

Access provided by:  
**TOHOKU UNIVERSITY**  
 Sign Out

BROWSE

MY SETTINGS

GET HELP

WHAT CAN I ACCESS?

Browse Journals &amp; Magazines &gt; IEEE Network ... ?

## IEEE Network



Popular

Current Issue

Past Issues

About Journal

Submit Your Manuscript

### Popular Articles (March 2016)

Includes the top 50 most frequently downloaded documents for this publication according to the most recent monthly usage statistics.

 Select All Results

Sort by: Most Popular

Sponsor



**1. When big data meets software-defined networking: SDN for big data and big data for SDN**

Laizhong Cui ; F. Richard Yu ; Qiao Yan  
 Publication Year: 2016, Page(s):58 - 65

Abstract | PDF (539 KB) | HTML



**2. System architecture and key technologies for 5G heterogeneous cloud radio access networks**

Mugen Peng ; Yong Li ; Zhongyuan Zhao ; Chonggang Wang  
 Publication Year: 2015, Page(s):6 - 14  
 Cited by: Papers (20)

Abstract | PDF (410 KB) | HTML



**3. Challenges in 5G: how to empower SON with big data for enabling 5G**

Ali Imran ; Ahmed Zoha ; Adnan Abu-Dayya  
 Publication Year: 2014, Page(s):27 - 33  
 Cited by: Papers (13)

Abstract | PDF (259 KB) | HTML



**4. Integrated energy and spectrum harvesting for 5G wireless communications**

Yi Liu ; Yan Zhang ; Rong Yu ; Shengli Xie  
 Publication Year: 2015, Page(s):75 - 81  
 Cited by: Papers (2)

Abstract | PDF (278 KB) | HTML



**5. Information-centric network function virtualization over 5g mobile wireless networks**

Chengchao Liang ; F. Richard Yu ; Xi Zhang  
 Publication Year: 2015, Page(s):68 - 74  
 Cited by: Papers (3)

Abstract | PDF (279 KB) | HTML



**6. Big data-driven optimization for mobile networks toward 5G**

Kan Zheng ; Zhe Yang ; Kuan Zhang ; Periklis Chatzimisios ; Kan Yang ; Wei Xiang  
 Publication Year: 2016, Page(s):44 - 51

Abstract | PDF (734 KB) | HTML



- 7. 5G wireless backhaul networks: challenges and research advances**

Xiaohu Ge ; Hui Cheng ; Mohsen Guizani ; Tao Han  
Publication Year: 2014, Page(s):6 - 11  
Cited by: Papers (32)

[©](#) | [📄](#) | [Abstract](#) | [PDF \(299 KB\)](#) | [HTML](#)

[🔒](#)

---
- 8. Big data in mobile social networks: a QoE-oriented framework**

Zhou Su ; Qichao Xu ; Qifan Qi  
Publication Year: 2016, Page(s):52 - 57

[©](#) | [📄](#) | [Abstract](#) | [PDF \(313 KB\)](#) | [HTML](#)

[🔒](#)

---
- 9. A survey of big data research**

Hua Fang ; Zhaoyang Zhang ; Chanpaul Jin Wang ; Mahmoud Daneshmand ; Chonggang Wang ; Honggang Wang  
Publication Year: 2015, Page(s):6 - 9  
Cited by: Papers (2)

[©](#) | [📄](#) | [Abstract](#) | [PDF \(88 KB\)](#) | [HTML](#)

[🔒](#)

---
- 10. A dynamic bandwidth allocation algorithm in mobile networks with big data of users and networks**

Bo Fan ; Supeng Leng ; Kun Yang  
Publication Year: 2016, Page(s):6 - 10

[©](#) | [📄](#) | [Abstract](#) | [PDF \(207 KB\)](#) | [HTML](#)

[🔒](#)

---
- 11. Toward efficient and privacy-preserving computing in big data era**

Rongxing Lu ; Hui Zhu ; Ximeng Liu ; Joseph K. Liu ; Jun Shao  
Publication Year: 2014, Page(s):46 - 50  
Cited by: Papers (9)

[©](#) | [📄](#) | [Abstract](#) | [PDF \(184 KB\)](#) | [HTML](#)

[🔒](#)

---
- 12. NFV: state of the art, challenges, and implementation in next generation mobile networks (vEPC)**

Hassan Hawilo ; Abdallah Shami ; Maysam Mirahmadi ; Rasool Asal  
Publication Year: 2014, Page(s):18 - 26  
Cited by: Papers (20)

[©](#) | [📄](#) | [Abstract](#) | [PDF \(248 KB\)](#) | [HTML](#)

[🔒](#)

---
- 13. Data mining algorithms for communication networks control: concepts, survey and guidelines**

Mauro De Sanctis ; Igor Bisio ; Giuseppe Araniti  
Publication Year: 2016, Page(s):24 - 29

[©](#) | [📄](#) | [Abstract](#) | [PDF \(160 KB\)](#) | [HTML](#)

[🔒](#)

---
- 14. A tutorial on the internet of things: from a heterogeneous network integration perspective**

Ke Xu ; Yi Qu ; Kun Yang  
Publication Year: 2016, Page(s):102 - 108

[©](#) | [📄](#) | [Abstract](#) | [PDF \(331 KB\)](#) | [HTML](#)

[🔒](#)

---
- 15. Improving physical-layer security in wireless communications using diversity techniques**

Yulong Zou ; Jia Zhu ; Xianbin Wang ; Victor C. M. Leung  
Publication Year: 2015, Page(s):42 - 48  
Cited by: Papers (11)

[©](#) | [📄](#) | [Abstract](#) | [PDF \(259 KB\)](#) | [HTML](#)

[🔒](#)

---
- 16. Information-centric networking for the internet of things: challenges and opportunities**

[🔒](#)

Marica Amadeo ; Claudia Campolo ; Jose Quevedo ; Daniel Corujo ; Antonella Molinaro ; Antonio Iera ; Rui L. Aguiar ; Athanasios V. Vasilakos  
Publication Year: 2016, Page(s):92 - 100

 |  Abstract |  PDF (535 KB) |  HTML

**17. Mobile big data fault-tolerant processing for ehealth networks** 


Kun Wang ; Yun Shao ; Lei Shu ; Chunsheng Zhu ; Yan Zhang  
Publication Year: 2016, Page(s):36 - 42

 |  Abstract |  PDF (275 KB) |  HTML

**18. Heterogeneous statistical QoS provisioning over 5G mobile wireless networks** 

Xi Zhang ; Wenchi Cheng ; Hailin Zhang  
Publication Year: 2014, Page(s):46 - 53  
Cited by: Papers (6)

 |  Abstract |  PDF (304 KB) |  HTML

**19. Privacy and security for online social networks: challenges and opportunities** 

Chi Zhang ; Jinyuan Sun ; Xiaoyan Zhu ; Yuguang Fang  
Publication Year: 2010, Page(s):13 - 18  
Cited by: Papers (23) | Patents (1)

 |  Abstract |  PDF (155 KB) |  HTML

**20. Multimedia traffic security architecture for the internet of things** 


Liang Zhou ; Han-Chieh Chao  
Publication Year: 2011, Page(s):35 - 40  
Cited by: Papers (24)

 |  Abstract |  PDF (747 KB) |  HTML

**21. Device-to-device communication in 5G cellular networks** 

Xuemin Shen  
Publication Year: 2015, Page(s):2 - 3

 |  Abstract |  PDF (169 KB) |  HTML

**22. Toward a software-based network: integrating software defined networking and network function virtualization** 


Timothy Wood ; K. K. Ramakrishnan ; Jinho Hwang ; Grace Liu ; Wei Zhang  
Publication Year: 2015, Page(s):36 - 41  
Cited by: Papers (3)

 |  Abstract |  PDF (139 KB) |  HTML

**23. Mobile cloud sensing, big data, and 5G networks make an intelligent and smart world** 

Qilong Han ; Shuang Liang ; Hongli Zhang  
Publication Year: 2015, Page(s):40 - 45  
Cited by: Papers (1)

 |  Abstract |  PDF (207 KB) |  HTML

**24. A tensor-based big data model for QoS improvement in software defined networks** 

Liwei Kuang ; Laurence T. Yang ; Xiaokang Wang ; Puming Wang ; Yaliang Zhao  
Publication Year: 2016, Page(s):30 - 35

 |  Abstract |  PDF (253 KB) |  HTML

**25. Coordinated device-to-device local area networks: the approach of the China 973 project D2D-LAN** 

Linyang Song ; Xiang Cheng ; Minghua Chen ; Shengli Zhang ; Yingjun Zhang

Publication Year: 2016, Page(s):92 - 99

 |  Abstract |  PDF (197 KB) |  HTML

**26. EMC: Emotion-aware mobile cloud computing in 5G** 

Min Chen ; Yin Zhang ; Yong Li ; Shiwen Mao ; Victor C. M. Leung  
Publication Year: 2015, Page(s):32 - 38  
Cited by: Papers (6)

 |  Abstract |  PDF (297 KB) |  HTML

**27. Freenet: Spectrum and energy harvesting wireless networks** 

Nirwan Ansari ; Tao Han  
Publication Year: 2016, Page(s):66 - 71

 |  Abstract |  PDF (192 KB) |  HTML

**28. Cloud robotics: architecture, challenges and applications** 

Guoqiang Hu ; Wee Peng Tay ; Yonggang Wen  
Publication Year: 2012, Page(s):21 - 28  
Cited by: Papers (40)

 |  Abstract |  PDF (793 KB) |  HTML

**29. A generic quantitative relationship between quality of experience and quality of service** 


Markus Fiedler ; Tobias Hossfeld ; Phuoc Tran-Gia  
Publication Year: 2010, Page(s):36 - 41  
Cited by: Papers (142) | Patents (2)

 |  Abstract |  PDF (874 KB) |  HTML

**30. Link-level access cloud architecture design based on SDN for 5G networks** 

Pablo Ameigeiras ; Juan J. Ramos-munoz ; Laurent Schumacher ;  
Jonathan Prados-Garzon ; Jorge Navarro-Ortiz ; Juan M. Lopez-  
soler  
Publication Year: 2015, Page(s):24 - 31  
Cited by: Papers (1)

 |  Abstract |  PDF (246 KB) |  HTML

**31. Building a network highway for big data: architecture and challenges** 


Xiaomeng Yi ; Fangming Liu ; Jiangchuan Liu ; Hai Jin  
Publication Year: 2014, Page(s):5 - 13  
Cited by: Papers (6)

 |  Abstract |  PDF (723 KB) |  HTML

**32. Visible light communications for 5G wireless networking systems: from fixed to mobile communications** 


Shaoen Wu ; Honggang Wang ; Chan-Hyun Youn  
Publication Year: 2014, Page(s):41 - 45  
Cited by: Papers (14)

 |  Abstract |  PDF (79 KB) |  HTML


















































**33. A buffer-aware HTTP live streaming approach for SDN-enabled 5G wireless networks** 








Chin-feng Lai ; Ren-hung Hwang ; Han-chieh Chao ; Mohammad  
Mehedi Hassan ; Atif Alamri  
Publication Year: 2015, Page(s):49 - 55  
Cited by: Papers (3)

 |  Abstract |  PDF (288 KB) |  HTML

**34. Cloud radio access network (C-RAN): a primer** 

Jun Wu ; Zhifeng Zhang ; Yu Hong ; Yonggang Wen  
Publication Year: 2015, Page(s):35 - 41  
Cited by: Papers (7)

-  |  |  Abstract | PDF (255 KB) |  HTML
- 
- 35. Monitoring and analyzing big traffic data of a large-scale cellular network with Hadoop** 
- Jun Liu ; Feng Liu ; Nirwan Ansari  
Publication Year: 2014, Page(s):32 - 39  
Cited by: Papers (5)
-  |  |  Abstract | PDF (301 KB) |  HTML
- 
- 36. Toward an SDN-enabled big data platform for social TV analytics** 
- Han Hu ; Yonggang Wen ; Yue Gao ; Tat-Seng Chua ; Xuelong Li  
Publication Year: 2015, Page(s):43 - 49
-  |  |  Abstract | PDF (1083 KB) |  HTML
- 
- 37. A dynamic trajectory control algorithm for improving the communication throughput and delay in UAV-aided networks** 
- Zubair Md. Fadlullah ; Daisuke Takaishi ; Hiroki Nishiyama ; Nei Kato ; Ryu Miura  
Publication Year: 2016, Page(s):100 - 105
-  |  |  Abstract | PDF (515 KB) |  HTML
- 
- 38. OpenSCaaS: an open service chain as a service platform toward the integration of SDN and NFV** 
- Wanfu Ding ; Wen Qi ; Jianping Wang ; Biao Chen  
Publication Year: 2015, Page(s):30 - 35
-  |  |  Abstract | PDF (300 KB) |  HTML
- 
- 39. A hyperbolic space analytics framework for big network data and their applications** 
- Eleni Stai ; Vasileios Karyotis ; Symeon Papavassiliou  
Publication Year: 2016, Page(s):11 - 17
-  |  |  Abstract | PDF (191 KB) |  HTML
- 
- 40. Integrating network function virtualization with SDR and SDN for 4G/5G networks** 
- Songlin Sun ; Michel Kadoch ; Liang Gong ; Bo Rong  
Publication Year: 2015, Page(s):54 - 59  
Cited by: Papers (5)
-  |  |  Abstract | PDF (190 KB) |  HTML
- 
- 41. QoS-aware cell association in 5G heterogeneous networks with massive MIMO** 
- Ping Wang ; Wei Song ; Dusit Niyato ; Yong Xiao  
Publication Year: 2015, Page(s):76 - 82
-  |  |  Abstract | PDF (263 KB) |  HTML
- 
- 42. Device-to-device communications for enhancing quality of experience in software defined multi-tier LTE-A networks** 
- Jiajia Liu ; Shangwei Zhang ; Nei Kato ; Hiroataka Ujikawa ; Kenichi Suzuki  
Publication Year: 2015, Page(s):46 - 52  
Cited by: Papers (2)
-  |  |  Abstract | PDF (280 KB) |  HTML
- 
- 43. Networking solutions for connecting bluetooth low energy enabled machines to the internet of things** 
- Johanna Nieminen ; Carles Gomez ; Markus Isomaki ; Teemu Savolainen ; Basavaraj Patil ; Zach Shelby ; Minjun Xi ; Joaquim Oller  
Publication Year: 2014, Page(s):83 - 90  
Cited by: Papers (3)
-  |  |  Abstract | PDF (327 KB) |  HTML

- 
- 44. Software defined virtual wireless network: framework and challenges** 
- Bin Cao ; Fang He ; Yun Li ; Chonggang Wang ; Wenqiang Lang  
 Publication Year: 2015, Page(s):6 - 12  
 Cited by: Papers (1)
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(195 KB\)](#) | [HTML](#)
- 
- 45. Rule caching in SDN-enabled mobile access networks** 
- Mianxiong Dong ; He Li ; Kaoru Ota ; Jiang Xiao  
 Publication Year: 2015, Page(s):40 - 45  
 Cited by: Papers (1)
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(240 KB\)](#) | [HTML](#)
- 
- 46. In-band full-duplex relaying for 5G cellular networks with wireless virtualization** 
- Gang Liu ; F. Richard Yu ; Hong Ji ; Victor C. M. Leung ; Xi Li  
 Publication Year: 2015, Page(s):54 - 61
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(1113 KB\)](#) | [HTML](#)
- 
- 47. Resource allocation in wireless networks with RF energy harvesting and transfer** 
- Xiao Lu ; Ping Wang ; Dusit Niyato ; Zhu Han  
 Publication Year: 2015, Page(s):68 - 75  
 Cited by: Papers (5)
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(248 KB\)](#) | [HTML](#)
- 
- 48. Deep semantics inspection over big network data at wire speed** 
- Chengchen Hu ; Hao Li ; Yuming Jiang ; Yu Cheng ; Poul Heegaard  
 Publication Year: 2016, Page(s):18 - 23
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(570 KB\)](#) | [HTML](#)
- 
- 49. SoftNet: A software defined decentralized mobile network architecture toward 5G** 
- Hucheng Wang ; Shanzhi Chen ; Hui Xu ; Ming Ai ; Yan Shi  
 Publication Year: 2015, Page(s):16 - 22  
 Cited by: Papers (2)
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(194 KB\)](#) | [HTML](#)
- 
- 50. LTE enhancements for public safety and security communications to support group multimedia communications** 
- Lorenzo Carlà ; Romano Fantacci ; Francesco Gei ; Dania Marabissi ; Luigia Micciullo  
 Publication Year: 2016, Page(s):80 - 85  
 Cited by: Papers (1)
- [©](#) | [📄](#) | [Abstract](#) | [PDF \(583 KB\)](#) | [HTML](#)

### Aims & Scope

As currently defined, IEEE Network covers the following areas: 1. network protocols and architectures, 2. Protocol design and validation, 3. Communication software and its development and test, 4. Network control and signalling, 5. network management, 6. Practical network implementations including local area networks, (LANs), metropolitan area networks (MANs), and wide area networks,

### Meet Our Editors

#### Editor-in-Chief

**Nei Kato**

Tohoku University, Japan

### Further Links

(WANs), 7. Switching and processing in integrated (voice/data) networks and network components, 8. Micro-to-host communication.

[Personal Sign In](#) | [Create Account](#)

**IEEE Account**

- » [Change Username/Password](#)
- » [Update Address](#)

**Purchase Details**

- » [Payment Options](#)
- » [Order History](#)
- » [View Purchased Documents](#)

**Profile Information**

- » [Communications Preferences](#)
- » [Profession and Education](#)
- » [Technical Interests](#)

**Need Help?**

- » **US & Canada:** +1 800 678 4333
- » **Worldwide:** +1 732 981 0060
- » [Contact & Support](#)

[About IEEE Xplore](#) | [Contact Us](#) | [Help](#) | [Terms of Use](#) | [Nondiscrimination Policy](#) | [Sitemap](#) | [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest professional association for the advancement of technology.  
© Copyright 2016 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.