Agriculture is a major and essential Vertical Sector of the world economy facing the challenges of meeting the demands of a growing and increasing affluent world population. The Internet of Things (IoT) opens up new innovative possibilities for agriculture ranging from research, to deep changes in the technology and practice for most agricultural domains, to new business models for managing the cycle from growth to consumption. The emerging IoT platforms, and the promise they hold pose many issues in solving practical problems of deployment and adoption. These include aspects of science and technology, development of new infrastructure, organizational issues, policy and regulatory regimes, and sustainable business models that reliably meet the needs of society.

For each region, such as Tuscany, IoT solutions must also accommodate local traditions and social needs, and capitalize on the existing networks of knowledge, relationships, and the well developed supply chains that serve customers both locally and around the world. While the focus of the Summit is on Technology the context is the much broader set of issues that must be addressed to achieve the benefits that IoT may bring - improvements in quality and yield, greater productivity, efficiency in operations, overcoming variability in natural conditions, lowering costs, fewer losses in the distribution and merchandising of agricultural products, better serving the needs and tastes of consumers, and a sustainable and stable eco-system that supports the viability and attracts participation in the supply chain of agricultural products - from the farm to the
table. The theme we have chosen for the Summit is "The Digital Revolution - Farming 4.0!" We have also selected specific Agricultural domains as a focus for the Summit. These are important to Tuscany, to Italian Agriculture, and address aspects of Agriculture practiced all over the globe. The domains briefly are: Viticulture, Orchards, Nurseries and Greenhouses; Cereal Crops, and Animal Husbandry.

On the Technology and Science front the areas of importance to IoT include complex multi-disciplinary systems such as: Wireless Sensor, Actuator, Monitoring and Control/Decision Networks; Unmanned Vehicles - including drones, tractors, quads, mechanical agriculture machinery, and for aquaculture submersibles and surface craft; adoption of Cloud, Mist, and Fog/Edge services; Big Data, Analytics, and Artificial Intelligence; the use of common infrastructure for power, communications, mobility, computing and data storage; human interface devices for situational awareness, decision making, and command; and lastly the codification of agricultural science, domain knowledge, and practices for the many segments of the Agriculture Vertical, all to drive further digitization. While there have been many deployments of IoT in Agriculture, IoT is still in its early stages and we are very much on the learning curve - we are at a point in time where experimentation and sharing of knowledge are extremely important.

The Summit is aimed at covering the most relevant aspects related to “The Digital Revolution - Farming 4.0” with a focus on IoT in the Agriculture Vertical, concentrating on the five domains we have chosen. The goal of the Summit is to create a sustained dialog between the many constituencies that normally do not interact, but must, for IoT to be fully embraced and to further drive the acceptance and adoption of IoT.

Experts and leaders from agricultural enterprises, prominent industrial suppliers of agricultural machinery and services, researchers and technologists, and some on the best thinkers about IoT will share their experiences and advanced ideas about the trajectory for IoT in agriculture. The Summit will offer the opportunity to discuss and analyze systems that can provide "intelligent and smart" goods, services, and processes to achieve the vision behind Farming 4.0 and the enabling role that IoT plays. During the Summit invited speakers will present case studies to explore deployed IoT solutions to identify the challenges to overcome and factors for success. The Summit will cover all the domains related to advances in the development and application of IoT in agriculture and related industries.
Venue

The Summit will be held in Monteriggioni (Siena) in the heart of Tuscany on the 8th-9th of May 2018. The Summit includes a rich program of social events and networking opportunities with industry speakers from leading international companies, and renowned researchers from the scientific and technical worlds of Engineering and Agriculture. The program has receptions scheduled for the evening of the 7th and 9th, traditional Tuscan meals for lunch and dinner, and a tour of the wine country. There is a full companion program to nearby tourist destinations during the Summit. The meetings will be held at the Hotel Borgo San Luigi, as will most of the meals. Hotel accommodations can be reserved at the Borgo San Luigi and at nearby Hotels in Siena (20 minutes away). The location for the Summit can best be reached from either Florence or Siena. Transportation to and from the venue to designated Hotels will be provided daily.
Organizing Committee

Alexander Berlin, Berlin Thinking
Adam Drobot, Chairman OpenTechWorks, Inc. and Chair IEEE IoT Activities Board
Stefano Giordano, University of Pisa
Latif Ladid, University of Luxembourg, and President IPV6 Forum
Roberto Minerva, Technical Lead SureFIRE, Turin, Italy
Mehmet Can Vuran, University of Nebraska
Periklis Chatzimisios, ATEITHE, Thessaloniki, Greece

Technical Program Committee

Adam Drobot, Chairman OpenTechWorks, Inc. and Chair IEEE IoT Activities Board
Stefano Giordano, University of Pisa

Publicity Committee

Lee Stogner, President Vincula Group, USA
Periklis Chatzimisios, ATEITHE, Thessaloniki, Greece

Submitting a Proposal

There are two types of proposals that are being solicited please use the instructions for the appropriate section below for your submission:

- Ideas for Panels, Panel Topics, Demonstrations, and for Presentations from Speakers that the Summit would benefit from.

- Original Technical Papers that are novel, original, that address the Summit Themes and would be an appropriate basis for a Presentation.
Summit Theme Related Ideas

Submission deadline: 30 March 2018
Notifications of acceptance will be returned by 6 April 2018

- Role of IoT in the Practice of Agriculture - (Viticulture, Orchards, Nurseries, Cereal Crops, and Animal Husbandry)
- Role of IoT in Processing, Distribution, and Retailing of Agricultural Products related to the Summit Topics
- Presentations, Panels, or Roundtables on Technologies and Infrastructure to Support IoT for the Themes identified
- Results of Demonstrations and Experiences with IoT Deployments
- Suggestions of specific topics and presentations or specific speakers

Conference proposals must be marked and submitted electronically: https://edas.info/chair.php?c=24406

Contacts for Theme Related Ideas

Adam Drobot - Email: adam.drobot@gmail.com
Stefano Giordano - Email: s.giordano@iet.unipi.it

Submission of Original and Novel Technical Papers Addressing the Summit Themes

Novel and original papers will be selected through a peer review process (the paper will be published on IEEE Xplore and indexed on Scopus).

The topics will include, among others, the following subjects

- Computerized decision-support aids
- Electronic monitoring and control
- Sensors and sensor systems
- Wireless sensors and actuators networks
- Cloud, Mist, and Fog/Edge computing in agriculture
- Machine learning in agriculture
- Autonomous vehicles in agriculture
- Applications of artificial intelligence
- Machine vision
- Robotics
- Simulation and modeling
- Connectivity and Communications
- Human Machine Interfaces

Submission deadline: 30 March 2018
Notifications of acceptance will be returned by 6 April 2018
The IEEE IoT Vertical and Topical Summit on Agriculture - Tuscany (Tuscany2018) solicits two types of technical paper submissions.

- **Full papers** describing original research. Suggested size is four pages; papers up to six pages will be accepted. Extended versions of selected papers may be considered for publication in IEEE IoT Journal: [http://iot-journal.weebly.com/](http://iot-journal.weebly.com/)

- **Extended abstracts** describing emerging results of new research areas or relevant topics from an industrial point of view, not to exceed two pages.

Papers and abstracts will be fully peer reviewed. Papers are expected to be 4-6 pages in length and extended abstracts 2 pages long. If the submission is accepted and presented, it will be included in the conference proceedings and be submitted to the Xplore Digital Library. IEEE takes the protection of intellectual property very seriously. All submissions will be screened for plagiarism using CrossCheck. By submitting your work you agree to allow IEEE to screen your work for plagiarism: [http://www.crossref.org/crosscheck/index.html](http://www.crossref.org/crosscheck/index.html)

**How to submit**
All papers must be submitted in PDF and US letter format. Submitted papers must conform to the IEEE formatting guidelines as specified in these templates (Word Template, LaTeX package). All papers must be submitted electronically: [http://www.ieee-wf-iot.org/](http://www.ieee-wf-iot.org/)

**Important Dates for Paper Submissions**
Technical paper abstract submission: 30 March 2018
Technical paper submission: 30 March 2018
Acceptance Notification: 6 April 2018
Camera-ready submission: 23 April 2018
Papers must be submitted electronically: [https://edas.info/chair.php?c=24406](https://edas.info/chair.php?c=24406)

**Contacts for Technical Papers**
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