The 29th IEEE Conference of the Open Innovations Association FRUCT is co-organized by FRUCT Association, Tampere University and IEEE Finland Section. The conference will be held in Tampere (Finland) on 12-14 May 2021.

Despite COVID-19, we keep on collecting submissions and plan to hold FRUCT as planned. The conference will be organized as a mix of onsite and remote participation, i.e., distant participation is allowed. If you select distant participation please don't forget to send 8-10 min video of your presentation to info@fruct.org by April 30, 2021 at latest. Video files over 20Mb better to upload to google drive, dropbox, or other repository. The video shall at least present your slides with audio track of the talk. The preferred formats for your video are MP4 and WMV. If you use MS PowerPoint you might use instructions from the following link to prepare your video https://support.office.com/en-us/article/record-a-slide-show-with-narrat...We welcome you to submit your papers to FRUCT29.

The conference sessions for distant participants are split into 2 parts:

1. Self-watching of presentations on Youtube (the corresponding playlists and links will be published in the conference program). Let's take advantage of distant participation - you can invite colleagues to watch videos and the online session. I also ask you to subscribe to FRUCT youtube channel – we need to get 1000 subscribers to be allowed make video streaming in the future.

2. Online questions and answers session held in Zoom. As some conference participants report issues with Internet connection quality we recommend to held Zoom session in Audio only mode (without video). Please prepare your questions/comments to the authors and use this time to discuss the presented works.

Overview of FRUCT

FRUCT is a large Pan-European cooperation framework that promotes open innovations of academia and industry. FRUCT conference is a high-quality scientific event for meeting academia and business people and setting projects. The average conference is attended by over 150 participants representing 30+ member organizations and guests from other organizations. Participants comes from Russia, Finland, Italy, UK, Denmark, India, and other countries and industry is primary represented by Dell EMC, Nokia, MariaDB, Intel, Jolla, Open Mobile Platform, Skolkovo, etc.

The conference attracts most active and talented students to present their R&D projects, meet people alike, create new teams, and find employers and investors. The conference invites the world-class academic and industrial experts to lecture on the hottest topics. Traditionally the program consists of FRUCT work groups meetings and intensive (half or full day) technology trainings (Tu) and the last 3 days (We-Fr) are the main conference days.

FRUCT conferences are organized every half a year, which is the reason for submission and acceptance notification deadlines be so close to the conference dates. If you need more time for visa and travel arrangements just notify us by email and submit your paper following the Early bird submission deadline. Then your paper will be taken to the early-review procedure and you get the notification of acceptance one month earlier.

Traditionally FRUCT pays a lot of attention to the Open Source and supports the corresponding activities and communities. At the conference we are planning to organize Sailfish OS meetup. The conference Demo session will include a lot of demos done on mobile Linux and Qt. The conference is supported by the local mobile Linux community and we welcome all mobile Linux and other apps developer to attend this event.

We welcome everybody to submit papers and take part in the conference, share your research and join the FRUCT Association. Thanks to sponsors we traditionally have low registration fee and various discounts can be applied. Please take early registration to get the best fee and most advantages of your participation in the conference.
All conference papers and abstracts will be published Open Access in FRUCT proceeding at no additional cost (available for free under a CC BY-ND license download from FRUCT proceedings catalog).

We welcome patrons/sponsors to join the conference team. Please refer to the overview of patrons' packages and contact us in case of any questions and proposals.

**Background and motivation**

The distinctive feature of modern IT and Telecommunications industries is in dramatic shortening of the period when technology remains commercially viable. On the one hand, this is due to the competition between key market players that are pushing all manufacturers to accelerate innovations; on the other hand, this is due to technological progress speed up caused by the growing expansion of intellectual resource invested into R&D and design activities. This trend is an important call and challenge for the leading educational and research institutions around the globe. In the FRUCT we believe that it is crucial to combine forces of EU and Russia to follow up the competition in adopting university education to the new industrial trends. The first step is to strength a bridge between Russian and Finnish academic worlds, increase visibility of involved research teams and set direct personal contacts between academic and industrial experts.

**Call for papers and presentations**

You can select one of the following 3 types of submissions:

- Full papers (min 6 full pages and up to 12 pages), deadline March 12, 2021;
- Short papers (min 2 pages, max 6 pages), deadline March 12, 2021;
- Poster or demo summary (min 200 words, max 4 pages), by May 7, 2021.

Traditionally FRUCT doesn't provide deadline extension, as instead we have early-bird submissions mechanism. But if authors need couple of extra days to finalize a paper, please send in advance email to info<at>fruct.org and we will try to arrange it so that you can finalize your work.

The review process is organized as follows:

- Full papers get at least 3 reviews by the Technical Committee
- Short papers and Poster/demo summaries get at least 2 reviews by the Technical Committee
- The review process is organized as the single-blind review
- The acceptance rate is below 45% (5 years)
- Authors of selected best papers will be invited to submit extended versions of their papers to be published in partner journals.

Please note that some papers submitted as Full Papers can be recommended for publication in WiP section of the proceedings. WiP section includes papers that have passed the quality check, but didn't get in top 40% of the papers based on the average score. This will be a normal publication, but with less guaranteed indexing, read more. To increase your chance to get your paper accepted as Full Paper, we recommend to submit it by the Early bird submission deadline, as this way you always will have a second chance to improve the paper and get another round of review. The conference language is English.

The Early bird submission deadline: February 19, 2021.

Please note that one person can be a coauthor of at maximum 3 submissions of all types: Submit

Conference dates: 12-14 May 2021
Conference location: Tampere, Finland
Short Paper submission deadline: 12 March 2021
Full Paper Submission deadline: 12 March 2021
Notification of acceptance date: 9 April 2021
Camera-ready submission deadline: 16 April 2021
Authors registration deadline: 16 April 2021
Demos/Posters submission deadline: 7 May 2021

All submitted papers will be peer reviewed by the Technical Committee. Please download the paper templates for MS Word and LaTeX, or you can use online LaTeX template on OverLeaf service. Please note the following major changes in the templates: The size of page should be Letter (21.59 cm × 27.94 cm). If you are using Word margins must be: top - 1.9 cm, bottom - 1.6 cm, left - 1.57 cm and right - 1.57 cm. Please note that all Full Paper submissions shall have at least 6 full pages and the last page cannot contain only Acknowledgments and References (at least some text of the main paper, e.g., part of Conclusions, shall be on page 6).

The list of conference topics (we welcome you to propose new R&D topics):

• Bioinformatics, e-Health and Wellbeing
• Internet of Things and enabling technologies
• Smart Spaces, Linked Data and Semantic Web
• Big Data and Data Mining, Data Storage and Management
• Knowledge and Data Managements Systems
• Location Based Services: Navigation, Logistics, e-Tourism
• Context Awareness and Proactive Services
• Sensor Design, Ad-hoc and Sensor Networking
• Natural Language Processing, Speech Technologies
• Artificial Intelligence, Robotics and Automation Systems
• Wearable-Computing Novel Architectures and Solutions
• Localization, Communication, and Sensing Algorithms for Wearables and IoT
• Open Source Mobile OS: Architectures and Applications
• Software Design, Innovative Applications
• Smart Systems and Embedded Networks
• Security and Privacy: Applications and Coding Theory
• Next Generation Networks, Emerging Wireless Technologies, 5G
• Computer Vision, Image and Video Processing
• Crowdsourcing and Collective Intelligence
• Intelligence, Social Mining and Web
• Relational databases, Spatial databases, SQL tuning
• Embedding flying sensors and actuators in IoT Infrastructures
• Simulation platforms for drone applications
• Drones and IoT convergence

All conference papers and abstracts will be published Open Access in FRUCT proceeding (available for free download from FRUCT proceedings catalog). In addition Full papers will be submitted for inclusion into IEEE Xplore and submitted for indexing to Scopus, WoS, ACM, DBLP, RSCI???? (as journal publication), Google Scholar, etc. Proceedings of FRUCT conference Full Papers are included into Scimago Journal Rank. FRUCT proceedings are included to DOAJ.

The selected papers get invitations to publish extended papers in the partner journals. For example, in case of successful presentation and recommendation by the session chair some papers will be invited to make free of charge publication of an extended version of the paper in IJERTCS journal (indexed by Scopus).
FRUCT conference is a recognized high quality scientific event. FRUCT has good rating in national systems, e.g., Finnish (JUFO=1, JufoID: 72707), Norwegian (NSD=1), Danish (BFI=1, ID: 8782540).

N.B. Please note that we cannot guaranty indexation in Scopus for Short Papers and papers from WiP section. If Scopus indexing is mandatory for you then make sure that your paper is accepted as Full Paper. Authors of all accepted papers must register to the conference, pay registration fee by author's deadline and present paper at the conference, as otherwise the paper will get technical reject.

Authors of top Short or Work in Progress papers get invite to make free of charge extended versions of the paper in the partner journal, which is included in all major indexes.

CONTACT INFORMATION

Chair of the local organizing committee: Prof. Evgeny Kucheryavy

Conference secretaries: TBD

All general questions about FRUCT conference please send to info<at>fruct.org