Special Session on
Boosting Sustainability through Collaboration in Agri-food 4.0 context

**Scope.** Agri-food value chains are subject to multiple sources of uncertainty and risks that strongly jeopardize their future sustainability. Due to the important implications that this sector has from the economic, environmental and social standpoint, it is necessary to investigate new models boosting their sustainability. Innovative approaches should also face other challenges such as the integration of the consumers' needs and producers minimizing wastes and achieving a fair distribution of gains and risks among the stakeholders involved. This is not an easy task due to the high diversity of interests attaining different stakeholders that hinder to find a satisfactory solution to all of them. In this context, the development of new generation of collaborative and innovative agri-food networks in the era of digital transformation would be key to address these challenges.

Along these lines the agri-food 4.0 is about including and integrating the digital technologies and their interoperability processes across them. The digitalization of agri-food value chains can allow to take advantage of the opportunities provided by the new technologies such as Cloud Computing, Internet of Things, Big Data, Blockchain, or Artificial Intelligence to reduce their uncertainty and risks as well as improve their security and resilience. In the digital era, these new technologies and their hybridization are changing the way agri-food value chains organize and make decisions with the development of data-driven, smart and autonomous connected systems. How agri-food 4.0 in a collaborative context could improve the sustainability of these supply chains still remains open. This special session is focused on papers addressing innovative solutions mutually beneficial to the diverse stakeholders of agri-food value chains that allow to increase their efficiency, security, flexibility, agility, robustness, resilience and sustainability from the farmers to the final customers taking advantage of the digitalisation and new technologies in a collaborative agri-food 4.0 context without losing sight of the ethical perspective.

This session addresses several aspects covers by H2020 RUC-APS project (www.ruc-aps.eu) a H2020 Rise project devoted to “Enhancing and implementing Knowledge based ICT solutions within high Risk and Uncertain Conditions for Agriculture Production Systems”

Topics of interest are the same as the general conference ones applied to agri-food value chains. They include but are not limited to the following aspects from a collaborative perspective:

- Digital modelling of agri-food value chain
- Agri-food networks digitalisation supported in collaborative models, platforms and systems.
- Developments based on new technologies (Cloud Computing, Internet of Things, Big Data, Blockchain...) and their hybridization fostering collaboration and addressing new challenges in agri-food value chains.
- Application of Artificial Intelligence in agri-food value chains
- Application of strategic planning for implementing ICT value chain solution in agri-food
- Design, planning and operating agri-food value chains
- Uncertainty, Risk and Resilience Management in agri-food value chains
- Models for boosting sustainability of agri-food value chains.
- Models for achieving fair solutions for the stakeholders of the agri-food value chains
- Economic and value models for agri-food value chains
- Application or case studies of collaboration and digitalisation in agri-food value chains
- New business models for the agri-food value chains
- Decision Support Systems for agri-food supply chains

**Session Organizers:**

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**Submission procedure:** Papers accepted for this session are included in the PRO-VE 2019 conference proceedings and follow the same reviewing process.

**Important dates:**

- Abstracts: Now
- Full paper: 29 Mar 2019
- Acceptance notification: 09 May 2019
- Camera ready: 18 May 2019

When submitting on the web site, you have to indicate the name of the special session. Submission on: www.pro-ve.org, with copy by email to the chairs of the special session.

Acceptance of papers is based on the full paper (up to 8 pages). Each paper will be evaluated by 3 members of the International Program Committee. However, prospective authors should submit a short abstract in advance, in order to check if the proposed topic fits within

**SPECIAL ISSUE:** Papers will be selected to publish an extended version in a Special Issue "Application of AI in Agri-food supply chains” in an Indexed Journal