowledge based ICT solutions within high risk and uncertain conditions for agriculture production systems.

Topics of interest

This call is interested in (but not limited to) articles that discuss the state of the art, present innovative solutions, survey standing challenges, and report on case studies in the any following topics, from a perspective of HCI:

- Current HCI issues and novel experiences in agriculture ICT
- HCI aspects of agriculture decision support systems
- Interaction techniques and technologies applicable to Agriculture scenarios
- Usability, Accessibility & User experience issues in Agriculture ICT
- Devices, sensors, and wearable computing
- Gamification and Serious Games in Agriculture
- CSCW and Groupware in Agriculture
- Information visualization to support agricultural practices
- Novel user interfaces
- Participatory Design and Design Thinking in Agriculture

Expected audience and outcomes

A broad audience is warmly invited to attend and contribute with their knowledge and experience to the Special Track. The invitation is extended, but not limited to academics, researchers, practitioners, artists and professionals working with interactive assistant systems.

Important Dates

Submission Deadline: April 15

Author Notification: May 28

Camera-ready papers due: June 13

Date of the special track: To be confirmed

Conferences dates: September 12-14, 2018

Program Committee

Alejandra Garrido, CONICET, Universidad Nacional de La Plata, Argentina

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Submission Guidelines:

All paper submissions will be peer-reviewed by an international panel of experts. All submissions must follow the conference ACM template. Papers not strictly following the templates will be excluded from the conference proceedings. The first version must be submitted in PDF. Authors should submit an original paper written in **English** in any of the following submission categories:

- **Full Papers:** Full papers should describe original work that have not previously been published and provide significant results of scientific research. Presentation time for full papers will be 15 minutes plus 5 minutes for questions. Full papers have a maximum of 8 pages.
- **Short Papers:** Short papers should describe innovative work in progress, without significant results yet, that contribute to well-founded research. Presentation time for short papers will be 10 minutes plus 5 minutes for questions. Short papers have a maximum of 4 pages.

Publications:

All papers accepted for the conference will be published in the conference proceedings under ISBN, on CD-ROM support, as long as the camera-ready submission, registration and copyright document have been received.

Accepted full and short papers written in English will be published entirely in the ACM Digital Library.

Conferences Submission System

Papers should be submitted electronically via the EasyChair web based submission system. Inside EasyChair the topic "HCI in agriculture" must be selected.