

# CFP: Mass Connectivity and Communication Paradigms for the Internet of Things (IoT)

A Special Issue of IEEE IoT Journal

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Internet of Things (IoT) refers to the collective network of connected devices and technologies facilitating the communication between these devices themselves and between the devices and cloud at a mass scale. Connected smart devices collect a massive amount of information and transmit them for storage and subsequent analysis. Such operation style leads to a heavy load on network communication links, connectivity, and computational resources and increases the demand for required storage space. As a result, fundamental techniques need to be devised for reducing the demand for such resources. For instance, to reduce the infrastructure cost of the topology and increase fault tolerance, recent research focused on minimizing the number of devices guaranteeing maximal area coverage for a given network region. Besides reducing the cost of the deployed infrastructure, minimization of the number of devices takes into consideration the communication cost in terms of consumed bandwidth or the time elapsed during the device-to-device communication as important parameters of interest. Accordingly, the focus on reducing such communication overhead using deterministic or/with heuristic solutions is vital for optimal IoT ecosystem design.

In this special issue, the focus of the call would be on the new and broader technical problems which are related to the connectivity, communication costs and resource sharing for IoT core networks, devices, and applications. Topics of interest include, but are not limited to:

- Resource management and connectivity issues in Wireless Sensor Networks.
- Resource management and connectivity issues in Underwater Wireless Sensor Networks.
- Resource management and connectivity issues in Internet of Drones.
- Fault tolerance in IoT topologies.
- Communication reliability in IoT networks.
- Availability in 5G and Beyond Cellular Networks.
- Network-Coded protocol design for IoT.
- Coded Caching for IoT platforms and Novel IoT protocol designs for network bandwidth/storage efficiency.

## Important Dates

1. Submissions Deadline: Oct. 30th, 2022
2. First Reviews Due: Jan. 31st, 2023
3. Revision Due: Feb. 30th, 2023
4. Second Reviews Due: Apr. 1st, 2023
5. Final Manuscript Due: April. 25th, 2023
6. Publication Date: End of 2023

## Submissions

Each unique submission or a revision must be submitted to IEEE IoT Journal through the link <https://mc.manuscriptcentral.com/iot>. Please make sure that you select the name of the special issue **SI:NC for IoT** when you submit. The complete guide and submission policies can be reached at <https://ieee-iotj.org/guidelines-for-authors/>. Submissions are expected to be accompanied with keywords and pointers to appropriate reviewers to expedite the review process.

## Guest Editors

- Elif Haytaoglu, *Pamukkale University*, Denizli, Turkey. (eacar@pau.edu.tr)
- Suayb S. Arslan, *Massachusetts Institute of Technology*, Cambridge, MA, USA. (sarslan@mit.edu)
- Orhan Dağdeviren, *Ege University*, Izmir, Turkey. (orhan.dagdeviren@ege.edu.tr)
- Huseyin Ugur Yildiz, *TED University*, Ankara, Turkey. (hugur.yildiz@tedu.edu.tr)
- Yusuf Ozturk, *San Diego State University*, San Diego, CA, USA. (yozturk@sdsu.edu)

## Potential Contributors

In addition to contributions by the guest editors and their research teams, we have the following list of potential contributors to this special issue.

1. Prof. Tommaso Melodia, *Northeastern University*, Boston, MA, USA.  
(melodia@northeastern.edu)
2. Prof. Nadeem Javaid, *COMSATS University Islamabad (CUI)*, Islamabad, Pakistan.  
(nadeemjavaid@comsats.edu.pk)
3. Prof. Mohamed Younis, *University of Maryland Baltimore County*, Baltimore, MD, USA.  
(younis@cs.umbc.edu)
4. Prof. Ertan Onur, *Middle East Technical University*, Ankara, Turkey.  
(eronur@metu.edu.tr)
5. Prof. Ibrahim Korpeoglu, *Bilkent University*, Ankara, Turkey.  
(korpe@cs.bilkent.edu.tr)
6. Prof. Suat Ozdemir, *Hacettepe University*, Ankara, Turkey.  
(ozdemir@cs.hacettepe.edu.tr)
7. Prof. Bulent Tavli, *TOBB University of Economics and Technology*, Ankara, Turkey.  
(btavli@etu.edu.tr)
8. Prof. Vehbi Cagri Gungor, *Abdullah Gul University*, Kayseri, Turkey.  
(cagri.gungor@agu.edu.tr)
9. Prof. Kemal Akkaya, *Florida International University*, Miami, FL, USA.  
(kakkaya@fiu.edu)
10. Asst. Prof. Zuleyha Akusta Dagdeviren, *Ege University*, Izmir, Turkey.  
(zuleyha.akusta.dagdeviren@ege.edu.tr)

11. Asst. Prof. Emrecaan Demirors, *Northeastern University*, Boston, MA, USA.  
(edemirors@ece.neu.edu)
12. Asst. Prof. Pelin Angin, *Middle East Technical University*, Ankara, Turkey.  
(pangin@metu.edu.tr)
13. Asst. Prof. Halil Yetgin, *Bitlis Eren University*, Bitlis, Turkey.  
(hyetgin@beu.edu.tr)
14. Asst. Prof. Vahid Akram, *Ege University*, Izmir, Turkey.  
(vahid.akram@ege.edu.tr)
15. Asst. Prof. brahim Kok, *Pamukkale University*, Denizli, Turkey.  
(ikok@pau.edu.tr)
16. PhD Candidate, Mustafa Tosun, San Diego State University, USA. (mtosun@sdsu.edu)
17. PhD Candidate, Umut Can Cabuk, San Diego State University, USA.  
(ucabuk@sdsu.edu)

- **Elif Haytaoglu** received a B.Sc. degree in computer engineering from Pamukkale University and a Ph.D. degree in information technologies from Ege University, zmir, Turkey. Currently, she is an assistant professor at the Department of Computer Engineering, Pamukkale University, Denizli, Turkey. Her research interests include distributed storage systems, distributed caching, distributed graph algorithms, wireless sensor networks, regenerating codes, network coding, and computer networks.
- **Suayb S. Arslan (Senior Member, IEEE)** received the B.Sc. degree in electrical and electronics engineering from Bogazici University, Istanbul, Turkey, in 2006, and the M.Sc. and Ph.D. degrees in electrical engineering from the University of California, San Diego, CA, USA, in 2009 and 2012, respectively. In the past, he worked in Quantum Corporation, Irvine, CA, USA and in MEF University, Istanbul, Turkey as an associate professor. He is currently a visiting associate professor in Massachusetts Institute of Technology, Cambridge, MA, USA. His research interests include storage systems, information and reliability theory, neural signal processing and analysis and Internet of Things (IoT). Dr. Arslan holds more than 20 US Patents and have written over 40 technical papers and serves as associate editor for Elsevier IoT Journal and a senior editor for the book Series “Intelligent Data-Centric Systems: Sensor Collected Intelligence”.
- **Orhan Dagdeviren** received the B.Sc. and the M.Sc. degrees in Computer Engineering from Izmir Institute of Technology. He received his Ph.D. degree from Ege University, International Computer Institute (Izmir, Turkey). He is an associate professor and is the head of the Network Engineering Science and Technology (NETOS) Laboratory at the International Computer Institute. His interests lie in distributed computing, fault tolerance, applied graph theory, and computer networking areas. He published more than 100 scholarly papers in respected conferences and journals.
- **Huseyin Ugur Yildiz (Senior Member, IEEE)** received the B.S. degree from Bilkent University, Ankara, Turkey, in 2009, the M.S. and Ph.D. degrees from the TOBB University of Economics and Technology, Ankara, in 2013 and 2016, respectively, all in electrical and electronics engineering. He is currently an Associate Professor with the Depart-

ment of Electrical and Electronics Engineering, TED University, Ankara. His research focuses on the applications of optimization techniques for modeling and analyzing research problems on wireless communications, wireless networks, underwater acoustic networks, and smart grids.

- **Yusuf Ozturk** received the B.S.E.E degree from Middle East Technical University, Turkey, in 1985 and the M.S. and Ph.D. degrees in computer engineering from Ege University, Turkey, in 1987 and 1991, respectively. In 1996, he joined San Diego State University, San Diego, CA, as an Associate Professor and in 2010 he became a full Professor. He is the director of Pervasive Computing and Communications research group. His current research interests include energy demand response solutions, energy management, home area network, sensor networks, and pervasive computing. He holds four U.S. patents and has published over 80 scholarly papers in conferences and journals. He is a member of the NSF engineering research center on sensorimotor neural engineering.