

# **SIG: Data-Driven Cognitive Networks (D<sup>2</sup>CN)**

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# Data-Driven Cognitive Networks (D<sup>2</sup>CN)



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# Scope and Objectives

- Data are collected from various sources, including radio channels, user locations, service access data, social networking data, network-status and management data.
- A revolution in CRN from a traditional knowledge-driven CRN into a more powerful data-driven CRN
- This sig provides a platform on the development of DDCN, including key technologies, data sharing opportunities and future research directions.

# Speech on Data Driven Cognitive Networks

- IEEE APWCS 2017, Incheon, Korea
  - Data Driven Cognitive Networks
  - [http://apwcs2017.incheon.ac.kr/invited\\_talk.html](http://apwcs2017.incheon.ac.kr/invited_talk.html)
- IEEE APNOMS 2017, Seoul, Korea
  - Data Driven Cognitive Networks

# Workshop Activities

- IEEE International Workshop on Knowledge Centric Networking (KCN), conjunction in INFOCOM 2018
  - present novel contributions in the field of machine learning and deep learning applied to networking
- Time
  - Manuscript due: January 1st, 2018
  - Acceptance notification: March 1st, 2018
  - Final manuscript due: March 15th, 2018
  - Workshops Day: April 16th, 2018
- TPC co-chairs:
  - **Yong Li (Tsinghua University)**
  - Zhenjiang Li (City University of Hong Kong)

# Journal SI Activities

- IEEE Communications Magazine SI of MOBILE BIG DATA FOR URBAN ANALYTICS
  - Understanding of human behavior in urban environments and the corresponding requirements in terms of human communications and their interplay and mutual influence with mobile networks and services.
- GUEST EDITORS
  - Steve Uhlig., Queen Mary University of London, UK  
[steve.uhlig@qmul.ac.uk](mailto:steve.uhlig@qmul.ac.uk)
  - Yong Li, Tsinghua University, China,  
[liyong07@tsinghua.edu.cn](mailto:liyong07@tsinghua.edu.cn)

# Journal SI Activities

- IEEE JSAC SI proposal about machine learning and big data analytics for networking and communications.
  - seeks for novel contributions in the field of machine learning and big data analytics applied to communications and networking, including scalable analytic techniques and frameworks capable of collecting and analyzing both online and offline massive datasets.
- Still under considered and reviewed by editors

# Other Activities Plan

- **Propose Workshops**
  - IEEE conference of ICC, GLOBECOM, INFOCOM, etc.
- **Propose Special Issues**
  - IEEE JSAC, IEEE Trans. on Cognitive Network, Trans. On Big Data, IEEE Communications Mag., Signal Processing Mag., etc.
- **Organizing regular meetings**
- **Invitation talks from this area**
- **Building data-sharing community and organize competitions:**
- [Maintain IEEE TCCN D2CN SIG Website:](#)
- <https://www.linkedin.com/groups/13516608/profile>



# Senior Advisor and Members

- **Senior Advisor**
  - Ekram Hossain, University of Manitoba (cognitive radio network)
  - Jon Crowcroft, University of Cambridge (networking)
  - Phillip Yu, University of Illinois Chicago (data mining/machine learning)
  - Sheng Chen, University of Southampton (communications)
  - HT Kung, Harvard University, Harford University (machine learning/parallel computing/network)
- **10+ founding members**
  - Pan Hui, Hong Kong University of Science and Technology
  - Meeyoung Cha, KAIST
  - Bo Han, AT&T Labs Research
  - Sue Moon, KAIST
  - Jörg Ott, Technische Universität München
  - Kun Tan, Huawei Technologie
  - Yan Chen, Fudan University
  - Hong-Han Shuai, National Chiao Tung University.
- Please suggest more~~

**Thanks!**

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