



**IEEE  
COMPUTER  
SOCIETY**



**IEEE COMPUTER SOCIETY  
TCCC**

*Technical Committee on Computer Communications*

December 2020 Newsletter

<http://cs-tccc.org/>

## Editorial

Due to the Corona virus restrictions all TCCC supported conferences in 2020 had to be turned into virtual events, and unfortunately, also the 2021 edition of PerCom is planning for a virtual format – the second time for PerCom, which was planned to be held in Kassel, Germany in March 2021. The other TCCC supported conferences, planned for June 2021 or later, still are in the phase of preparing a physical event in the intended location.

The December 2020 newsletter has an update on these conferences and upcoming deadlines. This issue of the TCCC Newsletter has been edited by TCCC Communications Chair Matthias Frank ([matthieu@cs.uni-bonn.de](mailto:matthieu@cs.uni-bonn.de)). Reach out to him if you have any content to publish in a future issue.



We carefully updated our calendar of deadlines and dates, based on public information available from the conference web sites, and in parts coming from preliminary information from the organizing committees. If you spot errors in the dates, please let us know (... to correct these in the upcoming TCCC newsletter).

## Contents

1. 40<sup>th</sup> Anniversary of IPCCC ahead!
2. Report from IEEE LCN 2020
3. Best Paper Awards of 2020 conferences
4. Overview of TCCC supported activities
5. Calendar of deadlines and dates
6. Call for Contributions!
7. Attachments: PDFs of Call for Papers with upcoming deadlines

## TCCC supported activities at a glance

LCN

IPCCC

SMARTCOMP

N2 Women

Student participation

ICOIN

grants

TCHPC

PerCom

WoWMoM

## 1. 40<sup>th</sup> Anniversary of IPCCC ahead!

The International Performance, Computing, and Communications Conference will be celebrating its 40th anniversary in 2021. IPCCC is a premier IEEE conference presenting high-quality academic, industrial and government research on the performance of computer and communication systems. The 40th anniversary conference will include a special award ceremony to celebrate past authors and important contributors to IPCCC.



IPCCC 2021 will be in Austin, Texas, USA October 29th – 31st, 2021.



Impression of IPCCC

Photo courtesy of: Kathlene Hurt

## 2. Report from IEEE LCN 2020

**The 45th IEEE Conference on Local Computer Networks (LCN2020), November 16-18, 2020, virtually hosted in Sydney, Australia**

The conference took place over 3 days from Monday 16 November to Wednesday 18 November, this year entirely on Zoom with sessions spread around the clock allowing presenters from different time zones to present their papers in a timely manner.

Three excellent keynotes were delivered this year. During the first day Prof. Arkady Zaslavsky, Deakin University, talked on real-time distributed contextual intelligence in the era of ubiquitous connectivity. During the second day Dr. Magnus Frodigh, Ericsson Research, covered the developments leading towards 6G, while Prof. Henning Schulzrinne, Columbia University, dedicated his talk towards the need for Wi-Fi in the era of 5G.

## Report from IEEE LCN 2020 (continued)

By Karl Andersson, Lyes Khouhki, Eyuphan Bulut, Florian Tschorsch and Fabian Marquardt (LCN 2020 organizing committee members).

The conference received 124 submissions. Out of the 99 full paper submissions, 31 papers have been accepted, giving an acceptance rate of 31.3%. The technical program included 8 regular sessions, 4 symposium sessions, 9 short paper sessions, and 2 Doctoral sessions. This year, we introduced a new Doctoral Track for graduate students to submit papers so that they can receive feedback on their research and also interact with established researchers in various fields of networking.



Screenshot taken at the Zoom session for the conference opening by the general chair, Karl Andersson.

Regular/symposium/short/doctoral track papers' presentations were pre-recorded, and the Q&A segments were 'live' via Zoom. The conference included also virtual plenary best papers and demo awards.

This year, in the Symposium, the following areas were encouraged: Machine Learning in Networking, IoT and M2M Communications, 5G and Beyond, Network and Cloud Security and Software Defined Networks. The symposium track received 12 submissions, and 4 of them were recommended for acceptance. There were also 12 papers transferred from regular paper track to symposium track, making a total of 16 symposium papers published as part of LCN Symposium proceedings.

The Demo track continues a tradition at LCN and invited demo presentations related to the main conference and the symposium. Due to an all-digital LCN conference, this year's call for demos posed a challenge and opportunity at the same time. We are therefore happy that many researchers took the challenge and submitted their work. The international and respected demo board, which consisted of 22 members from academia and industry, reviewed all submissions with great care. Together, we selected five demos for presentation.

An LCN online attendee forum was set up to provide an additional way of interaction for LCN attendees outside of the Zoom sessions. In addition, a virtual "social coffee break" event was held in the Zoom room where attendees had the opportunity to chat about their visits to LCN in the past, their current situation in research and teaching during the Corona pandemic, etc.

### 3. Best Paper Awards of 2020 conferences

#### 18<sup>th</sup> IEEE International Conference on Pervasive Computing and Communications (Percom)

March 2020



**Best paper** entitled: “**Helena: Real-time Contact-free Monitoring of Sleep Activities and Events around the Bed**”

**Authored by:** Jose Clemente, Maria Valero, Fangyu Li, ChengLiang Wang, and WenZhan Song, University of Georgia, USA & Chongqing University, China

#### 21<sup>st</sup> IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)

August 2020



Two best papers:

“**HydraWave: Multi-Group Multicast Hybrid Precoding and Low-Latency Scheduling for Ubiquitous Industry 4.0 mmWave Communications**”

**Authored by:** Luis F. Abanto-Leon (Technische Universität Darmstadt, Germany); Matthias Hollick (Technische Universität Darmstadt & Secure Mobile Networking Lab, Germany); Gek Hong (Allyson) Sim (TU Darmstadt, Germany)

“**Punched Cards over the Air: Cross-Technology Communication Between LTE-U/LAA and WiFi**”

**Authored by:** Piotr Gawłowicz and Anatolij Zubow (Technische Universität Berlin, Germany); Suzan Bayhan (University of Twente, The Netherlands); Adam Wolisz (TUB, Germany)

#### 6<sup>th</sup> IEEE International Conference on Smart Computing (SMARTCOMP)

September 2020



**Best paper** entitled: “**REAM: Resource Efficient Adaptive Monitoring of Community Spaces at the Edge Using Reinforcement Learning**”

**Authored by:** Praveen Venkateswaran (University of California, Irvine), Cheng-Hsin Hsu (National Tsing Hua University, Taiwan), Sharad Mehrotra (University of California, Irvine), Nalini Venkatasubramanian (University of California, Irvine)

### 3. Best Paper Awards of 2020 conferences (continued)

#### 39<sup>th</sup> IEEE International Performance Computing and Communications Conference (IPCCC)



November 2020

Two best papers:

##### **“Distributed Scheduling Algorithm for Optimizing Age of Information in Wireless Networks”**

**Authored by:** Dongxiao Yu and Xinpeng Duan (Shandong University, China); Feng Li (Shandong University, China); Yi Liang (Georgia State University, USA); Huan Yang (Qingdao University, China); Jiguo Yu (Qufu Normal University, China)

##### **LIDAUS: Localization of IoT Device via Anchor UAV SLAM**

**Authored by:** Yue Sun, Deqiang Xu, Zhuoming Huang, Honggang Zhang and Xiaohui Liang (University of Massachusetts Boston, USA)

#### 45<sup>th</sup> IEEE International Conference on Local Computer Networks (LCN)

November 2020



**Best Paper** entitled: "Celosia: An Immune-Inspired Anomaly Detection Framework for IoT Devices"

**Authored by:** Muhammad Naveed and Hui Wu (The University of New South Wales, Australia)

## 4. TCCC Sponsored Conferences

### IEEE International Conference on Pervasive Computing and Communications (PerCom)

IEEE PerCom is the premier conference for presenting scholarly research in pervasive computing and communications. Advances in this field are leading to innovative platforms, protocols, systems, and applications for always-on, always-connected services.

In the light of the ongoing situation of the CoVID-19 pandemic, the PerCom General Chairs and Steering Committee have decided that also the upcoming PerCom 2021 will be virtual (synchronous zoom meeting).



<p>General Information</p> <p>Conference Overview Organizing Committee Steering Committee</p>	<p>PerCom 2021</p> <p>The 19th International Conference on Pervasive Computing and Communications (PerCom 2021) March 22-26, 2021 in Kassel, Germany.</p>	<p>Previous PerComs</p> <p>PerCom 2020 PerCom 2019 PerCom 2018 PerCom 2017 PerCom 2016</p>
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<http://www.percom.org/>

IEEE PerCom 2021 is scheduled for March 22-26, 2021.

### IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)

WoWMoM's programme focuses on wireless networking technologies and their key role in future Internet scenarios. The symposium addresses the increasing wealth of opportunities for distributing multimedia contents over wireless networks, enabling dissemination of professional contents to mobile users as well as sharing user-generated contents among them. Users will be able to retrieve, publish, and manage information, communicate with other users or devices, access and author services, and create and exploit context-awareness.

IEEE WoWMoM  
June 7-11, 2021  
Pisa, Italy

HOME  
CALL FOR PAPERS  
CALL FOR WORKSHOPS  
IMPORTANT DATES  
WORKSHOPS  
COMMITTEES  
DIVERSITY, EQUITY, AND INCLUSION  
PAST CONFERENCES  
IEEE WOWMOM 2021

Tweets by @wowmom2021

Sponsored by: - Organized by: - Platinum industry sponsor:

**NEW!** Paper submission extended to Dec 31st [FIRM], see call for papers

Fast track for selected publications to Computer Communications

Best paper award by platinum industry sponsor

<http://wowmom2021.iit.cnr.it/>

**WoWMoM regular and work in progress paper submission deadline is soon (Dec. 31). WoWMoM workshops are not yet known, workshop paper submission deadline is intended to be March 1, 2021.**

## TCCC Sponsored Conferences (continued)

### IEEE International Conference on Smart Computing (SMARTCOMP)

SMARTCOMP is the premier IEEE conference on smart computing. Smart computing is based on the synergistic combination of advances in Sensor-based technologies, the Internet of Things (IoT), Cyber-Physical Systems, Edge cloud computing, Big Data analytics, Machine Learning, Cognitive Computing, and Artificial Intelligence.



#### IEEE SMARTCOMP 2021

7th IEEE International Conference on Smart Computing  
Irvine, Orange County, California, USA.  
23-27 August 2021

SMARTCOMP is the premier IEEE conference on smart computing. Smart computing is based on the synergistic combination of advances in Sensor-based technologies, the Internet of Things (IoT), Cyber-Physical Systems, Edge cloud computing, Big Data analytics, Machine Learning, Cognitive Computing, and Artificial Intelligence.

#### IMPORTANT DATES

- Abstract submission: 24 January 2021
- Paper submission: 1 February 2021
- Acceptance notification: 15 April 2021

<https://www.smart-comp.info/>

**SMARTCOMP main research papers are due by January 24 (abstract) and February 1 (paper), 2021.**

**Deadlines for papers of Industry Track, work in progress & demos, as well as a Ph.D. forum are not yet fixed.**

### IEEE International Conference on Local Computer Networks (LCN)

The IEEE LCN conference is the premier conference on theoretical and practical aspects of computer networking. LCN is highly interactive, enabling an effective interchange of results and ideas among researchers, users, and product developers. Major developments from high-speed networks to the global Internet to specialized sensor networks have been reported at past LCNs.

The screenshot shows the IEEE LCN 2021 website with a cityscape background. The navigation bar includes: HOME, AUTHOR, ATTENDEE, PROGRAM, PATRONS, COMMITTEES, PRIOR LCN CONFERENCES. The main content area features a "Welcome to Edmonton" section with a cityscape image and a "IEEE LCN News" section with social media icons (Facebook, Twitter, YouTube, LinkedIn). The "Important Dates" section lists: Paper Registration: May 1, 2021; Paper Submission: May 8, 2021; Paper Acceptance Notification: June 22, 2021; Final paper due: July 22, 2021.

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

The LCN 2021 web pages will be online soon.

## TCCC Sponsored Conferences (continued)

### IEEE International Performance Computing and Communications Conference (IPCCC)

The International Performance, Computing, and Communications Conference is a premier IEEE conference presenting research in the performance of computer and communication systems. For almost four decades, IPCCC has been a research forum for academic, industrial, and government researchers.

IPCCC 2020 turned virtual, IPCCC 2021 is planned for the 2020 intended location in Austin, Texas, USA, with dates October 29<sup>th</sup> to 31<sup>st</sup>, 2021.



40<sup>th</sup> IEEE International Performance, Computing and Communications Conference  
<http://ipccc.org>

October 29<sup>th</sup> - 31<sup>st</sup>, 2021  
Hilton Austin  
Austin, Texas, USA

<http://ipccc.org/>

### Recent Technically Co-Sponsored Conferences

- 34th of the International Conference on Information Networking (ICOIN 2020) <http://www.icoin.org/>

For a full list of past technically co-sponsored TCCC conferences  
See <https://cs-tccc.org/supports/tcs/>

## 5. Calendar of upcoming (TCCC) conference deadlines & dates

### Submission deadlines:

December 31, 2020 (soon!)	WoWMoM regular and work in progress paper submission
January 24, 2021	SMARTCOMP abstract submission
February 1, 2021	SMARTCOMP paper submission
March 1, 2021	WoWMoM (intended) workshop paper submission
May 1, 2021	LCN conference paper registration
June 15, 2021 (June 30)	IPCCC abstract submission (full paper June 30)
August 20, 2021	LCN demo submission



### Dates of the conferences:

March 22-26, 2021	19 <sup>th</sup> IEEE PerCom, Kassel (Germany) - <b>VIRTUAL</b>
June 7-11, 2021	22 <sup>nd</sup> IEEE WoWMoM, Pisa (Italy)
August 23-27, 2021	7 <sup>th</sup> IEEE SMARTCOMP, Irvine, Orange County, California (USA)
October 4-7, 2021	46 <sup>th</sup> IEEE LCN, Edmonton (Canada)
October 29-31, 2021	40 <sup>th</sup> IEEE IPCCC, Austin, Texas (USA)

## 2020/2021 TCCC Executive Committee

The Executive Committee of the TCCC is chaired by the TCCC Chair, directs the operations of the TCCC and determines the budget and nature of TCCC activities:

TCCC Chair:	<b>Andreas Reinhardt</b> , TU Clausthal, Germany
TCCC Past Chair:	<b>Nils Aschenbruck</b> , University of Osnabrück, Germany
Treasurer:	<b>Frank Huebner</b> , U.S.A.
Conference Liaison Chairs:	<b>Salil Kanhere</b> , The University of New South Wales, Australia <b>Burkhard Stiller</b> , University of Zürich, Switzerland
Industry Chair:	<b>Girish Revadigar</b> , Huawei International Pte. Ltd., Singapore
Student Outreach Chair:	<b>Matthias Wübbeling</b> , University of Bonn and Fraunhofer FKIE, Germany
History Chair:	<b>Joe Bumblis</b> , IEEE TCCC Executive Committee, U.S.A.
Communications Chair:	<b>Matthias Frank</b> , University of Bonn, Germany
TCHPC Representative:	<b>Anura Jayasumana</b> , Colorado State University, U.S.A.

# What would you like to read in the next TCCC newsletter?

## Call for contributions!

We are soliciting contributions for our TCCC newsletter. This maybe any piece of information like

- Call for Papers/Workshops/Demos/Posters/Participation/...
- Job offer related to TCCC
- Information of general relevance for the TCCC members
- Information on conference award recipients (best paper, best demo, travel grants, ...)
- Experience reports from conferences and workshops

If you are missing an important topic that should be mentioned as well, please let us know! ([matthew@cs.uni-bonn.de](mailto:matthew@cs.uni-bonn.de)) We plan to send out a TCCC newsletter about every few months, depending on availability of relevant content.



IEEE COMPUTER SOCIETY  
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## CALL FOR PAPERS

40<sup>th</sup> IEEE International Performance,  
Computing and Communications  
Conference  
<http://ipccc.org>

October 29<sup>th</sup> - 31<sup>st</sup>, 2021  
Hilton Austin  
Austin, Texas, USA

The International Performance, Computing, and Communications Conference is a premier IEEE conference presenting research in the performance of computer and communication systems. For four decades, IPCCC has been a research forum for academic, industrial, and government researchers. We encourage submission of high-quality papers reporting original work in both theoretical and experimental research areas.

### COVID-19 STATEMENT

We are closely monitoring the COVID-19 pandemic and the guidelines from IEEE, WHO and US/Texas/Austin CDC. If needed, IEEE IPCCC 2021 will provide flexible presentation and attendance options to the affected authors such as remote virtual presentations. All presented papers will be included in the conference proceedings and published in IEEE Xplore.

### HOT TOPICS FOR IPCCC 2021

Topics of interest include, but are not limited to:

- Big Data Processing and Analytics
- Edge Computing
- Crowdsourcing Systems
- Cyber Physical Systems
- Data Centers and Cloud Computing
- Embedded Systems
- Internet of Things
- Network Protocols
- Multimedia Networking
- Network Data Mining
- Security and Privacy
- Ubiquitous Computing
- Software Defined Networking
- Cache, Memory, and Disk Storage Systems
- Fundamental Theory and Algorithms for Computing and Communication Systems
- Named Data Networking
- Mobile Augmented/Virtual/Mixed Reality
- Blockchain and Distributed Ledger
- Internet Services and Network Management
- Many-core and Heterogeneous Computing
- Mobile Ad Hoc, Sensor and Mesh Networks
- Network Information Assurance and Security
- Online Social Network Analysis
- Parallel and Distributed Systems
- Performance Evaluation and Modeling for Computing and Communication Systems
- Smart Grid and Intelligent Mission Critical Operations
- Smart Health Systems, Wearable, and Implantable Systems
- Smartphone and Mobile Applications
- Wireless Communication and Networks
- Workload Characterization & its Impacts on Architecture Design
- Networks on Chip
- AI-assisted Networking and Systems

## **SUBMISSION GUIDELINES**

Paper submissions should be formatted according to the IEEE standard double-column format with a font size of 10 pt or larger with a maximum of **8 pages for full papers**. Please refer to the IEEE formatting instruction for details:

[http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html)

Submissions should represent original research results and may not be under review or accepted for publication in another venue. All papers should be submitted through the **EDAS** system: <https://www.edas.info/newPaper.php?c=28064>

For any questions regarding paper submissions, please refer to the conference website <http://ipccc.org> for more details.

## **IMPORTANT DATES**

Paper Abstract Due:	June 15, 2021	Acceptance Notification:	August 15, 2021
Full Paper Due:	June 30, 2021	Camera Ready Due:	August 30, 2021

Call for Papers

# 46th Annual IEEE Conference on Local Computer Networks

*Edmonton, Canada*

*October 4-7, 2021*

<https://www.ieeeln.org>

The IEEE LCN conference is the premier conference on the leading edge of theoretical and practical aspects of computer networking. LCN is a highly interactive conference that enables an effective interchange of results and ideas among researchers, users, and product developers. For the past 45 years, major developments from AI-enabled high-speed networking to application-focused IoT networks have been reported at this conference. Topics of interest include, but are not limited to:

- Personal and wearable networks
- Wireless ad hoc & sensor networks
- Information-centric networking
- Embedded networks
- Opportunistic networking
- Delay-tolerant networks
- Cognitive radio networks
- Vehicular networks
- Smart Grid communications
- Underwater sensor networks
- Cyber-physical systems
- Social networks
- Mobile and ubiquitous networking
- Green networking
- Overlay and peer-to-peer networks
- Local-area and metropolitan-area networks
- Storage-area networks
- Routing and transport protocols
- Big Data Networking
- Cloud computing and networking
- Software Defined Networking and Network Function Virtualization
- Internet of Things
- Link technologies
- Adaptive networking applications
- Authentication, authorization, accounting
- Security and privacy
- Cross-layer optimization
- Mobility and Location-dependent services
- Multimedia and real-time communication
- Machine-to-machine communications for smart environments
- Smart Cities
- Network traffic characterization and measurements
- Network management, reliability and QoS
- Performance evaluation of networks
- Test beds for network experiments
- Network coding
- Optical and high-speed access networks
- E-Health networking
- AI-enabled networking

**LCN Symposium on Emerging Topics In Networking**

The LCN Symposium provides an opportunity to present early work in-progress that shows exciting promise. The aim of the Symposium is to enable timely discussion of novel ideas and challenging future directions on emerging topics in networking.

Submissions in areas such as, but not limited to, the following are encouraged:

- Edge/Fog Computing
- Network Intelligence
- Blockchain Networks

### **Invitation to Authors**

Authors are invited to submit papers describing original, previously unpublished work, not currently under review by another conference, workshop, or a journal. *Full Regular papers* (maximum eight pages, 10 pt font in IEEE format) should present novel perspectives within the general scope of the conference. *Short papers* (up to four pages) are an opportunity to present preliminary or interim results on hot topics in a poster session. *Symposium papers* (maximum six pages) enable timely discussion of novel ideas and challenging future directions on emerging topics in networking. All papers will be published in the proceedings and [IEEE Xplore](#). All papers must include title, complete contact information for all authors, abstract, and keywords on the cover page. IEEE reserves the right to remove papers from IEEE Xplore that are not presented at the conference.

### **Paper Submission**

Papers must be registered on EDAS and submitted in PDF format. Detailed submission instructions are available at the conference website. Direct any questions to LCN Program Chair [Lyes Khoukhi](#) or LCN Program Co-Chair [Sharief Oteafy](#), or LCN Symposium Chair, [Florian Tschorsch](#).

### **Important Dates**

**Paper registration:** May 1, 2021

**Paper submission:** May 8, 2021

**Notification:** June 22, 2021

**Final paper:** July 22, 2021

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Follow LCN on LinkedIn <https://www.linkedin.com/company/ieee-lcn-conference/>