2nd Call for Papers

The International Conference on Field-Programmable Technology (FPT’21)

Important Dates (all 23:59, AoE)

- Submission to TRETS for new FPT Journal Track: June 14th, 2021
- Title and abstract due for regular FPT papers: July 12, 2021
- Paper submission due for regular FPT papers: July 19, 2021
- Initial TRETS FPT Journal Track reviews available: July 26, 2021
- Workshop/Tutorial/Special Session Proposals due: August 2, 2021
- Initial reviews/rebuttal questions available for FPT papers: August 16, 2021
- Submission of revised TRETS FPT Journal Track papers: August 23rd, 2021
- Notification for Workshop/Tutorial/Special Session Proposals: August 23, 2021
- Rebuttal responses due for regular FPT papers: September 6, 2021
- Notification of acceptance: September 27, 2021
- Final copy due: October 18, 2021
- Optional submission of artifacts for accepted papers to new FPT Artifact Evaluation initiative: October 18, 2021
- FPT’21 Conference: December 6-10, 2021
- Workshops/Tutorials: December 6-7, 2021

The FPT conference is the premier conference in the Asia-Pacific region on field-programmable technologies including reconfigurable computing devices and systems containing such components. Field-programmable devices promise the flexibility of software with the performance of hardware. The development and application of field-programmable technology have become important topics of research and development. Field-programmable technology is widely applied, in high-performance
computing systems, embedded and low-power control instruments, mobile communications, rapid prototyping and product emulation, among other areas.

At this early stage, it is still unclear what the specific format of FPT 2021 is going to be, as this will depend on the state of the CoViD pandemic. Possible options include a fully virtual conference, or a hybrid format combining on-site with remote presentations. Given the advances in vaccine rollout, though, we are guardedly optimistic that we will be able to meet in person in Auckland. But there will always be an online option for authors!

Submissions are solicited on new research results and detailed tutorial expositions related to field-programmable technologies, including but not limited to:

- Tools and Design Techniques for field-programmable technology including placement, routing, synthesis, verification, debugging, runtime support, technology mapping, partitioning, parallelization, timing optimization, design and run-time environments, high-level synthesis (HLS) compilers, languages and modeling techniques, provably-correct development, intellectual property core-based design, domain-specific development, hardware/software co-design.
- Architectures for field-programmable technology including field-programmable gate arrays, complex programmable logic devices, coarse-grained reconfigurable arrays, field-programmable interconnect, field-programmable analogue arrays, field-programmable arithmetic arrays, memory architectures, interface technologies, low-power techniques, adaptive devices, reconfigurable computing systems, high-performance reconfigurable systems, evolvable hardware and adaptive computing, fault tolerance and avoidance.
- Device technology for field-programmable logic including programmable memories such as non-volatile, dynamic and static memory cells and arrays, interconnect devices, circuits and switches, and emerging VLSI device technologies.
- Applications of field-programmable technology including accelerators for biomedical / scientific / neuro-morphic computing and machine learning, network processors, real-time systems, rapid prototyping, hardware emulation, digital signal processing, interactive multimedia, machine vision, computer graphics, cryptography, robotics, manufacturing systems, embedded applications, evolvable and biologically-inspired hardware.
- Education for field-programmable technology including courses, teaching and training experience, experiment equipment, design and applications.

Note that simply implementing an application using an FPGA is not considered a sufficient research contribution. Application-based papers should emphasize novel design techniques, novel use of embedded resources, or clearly articulated and measured system performance benefits.

**Submission Guidelines**

FPT 2021 is grateful to the ACM “Transactions on Reconfigurable Technology and Systems” (TRETS) for enabling us to, for the first time, offer a Journal Track in addition to regular and short papers directly submitted to FPT. The Journal Track is specifically intended for submissions that would benefit from the longer articles possible in TRETS (up to 32 ACM-style single-column pages), e.g., for clearer presentation of complex research, or an in-depth discussion of comprehensive results. Submissions to
the Journal Track that do not take advantage of the additional space offered by TRETS, or deviate significantly from the TRETS Author Guidelines

https://dl.acm.org/journal/trets/author-guidelines

will receive the corresponding feedback early, and can then be revised and entered into the direct FPT submission process.

**Journal Track Submissions (NEW FOR FPT 2021)**
When you decide to submit to the Journal Track, you will use the TRETS submission system

https://mc.manuscriptcentral.com/trets

to submit to the “FPT 2021 Journal Track” (which you can select after logging into your TRETS account), and then follow the ACM TRETS Author Guidelines as described above.

Note that the deadline for the FPT Journal Track is earlier than the deadline for direct FPT submissions. Your submission will then undergo the regular TRETS review process, and you will be provided with an initial set of reviewer comments and recommendations as outlined in the schedule above. If your submission is not rejected here, you will have sufficient time to revise the submission, and then submit it for a second round of reviews for inclusion in the Journal Track. You will be notified of the final decision on your TRETS Journal Track submission together with the rest of the direct FPT submissions.

Should your Journal Track submission be rejected in the TRETS initial review, or you feel you cannot fully address the revisions requested by the TRETS reviewers in the time provided, you may withdraw your submission from the Journal Track. You then have the option to submit a version of your paper, shortened according to the rules for regular/short FPT papers, to enter the regular review process for a direct FPT submission.

If you decide not to submit a revised version in time for the FPT Journal Track deadline above, or your revised version would need another round of revision, as decided by the final FPT PC discussions, you may choose to have an eventual later revision continue as a regular TRETS submission, independently of the FPT conference.
Accepted Journal Track papers will receive a regular presentation slot at the conference, but will only appear as an abstract in the FPT proceedings. That abstract will refer to the full publication in TRETS.

**Direct FPT Submissions**

For direct submission to the FPT conference, the program committee solicits full and short papers describing original research in field-programmable technology, including, but not limited to, the areas of interest indicated above. Papers should be submitted electronically in PDF format, following the IEEE style. Full papers can include up to 8 pages of content, plus unlimited pages for references. Short papers are limited to 4 pages in total, including references.

Manuscripts must not identify authors or their affiliations for double-blind review. Papers that identify authors will NOT be considered. Please use the online system for submission. For details, please visit the FPT’21 website.

FPT’21 will also include a rebuttal phase, where the authors have the opportunity to answer specific questions on their submission, posed by the reviewers.

It is also planned to invite the best direct submissions to FPT to contribute to an FPT 2021 Special Issue of ACM TRETS after the conference.

**Artifact Evaluation (NEW FOR FPT 2021)**

Also, for the first time, FPT will be able to offer the authors of *accepted* papers to optionally participate in an artifact evaluation process, aiming to increase the reproducibility of results. Details on this will be forthcoming and be described on the FPT web site. Note that participating in this optional process will *not* require you to open-source your research artifacts!

**Call for Workshop/Tutorial proposals**

We also call for workshops and tutorials, which will be held in advance of the conference. For details, please visit the [Workshops/Tutorials page](#) on the FPT web site.

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