

Welcome to RTAS 2022!

May 4 - 6

<http://2022.rtas.org>

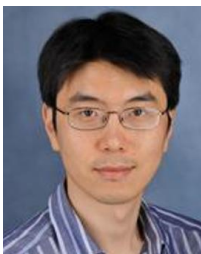
Opening Remarks



General Chair

Nan Guan

City Univ. of Hong Kong



Program & Track 1 Chair

Heechul Yun

University of Kansas



Track 2 Chair

Cong Liu

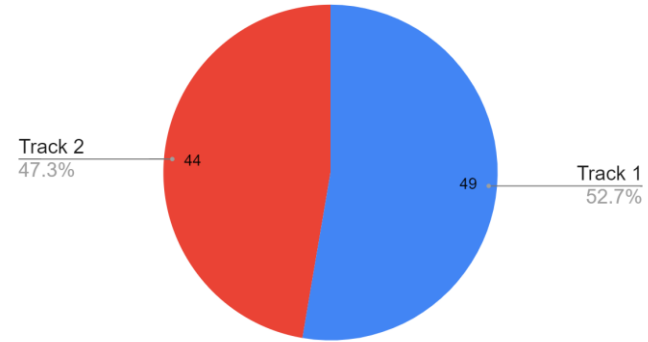
UT Dallas

Submissions & Acceptance

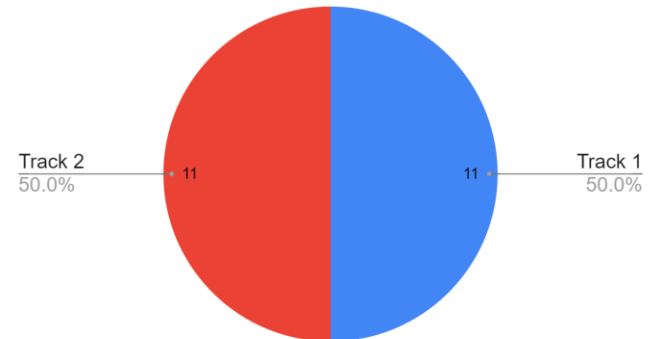
- 93 submissions
 - 49 in track 1 (Systems and Applications)
 - 44 in track 2 (Applied Methodologies and Foundations)
 - 2 withdrawn during the rebuttal phase

- 22 accepted (24% acceptance)
 - 8 direct accepts, 14 conditional accepts with shepherding
 - 11 accepts from track 1 and 11 from track 2

Submitted papers: Tracks

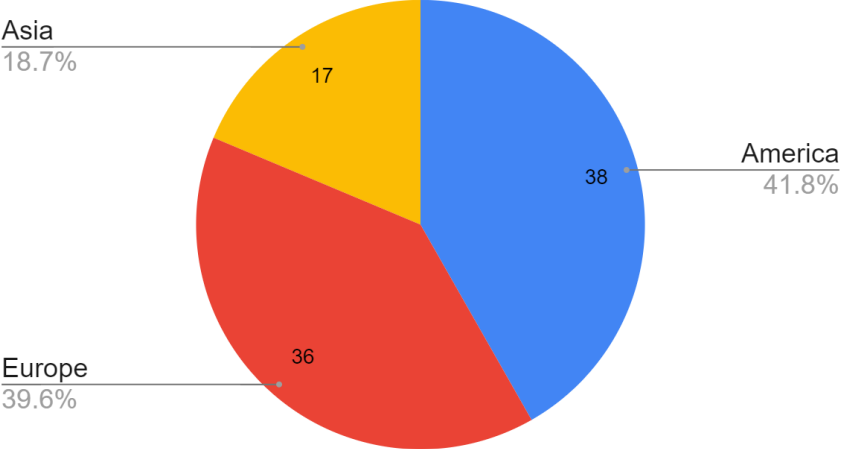


Accepted Papers: Tracks

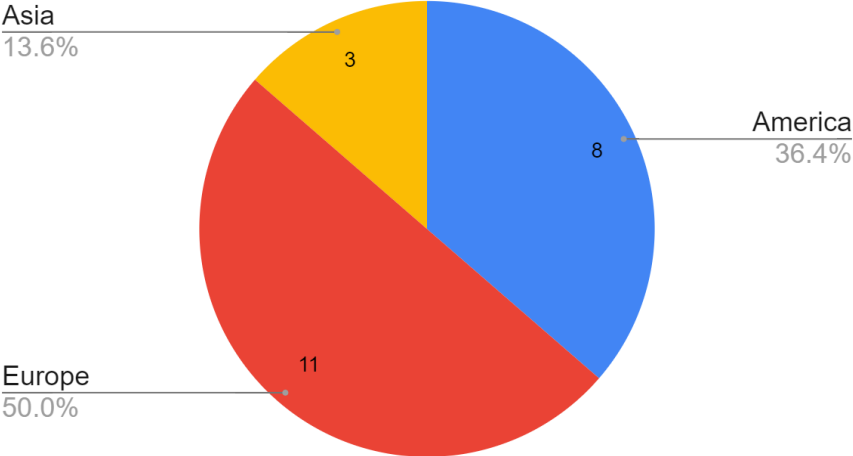


Submissions & Acceptance

Submitted papers: by Region

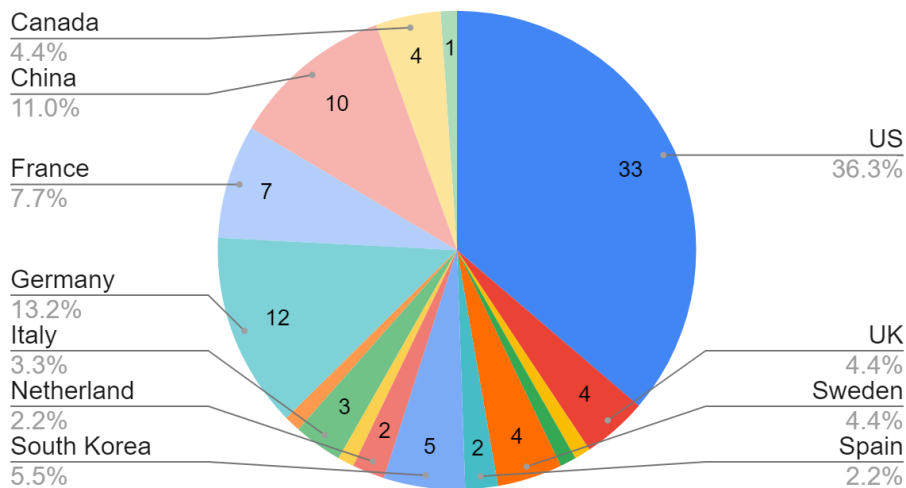


Accepted papers: by Region

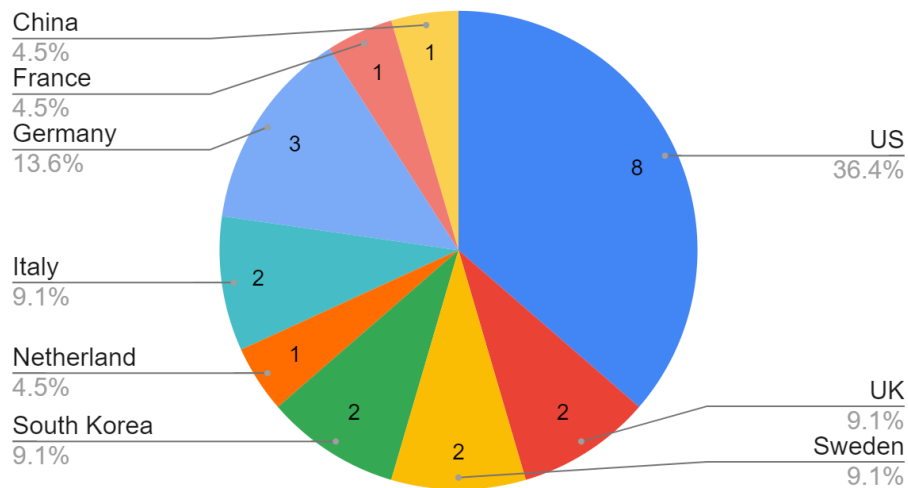


Submissions & Acceptance

Submitted papers: by Country



Accepted papers: by Country



Program

Overview

CPS-IoT Zoom

Keynotes

Main sessions

BP session

RTAS Zoom

Awards

Time	5/4 Wednesday	5/5 Thursday	5/6 Friday
9:00 AM			
9:15 AM			
9:30 AM			
9:45 AM			
10:00 AM			Keynote 2
10:15 AM			Break
10:30 AM			
10:45 AM			
11:00 AM			
11:15 AM			
11:30 AM			
11:45 AM			
12:00 PM			
12:15 PM			
12:30 PM	CPS-IoT Week Opening		
12:45 PM	Keynote 1		
1:00 PM			
1:15 PM			
1:30 PM			
1:45 PM			
2:00 PM	RTAS Opening		
2:15 PM			
2:30 PM	1. Cyber-Physical Systems	Brief Presentations Session	
2:45 PM			
3:00 PM			
3:15 PM	Break	TCRTS/RTAS Awards	
3:30 PM			
3:45 PM	2. Fault-Tolerance		
4:00 PM			
4:15 PM	Break		
4:30 PM			
4:45 PM			
5:00 PM	3. Systems and Applications I		
5:15 PM			
5:30 PM	Break		
5:45 PM			
6:00 PM			
6:15 PM			
6:30 PM	4. RTOS		
6:45 PM			
			8. Mixed-Criticality
			Break
			9. Timing Analysis II
			Break
			10. Security and Networking
			Break
			11. Scheduling and Verification
			Break
			Keynote 3
			CPS-IoT Week Closing

Program

Overview

Keynotes

Main sessions

BP session

Awards



**Cyber-Physical Traffic
Control using Automated
Vehicles: Distributed Sensing,
Actuation, and Learning**

Karl H. Johansson
*KTH Royal Institute of
Technology*



**Extreme Energy
Efficiency for Extreme
Edge AI: an Open
Platform Perspective**

Luca Benini
*ETH Zürich and Università
di Bologna*



**A Software and
Hardware Architecture
for Next-Generation
Automotive Systems**

Rich West
*Boston University and
Drako Motors Inc.*

Program

Overview

Keynotes

Main sessions

BP session

Awards

11 Sessions
2 papers / session
25 min. talk + 5 min. Q&A

Ask questions via Slack
Raise your hand

Time	5/4 Wednesday	5/5 Thursday	5/6 Friday
9:00 AM			
9:15 AM			
9:30 AM			Keynote 2
9:45 AM			
10:00 AM			Break
10:15 AM			
10:30 AM			
10:45 AM			
11:00 AM			
11:15 AM			
11:30 AM			
11:45 AM			
12:00 PM			
12:15 PM			
12:30 PM	CPS-IoT Week Opening		
12:45 PM			
1:00 PM	Keynote 1		
1:15 PM			
1:30 PM			
1:45 PM			
2:00 PM			
2:15 PM	RTAS Opening		
2:30 PM			
2:45 PM	1. Cyber-Physical Systems	Brief Presentations Session	8. Mixed-Criticality
3:00 PM			
3:15 PM	Break		Break
3:30 PM		TCRTS/RTAS Awards	
3:45 PM	2. Fault-Tolerance		
4:00 PM			
4:15 PM	Break		
4:30 PM			
4:45 PM			
5:00 PM	3. Systems and Applications I		
5:15 PM			
5:30 PM	Break		
5:45 PM			
6:00 PM			Keynote 3
6:15 PM			
6:30 PM			
6:45 PM			
6:50 PM			CPS-IoT Week Closing

Program

Overview

Keynotes

Main sessions

BP session

Awards

2 Industry papers
5 Work-in-Progress papers
1 Demo

Time	5/4 Wednesday	5/5 Thursday	5/6 Friday
9:00 AM			
9:15 AM			
9:30 AM			Keynote 2
9:45 AM			
10:00 AM			
10:15 AM			Break
10:30 AM			
10:45 AM			5. Timing Analysis I
11:00 AM			
11:15 AM			Break
11:30 AM			
11:45 AM			
12:00 PM			6. Systems and Applications II
12:15 PM			8. Mixed-Criticality
12:30 PM	CPS-IoT Week Opening		
12:45 PM			Break
1:00 PM	Keynote 1		Break
1:15 PM			
1:30 PM			7. Real-time AI
1:45 PM			9. Timing Analysis II
2:00 PM	RTAS Opening		Break
2:15 PM			
2:30 PM	1. Cyber-Physical Systems	Brief Presentations Session	10. Security and Networking
2:45 PM			
3:00 PM			Break
3:15 PM	Break		
3:30 PM		TCRTS/RTAS Awards	
3:45 PM	2. Fault-Tolerance		
4:00 PM			11. Scheduling and Verification
4:15 PM			
4:30 PM	Break		Break
4:45 PM			
5:00 PM	3. Systems and Applications I		Keynote 3
5:15 PM			
5:30 PM			
5:45 PM	Break		CPS-IoT Week Closing
6:00 PM			
6:15 PM			
6:30 PM	4. RTOS		
6:45 PM			

Program

Overview

Keynotes

Main sessions

BP session

Awards

3 Outstanding Papers

- FlyOS: Integrated Modular Avionics for Autonomous Multicopters
- Partial-Order Reduction for Schedule-Abstraction-based Response-Time Analyses of Non-Preemptive Tasks
- Self-Cueing Real-Time Attention Scheduling in Criticality-Aware Visual Machine Perception

Best Paper and Best Student Paper Awards

TCRTS RTAS Influential Paper Award

	5/4 Wednesday	5/5 Thursday	5/6 Friday
9:00 AM			
9:30 AM			Keynote 2
9:45 AM			
10:00 AM			Break
10:15 AM			
10:30 AM			
10:45 AM			5. Timing Analysis I
11:00 AM			
11:15 AM			Break
11:30 AM			
11:45 AM			
12:00 PM			6. Systems and Applications II
12:15 PM			8. Mixed-Criticality
12:30 PM	CPS-IoT Week Opening		
12:45 PM		Break	Break
1:00 PM	Keynote 1		
1:15 PM		7. Real-time AI	9. Timing Analysis II
1:30 PM			
1:45 PM	Break		
2:00 PM	RTAS Opening	Break	Break
2:15 PM			
2:30 PM	1. Cyber-Physical Systems	Brief Presentations Session	10. Security and Networking
2:45 PM			
3:00 PM			
3:15 PM	Break	TCRTS/RTAS Awards	Break
3:30 PM			
3:45 PM	2. Fault-Tolerance		11. Scheduling and Verification
4:00 PM			
4:15 PM			
4:30 PM	Break		Break
4:45 PM			
5:00 PM	3. Systems and Applications I		Keynote 3
5:15 PM			
5:30 PM			
5:45 PM	Break		CPS-IoT Week Closing
6:00 PM			
6:15 PM			
6:30 PM	4. RTOS		
6:45 PM			

Proceedings

RTAS 2022

28th IEEE Real-Time and Embedded Technology and Applications Symposium, Milano,
Italy, May 4-6, 2022



- [RTAS - 28th IEEE Real-Time and Embedded Technology and Applications Symposium](#)

- [Attend on zoom](#)

- Proceedings can be accessed at <https://conferences.computer.org/rtaspub>

- Username

- Password:

About

RTAS Proceedings, Zoom & Slack links
are available [here](#) (require password
you received upon registration)

Important Dates

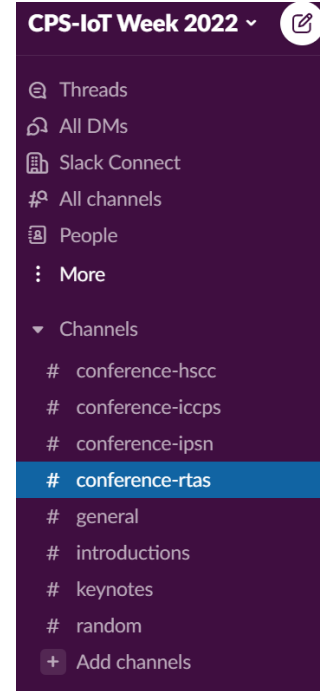
Submission Deadline (firm):	October 29, 2021
-----------------------------------	---------------------

Rebuttal Period:	January 3- 5, 2022
---------------------	-----------------------

Slack

The slack invitation link for the CPS-IoT Week 2022 workspace is available at:

https://join.slack.com/t/cps-iotweek2022/shared_invite/zt-186icmz12-14qCucGaZemHjWZiy3Knhw



Program Schedule

Time	Event
5:15 PM	3. Systems and Applications I
5:30 PM	
5:45 PM	Break
6:00 PM	4. RTOS
6:15 PM	
6:30 PM	
6:45 PM	
	Keynote 3
	CPS-IoT Week Closing

Add to [Google Calendar](#) or download the [.ics file](#).

← Add to your calendar

Day 1: Wednesday, May 4, 2022

12:30pm – 12:45pm CPS-IoT Week Opening

Session Recordings

- Will be available at a password protected location during the conference period (the link is available in the RTAS slack channel)

Organizers



Track 1 Deputy Chair
Zoom Master
Florian Brandner
Télécom Paris



Brief Presentation Chair
Alessandro Papadopoulos
Mälardalen University



Brief Presentation Chair
Angeliki Kritikakou
University of Rennes 1



Artifact Evaluation Chair
Renato Mancuso
Boston University



Publication Chair
Geoffrey Nelissen
TU/e



Track 2 Deputy Chair
Slack Master
Mitra Nasri
TU/e



Publicity Chair
Christian Dietrich
TU Hamburg



Publicity Chair
Hoon Sung Chwa
DGIST



Publicity Chair
Jing Li
NJIT



Web Chair
Tianyu Zhang
Univ. of Connecticut

Program Committee

[Tarek Abdelzaher](#), University of Illinois Urbana-Champaign
[Sebastian Altmeyer](#), University of Augsburg
[Tanya Amert](#), Denison University
[Jim Anderson](#), UNC Chapel Hill
[Sébastien Bardin](#), CEA, LIST, Université Paris Saclay
[Sanjoy Baruah](#), Washington University in St. Louis
[Marko Bertogna](#), University of Modena and Reggio Emilia
[Enrico Bini](#), University of Turin
[Alessandro Biondi](#), Scuola Superiore Sant'Anna
[Gedare Bloom](#), University of Colorado Colorado Springs
[Björn Brandenburg](#), Max Planck Institute for Software Systems (MPI-SWS)
[Daniel Bristot de Oliveira](#), Red Hat
[Daniel Casini](#), Scuola Superiore Sant'Anna
[Francisco J. Cazorla](#), Barcelona Supercomputing Center
[Samarjit Chakraborty](#), UNC Chapel Hill
[Wanli Chang](#), University of York
[Gang Chen](#), Sun Yat-Sen University
[Jian-Jia Chen](#), TU Dortmund
[Silviu Craciunas](#), TTTech Computertechnik AG
[Liliana Cucu-Grosjean](#), INRIA
[Dakshina Dasari](#), Robert Bosch GmbH
[Robert Davis](#), University of York
[UmaMaheswari Devi](#), IBM Research – India
[Christian Dietrich](#), Technische Universität Hamburg
[Zheng Dong](#), Wayne State University
[Parasara Sridhar Duggirala](#), University of North Carolina
[Nathan Fisher](#), Wayne State University
[Gerhard Fohler](#), TU Kaiserslautern
[Marisol Garcia-Valls](#), Universitat Politècnica de València
[Sathish Gopalakrishnan](#), The University of British Columbia
[Arpan Gujarati](#), The University of British Columbia
[Song Han](#), University of Connecticut
[Monowar Hasan](#), Wichita State University

[Mohamed Hassan](#), McMaster University
[Gernot Heiser](#), UNSW and CSIRO's Data61
[Pi-Cheng Hsiu](#), Academia Sinica
[Prachi Joshi](#), General Motors
[Hanjun Kim](#), Yonsei University
[Fanxin Kong](#), Syracuse University
[Hyoseung Kim](#), UC Riverside
[Chang-Gun Lee](#), Seoul National University
[Jinkyu Lee](#), Sungkyunkwan University
[Jing Li](#), New Jersey Institute of Technology
[Sibin Mohan](#), Oregon State University
[Geoffrey Nelissen](#), Eindhoven University of Technology
[Shahriar Nirjon](#), UNC Chapel Hill
[Sam H. Noh](#), UNIST (Ulsan National Institute of Science and Technology)
[Claire Pagetti](#), ONERA
[Gabriel Parmer](#), George Washington University
[Rodolfo Pellizzoni](#), University of Waterloo
[Sandro Pinto](#), University of Minho
[Isabelle Puaut](#), Université de Rennes
[Jan Reineke](#), Saarland University
[Christine Rochange](#), University of Toulouse
[Abusayeed Saifullah](#), Iowa State University
[Aviral Shrivastava](#), Arizona State University
[Jinghao Sun](#), Dalian University of Technology
[Yue Tang](#), Northeastern University, China
[Peter Ulbrich](#), TU Dortmund
[Marcus Völp](#), SnT, University of Luxembourg
[Bryan Ward](#), MIT Lincoln Laboratory
[Kecheng Yang](#), Texas State University
[Dakai Zhu](#), The University of Texas at San Antonio
[Qi Zhu](#), Northwestern University
[Dirk Ziegenbein](#), Robert Bosch GmbH
[Alexander Zuepke](#), Technical University of Munich

Thanks!

- CPS-IoT Week Organizers
 - Luca Mottola, Gian Pietro Picco (General Chairs)
 - ...
- TCRTS Executive Committee
 - Chris Gill (Chair), Rob Davis (Vice Chair), Luis Almeida (Past Chair)
 - Björn B. Brandenburg (Conference Chair),
 - ...
- All authors
- All participants

Enjoy RTAS 2022!

May 4 – 6, 2022