CALL FOR PAPERS

2nd International Workshop on Smart Agriculture for the environmental emergency (SmartAgr)

June 26-30, 2023

Vanderbilt University, Nashville, Tennessee

https://smartagr.santannapisa.it/

In conjunction with IEEE Int. Conference on Smart Computing (SMARTCOMP 2023)

The global environmental emergency, due to the fast climate changes, is heavily impacting on human activities and life. Agriculture, as one of the main human activities, is directly involved in meeting the needs of the growing population. It is responsible of around the 70% of total water consumption and has heavy effects on the environment and on the land use, increasing the pollution of natural resources (air, water, soil). Recently, agriculture was addressed by a technology evolution where the new paradigm of Smart Agriculture guided the introduction of technologies such as Internet of Things (IoT), wireless sensor networks, robotics, wireless communications, remote monitoring to sustain and make more efficient the agriculture production. The global environmental emergency solicits a further evolution of Smart Agriculture to provide scientific and technological solutions suitable to make agriculture more resilient to climate changes and to better address the issues related to the protection of natural resources and to the increased need of food.

In this context, Climate-Smart Agriculture (CSA) is where smart and precise agriculture can converge to provide scientific and technological solutions in support of the planet, human life, and agricultural production, with a continuous attention to the environmental emergency. Climate-Smart Agriculture can guide the evolution of agriculture, make the intensive production more efficient and cope with the growth of a starving population, especially in the most populated and environmentally stressed areas and where natural resources (soil, water and biodiversity) are drastically jeopardized.

Smart Agriculture, treasuring the technology evolution in the field of Pervasive Computing, IoT, Artificial Intelligence, embedded systems etc. and the new perspective introduced by CSA can answer the aforementioned needs, improving the productivity and the environmental sustainability and preserving natural resources. It can drive the evolution of the agriculture and reorienting the focus on the Three Pillars of CSA as stated by the FAO:

- sustainably increasing agricultural productivity and incomes,
- adapting and building resilience to climate change,
- reducing and/or removing greenhouse gas emissions, where possible.

These pillars outline the direction of action regarding the FAO Strategic Framework 2022-2031 based on the Four Betters: better production, better nutrition, a better environment and a better life for all, leaving no one behind.

The 2nd International Workshop on Smart Agriculture for the environmental emergency (SmartAgr) investigates the design, implementation, and assessment of innovative technological solutions, including new

paradigms, methods, systems, and tools to ensure the implementation of Smart Agriculture to face off the environmental emergency.

SmartAgr is an interdisciplinary, multi-national initiative to gather electrical and telecommunication engineers, computer scientists, agronomists, biotechnologists to present new pervasive computing and embedded systems, communication and networking solutions and devices to meet the aforementioned challenges. The workshop invites and calls for participation both representatives of academia and industry across the world interested in discussing on the last evolution of Smart Agriculture with a focus on the environmental emergency. From this point of view the workshop can provide a place where to profitably exchange ideas, present applications and solutions taking advantage from the heterogeneity of the contributors to encourage the cross-fertilization of ideas and competencies.

The papers should address forefront research and development in Smart Agriculture with a particular focus on, but is not limited to, the following topics:

- Pervasive computing and embedded systems solutions enabling Smart Agriculture to face off environmental emergency.
- Artificial intelligence in Smart Agriculture with attention to the environmental emergency.
- Communications and networking technologies supporting Smart Agriculture systems and solutions to preserve natural resources and improve productivity.
- New solutions, systems, models, applications to reduce CO_2 emissions.
- Technologies and applications to sustainably increase agricultural productivity and resilience to climate changes.
- Technologies and application to preserve natural resources (soil, water, and biodiversity).

Each accepted paper requires a full SMARCOMP registration and will be included and indexed in the IEEE digital libraries (Xplore) and in Scopus Database.

IMPORTANT DATES:

Extended submission Deadline:	~~April 1, 2023~~ April 15, 2023
Acceptance Notification:	May 3, 2023
Camera Ready Submission:	May 10, 2023

Organizers and Workshop Chairs

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