CALL FOR PAPERS

1st International Workshop on Climate-Smart Agriculture for the environmental emergency (C-SmAgr)

June 20, 2022

Hybrid event (online and in person)

Aalto University School of Electrical Engineering, Espoo, Finland

http://c-smagr.santannapisa.it/

In conjunction with IEEE Int. Conference on Smart Computing (SMARTCOMP 2022)

Keynote speaker

Federica Matteoli (Food and Agriculture Organization of the United Nations)

"Managing risks to build climate-smart and resilient agrifood value chains"

The global environmental emergency, due to rapid climate changes, is having a strong impact on human activities and life and requires immediate action in which people and productive activities can play an individual and collective role.

From the other side, Society is fast changing and is adopting new paradigms involving all aspects of life, more careful not to upset the delicate equilibrium of the Earth and where the attention is more focused on the well-being of humans and animals.

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. Furthermore, CSA can cope with the growth of a starving population since current agricultural production is not sufficient to provide all the necessary food, especially in the most populated and environmentally stressed areas and where natural resources (soil, water and biodiversity) are drastically jeopardized.

Climate-Smart Agriculture, exploiting the technological evolution in the field of Pervasive Computing, IoT, Artificial Intelligence, embedded systems can respond to the aforementioned needs, guiding the evolution of agriculture and reorienting the focus on the Three Pillars of Climate-Smart Agriculture as stated by 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.

Science can play an important role to address the goals of the Three Pillars of Climate-Smart Agriculture by helping to delay and contain the environmental emergency, to improve food production by making agriculture more efficient and with a lower environmental impact, reducing CO_2 emissions and improving the resilience of crops. Technology evolution can provide advanced tools, methods, and systems to support the improvement of the quality of life of human and animals and to protect natural resources and biodiversity.
The 1st International Workshop on Climate-Smart Agriculture for the environmental emergency (C-SmAgr) investigates the design, realisation and assessment of innovative technological solutions, including new paradigms, methods, systems, and tools to ensure the implementation of the Three Pillars of Climate-Smart Agriculture supporting the diffusion and the implementation of CSA systems and solutions.
C-SmAgr is an interdisciplinary, multi-national initiative to gather electrical and telecommunication engineers, computer scientists, agronomists, biotechnologists to develop pervasive computing, embedded systems, and 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 Climate-Smart Agriculture to face off the environmental emergency and to reorienting the agriculture evolution. 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 Climate-Smart Agriculture with a particular focus on, but is not limited to, the following topics:

- Pervasive computing and embedded systems solutions enabling Climate-Smart Agriculture.
- Artificial intelligence in Climate-Smart Agriculture.
- Communications and networking technologies supporting Climate-Smart Agriculture systems and solutions.
- 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: ~~March 25, 2022~~ April 15, 2022
Acceptance Notification: April 25, 2022
Camera Ready Submission: May 16, 2022

Organizers and Workshop Chairs
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