

# 2020 TRON Symposium (TRONSHOW) Call for Papers

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2020 TRON Symposium (TRONSHOW) website <http://www.tronshow.org/index-e.html>

**Note: Abstract submission is now to be handled by EDAS, PLEASE CHECK the website from time to time to learn the latest updates, especially for the deadline extension.**

## Date

9th - 11th December 2020, Tokyo, Japan (Accompanying Exhibition runs from 9th - 11th.)

## Organized and Sponsored by

TRON Forum<sup>1</sup>

<http://www.tron.org>

- Institute of Infrastructure Application of Ubiquitous Computing (IAUC), Interfaculty Initiative in Information Studies, Graduate School, the University of Tokyo

<http://www.ubinsoc.org/>

- collaboration Hub for University and Business (cHUB), Faculty of Information Networking for Innovation And Design (INIAD), Toyo University

<https://www.iniad.org/>

## Technical Co-sponsorship

- IEEE Consumer Technology Society  
(Formerly Consumer Electronics Society) \_

<http://cesoc.ieee.org/>

## Cooperation by (TBD)

Each year, about a dozen or so organizations cooperate with the sponsors to make TRON Symposium successful. The list should be available and updated when the announcement of the exhibition is published in June/July. For the last year's supporting organizations, please see the following URL:

<http://www.tronshow.org/2020-tron-symposium/en/08.html>

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<sup>1</sup> TRON Forum: T-Engine Forum which has promoted TRON Project has changed its name to TRON Forum effective as of 1st April, 2015.

## Organization

- TRON Symposium Technical Program  
Chair Ken Sakamura, Chair of TRON Forum, Dean of Faculty of Information  
Networking for Innovation And Design (INIAD), Toyo University
- Symposium Publicity  
Chair Chiaki Ishikawa, YRP Ubiquitous Networking Laboratory
- Symposium Publication  
Co-chair Toshihisa Muto, Personal Media Corporation  
Co-chair Chiaki Ishikawa, YRP Ubiquitous Networking Laboratory

## Venue

Tokyo Midtown, Roppongi, Tokyo, Japan

<http://www.tokyo-midtown.com/en/> (in English)

<http://www.tokyo-midtown.com/jp/index.html> (in Japanese)

We are pleased to announce **2020 TRON Symposium**, the 36th TRON Project Symposium to be held on 9th – 11th of December 2020 in Tokyo, Japan. The Symposium, with technical co-sponsorship of IEEE Consumer Technology Society, will feature presentation sessions of papers, poster sessions, panel discussions, tutorial sessions and an accompanying exhibition, **TRONSHOW** ( 9th – 11th December).

## About TRON Project and TRON Symposium

TRON Project was established in 1984. It aims to build the open architecture of advanced embedded systems. It has developed very popular TRON real-time OS (RTOS) family: ITRON specification, and T-Kernel, for example. TRON Project's original goal included the vision of "Computer Everywhere" which is basically the same as ubiquitous computing or the IoT (the Internet of Things). Today, the embedded systems technology is used widely to support the IoT. The project has influenced ICT industry very much. For example, TRON RTOS family has more than 60% of embedded systems market share in Japan. The project has led the IoT research by introducing ucode, an identifier system as part of its IoT application framework called uID architecture. (See <http://www.tron.org/> for the detailed background on TRON Project.)

To disseminate the result of the project and foster communication of interested parties, TRON Project has held the annual TRON Symposium for the last 35 years. TRON Symposium is the place to discuss

the applications and services of the IoT in the future such as the home electronic appliances, homes, buildings and cities of the future, and to discuss the nuts and bolts of embedded systems such as RTOS kernel, the implementation issues such as the interaction of the IoT paradigm and Cloud. We welcome discussions of the impact of technology on society.

## Submission of Papers / Extended Abstracts

Accepted and presented FULL papers, i.e. papers submitted to “FULL” track, will be submitted to IEEE for inclusion in **IEEE Xplore®** online publication database. (Note: SHORT papers, i.e., papers submitted to “SHORT” track will not be submitted to IEEE Xplore database irrespective of their length.) Prospective authors in the embedded systems industry and the emerging field of the IoT are encouraged to submit full papers or extended abstracts for presentation. Only original papers that have not been published or submitted for publication elsewhere will be considered.

Papers presented at the Symposium should be full papers or extended abstracts, in English, of **maximum** 9 pages including figures and pictures, using the supplied template. The **minimum** length is 2 pages for an extended abstract from busy practitioners. See “**Topics of Interest**” at the end of this call for relevant topics that are of interest to the Symposium per se, and the visitors to the accompanying exhibition.

### Abstract (we now use EDAS for registering your abstracts!)

Those wishing to submit papers or extended abstracts should first register an abstract (up to approximately 300 words) that explains the main content of the final submission by registering your paper to EDAS. This is now optional. **We have made this a soft deadline, so to speak. But please finish this step BEFORE the final full paper submission date.**

**To make it easy for the authors to check the appropriateness, the excerpts of session programs for the past four TRON Symposiums are uploaded to the website. TPC will contact you for the appropriateness of the topics explained in the abstract.** Please specify if you would like to submit extended abstract of 2 pages or longer for the subsequent final submission (SHORT) instead of a FULL paper: there is a check box in the submission form at the URL shown below.

The following is the process of registering your paper and abstract.

Step 0:

If you are not registered in EDAS, please do so.: <http://edas.info>

Step 1:

Please register your paper (title, author, etc.) to 2020 TRON Symposium (TRONSHOW) at EDAS:

<http://edas.info/Nxxxxx> (This is being set up. Please check the CFP web page.)

Step 2:

Please input the abstract as plain text into the web submission form during registering your paper.

Subsequently, you upload the draft of the full paper or extended abstract.

### **Important Dates:**

Please check the latest update of the dates at

<http://www.tronshow.org/2020-tron-symposium/en/call.html> since there are often extensions.

- Paper Registration. This is now a soft deadline. But you must finish this before you can upload the final full paper submission.**
- November 18**  
Full paper submission deadline
- December 1**  
Notification of Acceptance
- December 7**  
Final version deadline (for accepted papers)  
Author's advance registration deadline

### **Full Paper / Extended Abstract**

The authors then should submit the final paper by the designated deadline to **EDAS** in Portable Document Format (PDF). Notice of acceptance for presentation will be given **by 1st December**.

For papers and extended abstracts that are accepted for presentation, the final version is to be submitted **by 7th December**. (We plan to use PDF eXpress plus of IEEE conference publication service for the final presentation submission. The details of using PDF eXpress plus to validate the format of the final version for conforming IEEE format will be mailed to the authors whose paper has been accepted. Also, please consult the author's guideline posted at the Symposium website.). An author must be present during the REMOTE PRESENTATION TIME for the presentation of the paper during 2020 TRON Symposium (TRONSHOW).

### **Accompanying Exhibition, TRONSHOW (9th – 11th December, one day extra)**

We will hold the annual exhibition of products, services, and publication related to TRON Project in parallel to the TRON Symposium. <http://www.tronshow.org/index-e.html>

Please contact the following address if you are interested in participating as an exhibitor:

**info@tronshow.org**

### **Topics of Interest**

Broadly speaking there are two (2) categories. One is embedded systems and the other is the IoT (or Ubiquitous Computing) application and services. The boundary of these categories has become blurred thanks to the real-world services applications of the IoT that use RFID tags, small sensor nodes to build Ubiquitous Sensor Network, and the like. Topics of the symposium include the

following, but not limited to:

### **Embedded Systems:**

- Home electronic appliances
- Smart Houses, Smart Buildings, and Smart Cities,
- Intelligent Mobility (automotive, construction machinery)
- Power-aware computing and energy harvesting
- Smart-grid application
- Intra-system and inter-systems electromagnetic compatibility
- Human Machine Interface (HMI) for embedded systems
- Security of embedded devices
- Functional safety, fault tolerance
- Real-time OS development and application
- Embedded systems software and optimization
- Hardware/Software co-design of embedded systems
- Embedded systems design automation
- ASICs and FPGAs
- System/Network-on-chip
- The use and development of RTOS and the middleware
- Comparative study of RTOSs including TRON RTOS Family
- Theory and practice of embedded systems education/training

### **The IoT**

- USN (Ubiquitous Sensor Network)
- M2M communications
- Cyber Physical Systems (CPS)
- Computer-Augmented Environment
- IoT architectures
- IoT infrastructures
- IoT applications and IoT services
- IoT architectures and application frameworks (uID architecture, SmartM3, etc.)
- Implementation of servers for uID Architecture (1.0, 2.0), ucode, etc.
- RFID tags, ucode tags, etc.
- Location-based Information Systems
- Theory and practice of building real-world IoT application systems
- Cloud computing
- Open Data, Big Data processing for the IoT
- IoT security
- Aggregate Computing
- IoT Aggregator
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### **General**

- Assistive technology (such as Enableware)<sup>2</sup>

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<sup>2</sup> Enableware is a term coined by TRON Project to refer to hardware/software/IoT-like solution to help the challenged people including the aged to use computer systems and enjoy computer-related services easily. This is an important contribution of the IoT in the future. TRON Forum will hold **TRON Enableware Symposium (TEPS)** separately from

- Impact of technology on society
- Security and privacy
- Standardization efforts, regulatory aspects and governance of the IoT

## Technical Program Committee

Inquiries should be directed to the following address of Technical Program Committee (in English):

**tpc@tron.org**

- **Chair:**
  - Dr. Ken Sakamura, Dean of INIAD of Toyo University,  
Chair of TRON Forum
- **Vice Chair:**
  - Dr. Tomohiro Hase, Professor, Ryukoku University, Japan,  
Board Member, IEEE Consumer Technology Society

## Members of TPC (Alphabetical order of the family name):

To Be Updated

[End of call for papers] <sup>3</sup>

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the main TRON Symposium. This is **different** from the main TRON Symposium co-sponsored by IEEE CES, and is conducted in Japanese language. Please look out for the announcement on the TRON Forum web page.