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RESEARCH INTERESTS My main area of research lies in *data-driven* system development and performance optimization for *large-scale networked computing systems*.
Current research interests include artificial intelligence, big data, cloud computing, distributed ledger, green data center, machine learning, and software-defined infrastructure.

Research Highlights

- Elevated to IEEE Fellow Grade (Class 2020).
- Published **115** journal papers and **119** conference papers. Google Scholar citation (**10578**, retrieved on *January 14, 2021*) and H-index (**49**) and i10-index(**126**).
- Received **14** Best Paper Awards (or Finalist).
- Released **10+** open-source projects, winning **5** industrial innovation awards
- Secured **10+ million** SGD in competitive research grants (*cash awards*) from public agencies and multinational companies.

EDUCATION **Massachusetts Institute of Technology**, Cambridge, MA
Ph.D. (Minor in Literature), Electrical Engineering and Computer Science, 2008
The Chinese University of Hong Kong, Hong Kong, China
M.Phil. (with honors), Information Engineering, 2001
University of Science and Technology of China, Hefei, China
B.Eng. (with honors), Electronic Engineering and Information Science, 1999

PROFESSIONAL EXPERIENCE **Nanyang Technological University (NTU)** Singapore
School of Computer Science and Engineering (SCSE)
Full Professor (tenure) September 2019 to Present
Associate Professor (tenure) March 2016 to August 2019
Assistant Professor (tenure-track) February 2011 to February 2016
College of Engineering (CoE)
Associate Dean (Research) January 2018 to Present
Nanyang Technopreneurship Centre (NTC)
Acting Director September 2017 to April 2019
Renaissance Engineering Program (REP)
REP Fellow July 2017 to June 2021
School of Computer Science and Engineering (SCSE)
Assistant Chair(Innovation) April 2016 to March 2018

Cisco Systems, Inc. <i>Senior Software Engineer</i>	San Jose, CA July 2008 to October 2010
Mitsubishi Electric Research Laboratories <i>Research Intern</i>	Cambridge, MA April 2008 to June 2008
Sycamore Networks, Inc. <i>Summer Research Intern</i>	Chelmsford, MA June 2006 to August 2006
Bell Laboratories <i>Summer Research Intern</i>	Holmdel, NJ May 2005 to August 2005

HONOURS AND
AWARDS

Research Awards

- Winner*, 2019 Nanyang Research Award, December 2020
- To give the highest recognition to individuals or teams, at NTU Singapore, who have made outstanding contributions in extending the frontiers of knowledge.
- Fellow*, Institute of Electrical and Electronics Engineers (IEEE), January 2020
- For contributions and development of cloud systems for multimedia signal processing and communications.
- Best Paper Award*, 2019 IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), May 2019
- For the paper titled “Joint Content Replication and Request Routing for Social Video Distribution Over Cloud CDN: A Community Clustering Method.”
- Best Paper Award*, 2015 IEEE Multimedia Magazine, August 2015
- For the paper titled “Towards Multi-Screen Social TV with Geo-Aware Social Sense.”
- Best Paper Award*, 2019 IEEE International Conference on Visual Communications and Image Processing (VCIP’19), December 2019
- For the paper titled “Toward Intelligent Visual Sensing and Low-cost Analysis: A Collaborative Computing Approach.”
- Best Conference Paper Award*, 2019 IEEE Multimedia Communications Technical Committee (MMTC), December 2019
- For the paper titled “DeepQoE: A Unified Framework for Learning to Predict Video QoE,” published on 2018 IEEE International Conference on Multimedia Expo (ICME’18).
- Best Paper Award Finalist (TOP 5 papers)*, 2018 IEEE International Conference on Data Mining (ICDM 2018), November 2018
- For the paper titled “ResumeNet: A Learning-based Framework for Automatic Resume Quality Assessment.”
- Distinguished Paper Award Finalist (TOP 3 papers)*, 2017 International Joint Conference on Artificial Intelligence (IJCAI 2017), August 2017
- For the paper titled “General Heterogeneous Transfer Distance Metric Learning via Knowledge Fragments Transfer.”
- Best Paper Award*, 2016 IEEE Global Communications Conference, Exhibition & Industry Forum (Globecom 2016), December 2016

- For the paper titled “Toward Effortless TV-to-Online (T2O) Experience: A Novel Metric Learning Approach.”
- First Place*, Top Faculty Paper Award, Interactive Media & Emerging Technologies Division, 2016 Broadcast & Education Association (BEA 2016), April 2016
- For the paper titled “Understanding User Experiences of a Multiscreen Social TV System: A Mix-Method Study.”
- Best Paper Award*, 2016 IEEE Infocom Workshop on Multimedia Streaming in Information-Centric Networks (MuSIC 2016), April 2016
- For the paper titled “Resource Provisioning and Profit Maximization for Transcoding in Information Centric Networking.”
- Best Paper Award*, the 10th EAI International Conference on Communications and Networking in China (Chinacom 2015), August 2015
- For the paper titled “Wearable Computing Going Green: Energy-Optimal Data Transmission for Multi-Sensor Wearable Devices.”
- Best Paper Award*, 2014 International Conference on Wireless Communications and Signal Processing (WCSP 2014), October 2014
- For the paper titled “Energy-Efficient Dispatching Policy for Virus Scanning as a Service under N-Version Protection.”
- Best Paper Award*, 2013 IEEE Global Communications Conference, Exhibition & Industry Forum (Globecom 2013), December 2013
- For the paper titled “Minimizing Monetary Cost via Cloud Clone Migration in Multi-Screen Cloud Social TV Systems.”
- Best Demo Award Finalist*, the 21st ACM International Conference on Multimedia (ACM Multimedia 2013), October 2013
- For the demo paper titled “Multi-Screen Cloud Social TV: Transforming TV Experience into 21th Century.”
- Best Paper Award*, the 10th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC 2012), December 2012
- For the paper titled “Applied Lightweight Parallel Multi-Appliance Recognition on Smart Meter.”
- Travel Grant Award*, 2003 IEEE Global Communications Conference (GlobeCom 2003), December 2003
- For the paper titled “Ultra-reliable Communication over Unreliable Optical Networks via Lightpath Diversity: System Characterization and Optimization.”
- Travel Grant Award*, 2001 IEEE Optical Fiber Communication Conference and Exposition (OFC 2011), March 2001
- For the paper titled “Fundamental Limitation and Optimization on Optical Code Conversion for WDM Packet Switching Net.”
- Outstanding Master Thesis Award* (Runner-up), The Chinese University of Hong Kong (CUHK), June 2001
- For the MPhil thesis titled “On Architecture and Scalability of Optical Multiple-protocol Label Switching Networks Using Optical-orthogonal-code Label.”
- Outstanding Bachelor Thesis Award*, University of Science and Technology of China (USTC), June 1999

- For the BEng thesis titled “On Performance Analysis of Multi-user Detection Technologies under Nakagami-m Fading Channels for Wireless Communication Systems.”

Innovation Awards

Industrial Technical Excellence Award, IEEE TCCPS, June 2020

- For development and deployment of an integrated sandbox solution with industry-grade digital twin and AIoT to optimize and automate data centre management and operations for business continuity and energy efficiency.

Increasing Productivity Award, 2019 Microsoft Research Asia Academic Day, November 2019

- For the project titled “Optimizing Quality of Experience (QoE) for Adaptive Bitrate Streaming via Deep Video Analytics.”

Winner, 2016 Nanyang Award for Innovation & Entrepreneurship, March 2017

- To give the highest recognition to individuals or teams who have made significant contributions to the creation of a vibrant entrepreneurial ecosystem at NTU, and contributed to Singapore’s economic and national development through the creation of entrepreneurial leaders and new business ventures.

Gold Medal, 2016 ASEAN ICT Awards (AICTA), under the category of Research and Development, November 2016

- For the project titled “Cloud3DView.”
- The AICTA is an initiative under the ASEAN ICT Masterplan 2015 to recognize outstanding ICT achievements among entrepreneurs and organizations.

Winner, 2015 Data Centre Dynamics Awards - APAC, under the category of Open Data Center Project, September 2015

- For the project titled “Cloud3DView: A Human-Centric 3D-Gamification Platform to De-risk New Technology Adoption in Modular Data Centre Operations.”
- The only academic entry from 170+ nominations from APAC region, in the league with industry giants such as Huawei, IBM, Starhub, Digital Realty, Vodafone, China Unicom, Equinix Inc., Infosys, Telstra, NEC, Hitachi, NTT, etc.
- The DatacenterDynamics Awards are the leading awards for the data center industry recognising innovation, leadership and ‘out of the box’ thinking, often referred to as the ‘Oscars’ of data centre industry.

Gold Medal, 2013 ASEAN ICT Awards (AICTA), under the category of Research and Development, November 2013

- For the pioneering project titled “Multi-Screen Cloud Social TV.”
- The AICTA is an initiative under the ASEAN ICT Masterplan 2015 to recognize outstanding ICT achievements among entrepreneurs and organizations.

Cisco Achievement Program Award, Cisco Systems, Inc., October 2010

- For the product release - WebEngine for CDS-IS.

Cisco Achievement Program Award, Cisco Systems, Inc., May 2010

- For the product release - CDS-IS.

Cisco Pioneer Award (Honorable Mentioning), Cisco Systems, Inc., August 2009

- For the project titled “Service Node.”

Service Awards

Best Editor Award , Association of Computing Machinery (ACM), October 2020

- For excellent review service as an editor for ACM Transactions on Multimedia Computing, Communications and Applications (TOMM).

Outstanding Service Award, IEEE International Conference on Multimedia and Expo (ICME), July 2019

- For excellent service as the award committee co-chair for 2019 IEEE Conference on Multimedia and Exhibition (ICME'19).

Best Editor Award - Honorable Mentioning, Association of Computing Machinery (ACM), July 2019

- For excellent review service as an editor for ACM Transactions on Multimedia Computing, Communications and Applications (TOMM).

Best Editor Award, IEEE Circuits and Systems Society, December 2018

- For excellent review service as an editor for IEEE Transaction on Circuits and Systems for Video Technology (TCSVT).

MMTC Outstanding Leadership Award, IEEE Communication Society, December 2016

- For effective leadership of IEEE ComSoc MMTC (2014-2016).

Exemplary Editor Award, IEEE Communication Society, June 2016

- For excellent review service as an editor for IEEE Communications Surveys and Tutorials.

Outstanding Service Award, IEEE Computer Society, December 2015

- For serving as the publicity chair for the 7th IEEE International Conference on Cloud Computing Technology and Service (IEEE CloudCom 2015), 30 November to 3 December 2016, Vancouver, Canada.

Awards for Students under Tutelage

Guanyu Gao, PhD, *2018 National Award for Outstanding Self-financed Chinese Students Study Abroad*, China Scholarship Council, December 2018.

Yichao Jin, PhD, *2015 National Award for Outstanding Self-financed Chinese Students Study Abroad*, China Scholarship Council, December 2015.

Mediana Lau, FYP, *LEE Kuan Yew Gold Medal*, NTU Singapore, August 2015.

Weiwen Zhang, PhD, *2014 National Award for Outstanding Self-financed Chinese Students Study Abroad*, China Scholarship Council, December 2014.

Yu Hong, PhD, *2013 DragonVenture-NTU Award*, Dragon Venture , August 2013.

Weizheng Zhang, PhD, *2013 DragonVenture-NTU Award*, Dragon Venture , August 2013.

Yichao Jin, PhD, *2012 DragonVenture-NTU Award*, Dragon Venture , August 2012.

Co-founded Start-ups

- Red Dot Analytics Pte Ltd, 2016
- Cloud Wings Pte Ltd, 2015 - 2018

Granted Patents

4. Data Collection In Data Centers, SG.10201603017R, July 6, 2018
3. Multi-Screen Media Delivery Systems And Methods, PCT-EP, 2 915 054, 15/08/2018
2. Multi-Screen Media Delivery Systems And Methods, PCT-US, 9,813,760B2, 07/11/2017
1. A Method For Managing A Data Center Network, SG.11201601206Y, November 21, 2016

Open-Source Projects¹

11. *ML-Model-CI* - a complete platform for managing, converting, profiling, and deploying models as cloud services (MLaaS).
10. *Baconian* - a user-friendly model-based reinforcement learning framework.
9. *DCwiz* - a data centre operating system based on AI and digital twin.
8. *DeepQoE* - a generalized neural network architecture for QoE prediction.
7. *Hysia* - an optimized platform for multimodality deep video analytics, with pilot application in TV-2-online (T2O).
6. *Yubigo* - a Multi-Screen Cloud Social TV System.
5. *Cloud3DView* - a Human-centric Life-Cycle Management Tool for Green Data Centre.
4. *UniCAP* - a Performance-optimized big-data platform over virtualized infrastructure.
3. *Morph* - a Cloud-based video transcoding management framework.
2. *Graphee* - Big Graph Analytics System.
1. *Ratatouille* - Training Accelerator System for Distributed Machine Learning Framework (i.e., Parameter Server).

Research Grants (*Public Sector*)

- Behavioural Research Office, NRF, PI, *Towards a Deep Reinforcement Learning Approach to Instil Energy-Saving Behavioural Changes for Building Occupants in the Tropical Region*, **S\$597,600.00**, 2018-2020
- EMA Energy Resilience Grant, PI, *FogGrid: Transforming Microgrid Operations via Blockchain and Fog Computing In Singapore*, **S\$2,607,120.00**, 2018-2021
- IMDA Green Data Centre Research (GDCR) Grant, PI, *Toward Joint IT-Thermal Optimization to Improve Energy Efficiency for High-Ambient Temperature Data Centres in the Tropics via Learning-based Algorithms*, **S\$1,191,600.00**, 2016-2019

¹<https://github.com/cap-ntu>

- BCA Green Buildings Innovation Cluster (GBIC) R&D Grant, PI, *Toward Learning-based Thermal Comfort Models to Instil Behavioural Changes for Greener, Smarter and Healthier Buildings in the Tropics Via Pervasive Sensing*, **S\$988,000.00**, 2016-2019
- Singapore NRF - Energy Innovation Research Program (EIRP), PI, *Towards Green Data Center as an Interruptible Load for Grid Stabilization in Singapore*, **S\$1,850,982.00**, 2013-2017
- Singapore MDA - IDM R&D Programme Office (IDMPO), Team PI, *Rapid Rich Object Search (ROSE) Lab*, **S\$1,000,000.00**, 2012-2017
- SMART Innovation Grant, PI, *iClonecast: cloud-based service engine for multi-screen applications*, **S\$250,000.00**, 2014-2016
- MOE Tier-2, PI, *Automatic Video Tagging by Learning from Web Data*, **S\$468,750.00**, 2013-2016
- MOE Tier-1, PI, *Towards Automated Benchmarking System for Machine Learning Model Inference*, **S\$146,500.00**, 2021-2023
- MOE Tier-1, PI, *Towards Multi-view Human Age Estimation for Smart Nation Applications: A Deep-Learning Approach*, **S\$50,000.00**, 2016-2018
- MOE Tier-1, PI, *Towards Big-Data Platform for Social TV Analytics*, **S\$150,000.00**, 2014-2017
- MOE Tier-1, PI, *A Streamlined Security Framework to Defend against Cross-Site Scripting (XSS) Attacks Targeted for New HTML5 APIs*, **S\$195,000.00**, 2012-2015
- Singapore NRF - SRIE, Co-PI, *Altmetrics: Rethinking and Exploring New Ways of Measuring Research Outputs*, **S\$919,000.00**, 2015-2018
- Ministry of National Development (MND) Sino-Singapore Tianjin Eco-City, Co-PI, *Development of An Integrated Decision Support System for Eco City DHCS*, **S\$499,400.00**, 2013-2015

Research Grants (*Private Sector*)

- Sembcorp, PI, *Scalable P2P Power Trading in Smartgrids via Blockchain and Fog Computing*, **S\$72,000.00**, 2018-2019
- Alibaba, PI, *Towards Risk-Aware Impact Analysis via Learning-Based Algorithms and Simulation*, **S\$158,160.00(US\$120,000.00)**, 2018-2019
- Microsoft Research Asia, PI, *Optimizing Quality of Experience (QoE) for Adaptive Bitrate Streaming via Deep Video Analytics*, **S\$42,000.00**, 2018-2019
- Huawei Technologies Co Ltd, PI, *Stream Graph Analytics*, **S\$110,880.00**, 2017-2018
- Cisco Systems Inc., PI, *Cloud -Assisted Task Offloading for Collaborative Applications in Fog Computing*, **US\$50,000.00**, 2013-2016
- Microsoft Research Asia, PI, *Cost-Optimal Mobile Computing in the Cloud*, **US\$35,000.00**, 2012-2014
- Toshiba Asia Pacific Pte Ltd, PI, *Outside Air cooling in modular data centre*, **S\$228,375.00**, 2012-2013

Research Grants (*Internal*)

- NTU ACE Grant, PI, *Towards a Data-Driven, Explainable Framework for AI Start-ups' Due Diligence*, **S\$180,000.00**, 2020-2022
- NTU Internal Funding - CoE, PI, *Hey!Shake : AI-enabled Video-to-Online (V2O) Technology for an Immersive Learning Hub at NTU*, **S\$240,000.00**, 2018-2020
- NTU Internal Grant, PI, *Voice4Baby: Wearable Computing for Early Children Development*, **S\$270,000.00**, 2016-2019
- NTU SUG, PI, *Content Delivery As A Service (CoDaaS): A Case for Cloud-Centric Media Network*, **S\$100,000.00**, 2011-2013
- NTU ACE Grant, Co-PI, *Tracing Early Trading in Singapore Using Geochemical Fingerprints and Artificial Intelligence on Archaeological Artefacts*, **S\$200,000.00**, 2019-2021
- NTU Internal Funding - CoE, Co-PI, *Distributed Sensing and Cyberinfrastructure for Environmental Monitoring and Modelling*, **S\$34,000.00**, 2012-2013
- NTU-Sustainable Earth Project, Co-PI, *Secure Cyberspace Platform for Virtual Sustainable Campus with Real-time Continuum - Phase One*, **S\$90,000.00**, 2011-2013

In-kind Contributions (*Market Value*)

- Toshiba Asia Pacific Pte Ltd, *Modular Data Centre with 270 Servers*, Equipment Donation, S\$2,500,000.00
- Toshiba Asia Pacific Pte Ltd, *CMS (server + software)*, Equipment Donation, S\$150,000.00
- Dell, *Server* (1 unit), Equipment Donation, S\$8,000.00
- Intel, *Intel DCIM Software*, Free License Donation, S\$10,000.00
- Intel, *Intel Galileo Development Board* (40 pieces), Equipment Donation, S\$4,000.00
- Extreme Networks, *10Gbps SDN Switch* (1 unit), Equipment Donation, S\$25,000.00
- Microsoft, *System Centre Software*, Free Software License, S\$25,000.00
- HP, *HP Moonshot platform*, License free donation, S\$100,000.00
- IHPC, A*STAR, *Data Processing Software*, License Free Donation, S\$100,000.00

REFEREED
PUBLICATIONS

Books²

2. Vikram Krishnamurthy, Qing Zhao, Minyi Huang, **Yonggang Wen** (Eds.), *Game Theory for Networks* - Third International ICST Conference, GameNets 2012, Vancouver, BC, Canada, May 24-26, 2012, Revised Selected Papers. Lecture Notes of the Institute for Computer Sciences (LNCS), Social Informatics and Telecommunications Engineering 105, Springer 2012, ISBN 978-3-642-35581-3.
1. Hao Zhang[^], **Yonggang Wen**, Haiyong Xie, and Nenghai Yu, *A Survey on Distributed Hash Table (DHT): Theory, Platforms and Applications*. Springerbriefs in Computer Science, Springer-Verlag New York, Inc., 2013, ISBN 978-1-4614-9007-4.

Book Chapters

²FName LName[^] for students, FName LName* for researchers under supervision

3. Peng Sun[^] and **Yonggang Wen**, “Scalable architectures for Big Data analysis,” *Encyclopedia of Big Data Technologies* (ISBN: 978-3-319-63962-8), edited by Sherif Sakr and Albert Zomaya, Springer, Cham, 2018.
2. Weiwen Zhang[^], **Yonggang Wen** and Kyle Guan, “Towards Energy-Efficient Task Execution in Mobile Cloud Computing,” *Advances in Mobile Cloud Computing Systems*, edited by Richard Yu and Victor C.M. Leung, CRC Press - Taylor & Francis Group, USA, 2015.
1. Han Hu*, **Yonggang Wen**, Tat-Seng Chua and Xuelong Li, “Mining Social Media with SDN-Enabled Big-Data Platform to Transform TV Watching Experience,” *Networking for Big Data*, edited by Shui Yu, Xiaodong Lin, Jelena Masic and Xuemin Shen, CRC Press - Taylor & Francis Group, USA, 2015.

Editorial Articles

13. Prosper Chemouil, Pan Hui, Wolfgang Kellerer, Yong Li, Noura Limam, Rolf Stadler and **Yonggang Wen**, “Guest Editorial: Special Issue on Advances in Artificial Intelligence and Machine Learning for Networking,” *IEEE Journal on Selected Areas in Communications* (JSAC), Vol. 38, No. 10, October 2020, pp.2229-2233.
12. Shuqiang Jiang, Weiqing Min, **Yonggang Wen**, Qingming Huang and Shuicheng Yan, “Editorial: Deep Neural Networks for Emerging Multimedia Computing and Applications,” *Neurocomputing*, In Press, June 2019. [DOI: j.neucom.2019.05.084]
11. Prosper Chemouil, Pan Hui, Wolfgang Kellerer, Yong Li, Rolf Stadler, Dacheng Tao, **Yonggang Wen** and Ying Zhang, “Editorial: Special Issue on Artificial Intelligence and Machine Learning for Networking and Communications,” *IEEE Journal on Selected Areas in Communications* (JSAC), Vol. 37, No. 6, June 2019, pp.1185 - 1191.
10. Qing Yang, Honggang Wang, Mischa Dohler, **Yonggang Wen** and Guoliang Xue, “Guest Editorial: Multimedia Communication in the Internet of Things,” *IEEE Internet of Things Journal* (IoTJ), Vol. 4, No. 2, March 2017, pp.484-486.
9. Zheng Yan, Wei Wang, **Yonggang Wen**, Chonggang Wang and Honggang Wang, “Editorial: Mobile Multimedia Communications,” *Mobile Networks and Applications*, Vol. 22, June 2017, pp.435-437.
8. **Yonggang Wen**, Jacov Chakareski, Pascal Frossard, Di Wu and Wenjun Zeng, “Visual Computing in the Cloud - Mobile Computing [Guest Editorial],” *IEEE Transactions on Circuits and Systems for Video Technologies* (TCSVT), Vol. 27, No. 1, January 2017, pp.1-5.
7. Han Hu, **Yonggang Wen**, Honggang Wang and Ali Begen, “Cloud Mobile Media (Guest Editorial),” *China Communications*, Vol. 13, No. 8, August 2016, pp.iv-vi.
6. Tat-Seng Chua, Xiangjian He, Weifeng Liu, Massimo Piccardi, **Yonggang Wen** and Dacheng Tao, “Big Data Meets Multimedia Analytics,” *Elsevier Signal Processing*, Vol. 124, July 2016, pp.1-4.
5. Wenwu Zhu, **Yonggang Wen** and Zhi Wang, “Networking and Distributed Computing for Big Data: Preface,” *CCF Journal of Computer Science and Technology*, Vol. 30, No. 6, November 2015, pp.1-2.
4. Ming Liu, **Yonggang Wen**, Guihai Chen and Chao Song, “Ubiquitous Sensing: Services and Applications [Guest Editorial],” *International Journal of Distributed Sensor Networks*, November 2013.

3. Victor Leung, **Yonggang Wen**, Min Chen and Chunming Rong, "Mobile Cloud Computing [Guest Editorial]," *IEEE Wireless Communications Magazine*, Vol. 20, No. 3, June 2013, pp.12-13.
2. Changwen Chen, Xiaoqing Zhu, **Yonggang Wen** and Joel P.C. Rodrigues, "Guest Editorial: Cloud-Based Mobile Media - Infrastructure, Services and Applications," *IEEE Transactions on Multimedia* (TMM), Vol. 15, No. 4, June 2013, pp. 721-722.
1. **Yonggang Wen**, "Advances in Network-Adaptive Video Communications (Editorial)," *IEEE MMTC E-Letter*, Vol. 4, No. 10, November, 2009.

High-Impact Articles (**Hot Papers**)

ESI Hot Paper

1. Han Hu*, **Yonggang Wen**, Yue Gao, Tat-Seng Chua and Xuelong Li, "Towards SDN-Enabled Big-Data Platform for Social TV Analytics," *IEEE Network*, Vol. 29, No. 5, September-October 2015, pp.43-49.

ESI Highly Cited Paper

5. Miyuru Dayarathna*, **Yonggang Wen** and Rui Fan, "Data Center Energy Consumption Modeling: A Survey," *IEEE Communications Surveys and Tutorials* (COMST), Vol. 18, No. 1, First Quarter 2016, pp. 732-794.
4. Wenfeng Xia*, **Yonggang Wen**, Chuan Heng Foh, Haiyong Xie and Dusit Niyato, "A Survey on Software-Defined Networking," *IEEE Communication Surveys and Tutorials*(ComST), Vol.17, NO.1, March 2015, pp.27-51.
3. Jun Wu, Zhifeng Zhang, Yu Hong^ and **Yonggang Wen**, "Cloud Radio Access Network (C-RAN): A Primer," *IEEE Network*, Vol. 29, No.1, January-February 2015, pp.35-41.
2. Han Hu*, **Yonggang Wen**, Tat-Seng Chua and Xuelong Li, "Towards Scalable Systems for Big Data Analytics: A Technology Tutorial," *IEEE Access*, Vol. 2, July 2014, pp.652-687.
1. **Yonggang Wen**, Xiaoqing Zhu, Chang Wen Chen and Joel P.C. Rodrigues, "Mobile Cloud Media: Reflections and Outlook (Invited Paper)," *IEEE Transactions on Multimedia* (TMM), Vol. 16, No.4, June 2014, pp. 885-902.

IEEEExplore Top 100 Most Frequently Downloaded Paper

4. Miyuru Dayarathna*, **Yonggang Wen** and Rui Fan, "Data Center Energy Consumption Modeling: A Survey," *IEEE Communications Surveys and Tutorials* (COMST), Vol. 18, No. 1, First Quarter 2016, pp. 732-794.
3. Wenfeng Xia*, **Yonggang Wen**, Chuan Heng Foh, Haiyong Xie and Dusit Niyato, "A Survey on Software-Defined Networking," *IEEE Communication Surveys and Tutorials*(ComST), Vol.17, NO.1, March 2015, pp.27-51.
2. Han Hu*, **Yonggang Wen**, Tat-Seng Chua and Xuelong Li, "Towards Scalable Systems for Big Data Analytics: A Technology Tutorial," *IEEE Access*, Vol. 2, July 2014, pp.652-687.
1. **Yonggang Wen**, Xiaoqing Zhu, Chang Wen Chen and Joel P.C. Rodrigues, "Mobile Cloud Media: Reflections and Outlook (Invited Paper)," *IEEE Transactions on Multimedia* (TMM), Vol. 16, No.4, June 2014, pp. 885-902.

IEEEExplore Transactions Top 50 Most Frequently Downloaded Paper

23. Peng Sun[^], **Yonggang Wen**, Duong Ta and Haiyong Xie, "MetaFlow: a Scalable Metadata Lookup Service for Distributed File Systems in Data Centers", *IEEE Transactions on Transactions on Big Data* (TBD), Vol. 4, No. 2, June 2018, pp.203 - 216.
22. Haifeng Lu, Foh Chuan Heng, **Yonggang Wen** and Jianfei Cai, "Delay-Optimized File Retrieval under LT-Based Cloud Storage," *IEEE Transactions on Cloud Computing* (TCC), Vol.5, No.4, October-December 2017, pp.656-666.
21. Guanyu Gao[^], **Yonggang Wen** and Jianfei Cai, "vCache: Supporting Cost-Efficient Adaptive Bitrate Streaming via NFV-Based Virtual Caching," *IEEE Multimedia*, Vol. 24, No.3, July-September 2017, pp.19-27.
20. Yichao Jin[^] and **Yonggang Wen**, "When Cloud Media Meets Network Function Virtualization: Challenges and Applications," *IEEE Multimedia*, Vol. 24, No. 3, July-September 2017, pp.72-82.
19. Zhenzhen Hu^{*}, **Yonggang Wen**, Jianfeng Wang, Richang Hong, Meng Wang and Shuicheng Yan, "Facial Age Estimation with Age Difference," *IEEE Transactions on Image Processing* (TIP), Vol. 27, No. 7, July 2017, pp.3087-3097.
18. Han Hu^{*}, **Yonggang Wen**, Tat-Seng Chua, Jian Huang, Wenwu Zhu and Xuelong Li, "Towards Joint Content Replication and Request Routing for Social Video Distribution over Cloud CDN: A Community-Clustering Approach," *IEEE Transactions on Circuits and Systems for Video Technology* (TCSVT), Vol. 26, No. 7, July 2016, pp.1320-1333.
17. Yichao Jin[^], **Yonggang Wen** and Kyle C. Guan, "Towards Cost-Efficient Content Placement in Media Cloud: Modeling and Analysis," *IEEE Transactions on Multimedia* (TMM), Vol. 18, No.5, May 2016, pp.807-819.
16. Weiwen Zhang[^], **Yonggang Wen**, Yew Wah Wong, Kok-Chuan Toh and Chiu-Hao Chen, "Towards Joint Optimization over ICT and Cooling Systems in Data Centre: A Survey", *IEEE Communications Surveys and Tutorials* (COMST), Vol. 18, No. 3, Third Quarter, 2016, pp.1596-1616.
15. Miyuru Dayarathna^{*}, **Yonggang Wen** and Rui Fan, "Data Center Energy Consumption Modeling: A Survey," *IEEE Communications Surveys and Tutorials* (COMST), Vol. 18, No. 1, First Quarter 2016, pp. 732-794.
14. Han Hu^{*}, **Yonggang Wen**, Yue Gao, Tat-Seng Chua and Xuelong Li, "Towards SDN-Enabled Big-Data Platform for Social TV Analytics," *IEEE Network*, Vol. 29, No. 5, September-October 2015, pp.43-49.
13. Yanhua Li, Haiyong Xie, **Yonggang Wen**, Chi-Yin Chow and Zhi-Li Zhang, "How Much to Coordinate? Optimizing In-Network Caching in Content-Centric Networks," *IEEE Transactions on Network and Service Management* (TNSM), Vol. 12, No. 3, September 2015, pp.420-434.
12. Zongqing Lu[^], Xiao Sun, **Yonggang Wen**, Guohong Cao and Tom La Porta, "Algorithms and Applications for Community Detection in Weighted Networks," *IEEE Transactions on Parallel and Distributed Systems* (TPDS), Vol.26, No.11, November 2015, pp.2916-2926.
11. Wenfeng Xia^{*}, **Yonggang Wen**, Chuan Heng Foh, Haiyong Xie and Dusit Niyato, "A Survey on Software-Defined Networking," *IEEE Communication Surveys and Tutorials*(ComST), Vol.17, NO.1, March 2015, pp.27-51.
10. Jun Wu, Zhifeng Zhang, Yu Hong[^] and **Yonggang Wen**, "Cloud Radio Access Network (C-RAN): A Primer," *IEEE Network*, Vol. 29, No.1, January-February 2015, pp.35-41.
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119. Duc Van Le, Rui Tan, Yew-Wah Wong and Yonggang Wen, "Real-Time Cooling Power Attribution for Co-located Data Center Rooms with Distinct Temperatures," *the 7th ACM International Conference on Systems for Energy-Efficient Buildings, Cities and Transportation* (BuildSys'20), November 19-20, 2020, Yokohama, Japan.
118. Ruihang Wang[^], Xin Zhou^{*}, Linsen Dong[^], **Yonggang Wen**, Rui Tan, Li Chen, Guan Wang and Feng Zeng, "Kalibre: Knowledge-based Neural Surrogate Model Calibration for Data Center Digital Twins", *the 7th ACM International Conference on Systems for Energy-Efficient Buildings, Cities and Transportation* (BuildSys'20), November 19-20, 2020, Yokohama, Japan.
117. Shikang Gan[^], Yong Luo^{*}, **Yonggang Wen**, Tongliang Liu and Han Hu, "Deep Heterogeneous Multi-Task Metric Learning," *the 28th ACM International Conference on Multimedia* (MM'20), 12-16 October 2020, Seattle, USA.
116. Yangxi Li, Han Hu^{*}, Jin Li, Yong Luo^{*} and **Yonggang Wen** "Semi-supervised Online Multi-Task Metric Learning for Visual Recognition and Retrieval," *the 28th ACM International Conference on Multimedia* (MM'20), 12-16 October 2020, Seattle, USA.
115. Weiming Zhuang[^], **Yonggang Wen**, Xuesen Zhang, Xin Gan, Daiying Yin, Dongzhan Zhou, Shuai Zhang and Shuai Yi, "Performance Optimization of Federated Person Re-identification via Benchmark Analysis," *the 28th ACM International Conference on Multimedia* (MM'20), 12-16 October 2020, Seattle, USA.
114. Huaizheng Zhang[^], Yong Luo^{*}, Qiming Ai^{*}, Han Hu^{*} and **Yonggang Wen**, "Look, Read and Feel: Benchmarking Ads Understanding with Multimodal Multitask Learning," *the 28th ACM International Conference on Multimedia* (MM'20), 12-16 October 2020, Seattle, USA.

113. Yan Bai, Lingyu Duan, Yong Luo*, Shiqi Wang, **Yonggang Wen** and Wen Gao, "Toward Intelligent Visual Sensing and Low-cost Analysis: A Collaborative Computing Approach," *2019 IEEE International Conference on Visual Communications and Image Processing (VCIP'19)*, December 1-4, 2019, Sydney, Australia. [**Best Paper Award**]
112. Yong Luo*, Huaizheng Zhang[^], **Yonggang Wen** and Xinwen Zhang, "ResumeGAN: An Optimized Deep Representation Learning Framework for Talent-Job Fit via Adversarial Learning," *the 28th ACM International Conference on Information and Knowledge Management (CIKM'19)*, November 03-07, 2019, Beijing, China. [**Acceptance Rate: 19.4%**]
111. Duc Van Le, Yingbo Liu, Rongrong Wang, Rui Tan, Yew-Wah Wong and **Yonggang Wen**, "Control of Air Free-Cooled Data Center in the Tropics via Deep Reinforcement Learning," *the 6th ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys'19)*, November 13-14 2019, New York, NY, USA.
110. Weizheng Hu[^], Yong Luo*, Zongqing Lu[^] and **Yonggang Wen**, "Heterogeneous Transfer Learning for Thermal Comfort Modeling," *the 6th ACM International Conference on Systems for Energy-Efficient Built Environments, Cities, and Transportation (BuildSys'19)*, November 13-14 2019, New York, NY, USA.
109. Yongyi Ran*, Han Hu*, Xin Zhou* and **Yonggang Wen**, "DeepEE: Joint Optimization of Job Scheduling and Cooling Control for Data Center Energy Efficiency Using Deep Reinforcement Learning," *2019 International Conference for High Performance Computing, Networking, Storage and Analysis (ICDCS'19)*, November 13-18, 2019, Salt Lake City, Utah. [**Acceptance Rate: 19.6%**]
108. Deliang Yi[^], Xin Zhou*, **Yonggang Wen** and Rui Tan, "Toward Efficient Compute-Intensive Job Allocation for Green Data Centers: A Deep Reinforcement Learning Approach," *2019 International Conference for High Performance Computing, Networking, Storage and Analysis (ICDCS'19)*, November 13-18, 2019, Salt Lake City, Utah. [**Acceptance Rate: 19.6%**]
107. Qiang Fu, Linsen Dong[^], Ziyuan Liu[^], Yong Luo*, **Yonggang Wen**, Ying Li and Lingyu Duan, "Incorporating Category Taxonomy in Deep Reinforcement Learning Based Image Hashing," *2019 IEEE International Conference on Multimedia and Expo (ICME'19)*, July 8-12 2019, Shanghai, China.
106. Fang Liu*, Zhang Wei* and **Yonggang Wen**, "QoE-Driven Mobile Streaming: A Location-aware Approach," *2019 IEEE International Conference on Multimedia and Expo (ICME'19)*, July 8-12 2019, Shanghai, China.
105. Han Hu*, Cheng Zhan, Jianping An and **Yonggang Wen**, "Optimization for HTTP Adaptive Video Streaming in UAV-Enabled Relaying System," *2019 IEEE International Conference on Communications (ICC'19)*, 20-24 May 2019, Shanghai, China.
104. Guanyu Gao[^], Linsen Dong[^], Huaizheng Zhang[^], **Yonggang Wen** and Wenjun Zeng, "Content-Aware Personalised Rate Adaptation for Adaptive Streaming via Deep Video Analysis," *2019 IEEE International Conference on Communications (ICC'19)*, 20-24 May 2019, Shanghai, China.
103. Yong Luo*, Huaizheng Zhang[^], Yongjie Wang*, **Yonggang Wen** and Xinwen Zhang, "ResumeNet: A Learning-based Framework for Automatic Resume Quality Assessment," *2018 IEEE International Conference on Data Mining (ICDM'18)*, November 17-20, 2018, Singapore. [**Best Paper Award Finalist**][**Acceptance Rate: 8.86%**]

102. Huaizheng Zhang[^], Han Hu^{*}, Guangyu Gao^{*}, **Yonggang Wen** and Kyle Guan, “DeepQoE: A Unified Framework for Learning to Predict Video QoE (Oral Presentation),” *2018 IEEE International Conference on Multimedia and Expo (IEEE ICME 2018)*, July 23-27, 2018, San Diego, USA. [Acceptance Rate: 15%][2019 IEEE MMTCC Best Conference Paper Award]
101. Yi Dong[^], Han Hu^{*}, **Yonggang Wen**, Han Yu and Chunyan Miao, “Personalized Emotion-Aware Video Streaming for the Elderly,” *the 20th International Conference on Human-Computer Interaction (HCI International 2018)*, 15-20 July 2018, Las Vegas, NV, USA.
100. Yong Luo^{*}, **Yonggang Wen** and Dacheng Tao, “Online Heterogeneous Transfer Metric Learning,” *the 27th International Conference on Artificial Intelligence (IJCAI 2018)*, July 13-19 2018, Stockholm, Sweden.
99. Peng Sun[^], **Yonggang Wen**, Ta Nguyen Binh Duong and Xiaokui Xiao, “GraphMP: An Efficient Semi-External-Memory Big Graph Analytics System on a Single Machine,” *IEEE 23rd International Conference on Parallel and Distributed Systems (IEEE ICPADS 2017)*, December 15-17, 2007, Shenzhen, China.
98. Peng Sun[^], **Yonggang Wen**, Ta Nguyen Binh Duong and Xiaokui Xiao, “GraphH: High Performance Big Graph Analytics in Small Clusters,” *2017 IEEE International Conference on Cluster Computing (IEEE Cluster 2017)*, September 05-08, 2017, Hawaii, USA. (Acceptance rate: 21.8%)
97. Yong Luo^{*}, **Yonggang Wen**, Tongliang Liu and Daocheng Tao, “General Heterogeneous Transfer Distance Metric Learning via Knowledge Fragments Transfer,” *2017 International Joint Conference on Artificial Intelligence (IJCAI’17)*, August 19-25, 2017, Melbourne, Australia. [Best Paper Award Finalist, TOP 3 out of 2540 submissions]
96. Yong Luo^{*}, Daocheng Tao and **Yonggang Wen**, “Exploiting High-Order Information in Heterogeneous Multi-Task Feature Learning,” *2017 International Joint Conference on Artificial Intelligence (IJCAI’17)*, August 19-25, 2017, Melbourne, Australia.
95. Yanmei Jiao^{*}, Yuanlong Li^{*}, **Yonggang Wen**, Yew Wah Wong, Kok Chuan Toh, Chee Cheng Chua and Wilson Ang, “Thermal Analysis for Underground Data Centres in the Tropics,” *the World Engineers Summit 2017 - Applied Energy Symposium and Forum: Low Carbon Cities and Urban Energy Joint Conference (WES-CUE 2017)*, July 18-21, 2017, Singapore.
94. Yi Dong[^], **Yonggang Wen**, Han Hu, Chunyan Miao and Cyril Leung, “Design Tradeoffs for Cloud-Based Ambient Assisted Living Systems,” *the 2nd International Conference on Crowd Science and Engineering (ICCSE’17)*, July 6-9 2017, Beijing, China.
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- Approach,” *the 3rd IEEE International Conference on Smart Computing (IEEE SMARTCOMP’17)*, 29-31 May, 2017, Hong Kong, China.
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 89. Meng Liu, Chang Xu, Yong Luo^{*}, Dacheng Tao, Chao Xu and **Yonggang Wen**, “Cost-Sensitive Feature Selection via F-measure Optimization Reduction,” *the 31st AAAI Conference on Artificial Intelligence (AAAI-17)*, February 4 - 9, 2017, San Francisco, California, USA.
 88. Peng Sun[^], **Yonggang Wen**, Ta Nguyen Binh Duong and Shengen Yan, “Timed Dataflow: Reducing Communication Overhead for Distributed Machine Learning Systems,” *the 22nd IEEE International Conference on Parallel and Distributed Systems (IEEE ICPADS’16)*, December 13-16, 2016, Wuhan, China.
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 86. Guanyu Gao[^], **Yonggang Wen** and Cedric Westphal, “Dynamic Resource Provisioning with QoS Guarantee for Video Transcoding in Online Video Sharing Service,” *2016 ACM Multimedia Conference (ACM MM’16)*, October 15-19, 2016, Amsterdam, The Netherlands.
 85. Yong Luo^{*}, **Yonggang Wen** and Dacheng Tao, “On Combining Side Information and Unlabeled Data for Heterogeneous Multi-task Metric Learning,” *the 25th International Joint Conference on Artificial Intelligence (IJCAI’16)*, July 9-15, 2016, New York City, New York, USA.
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 81. Yong Luo^{*}, Dacheng Tao, Kotagiri Ramamohanarao, Chao Xu and **Yonggang Wen**, “Tensor Canonical Correlation Analysis for Multi-view Dimension Reduction (Extended abstract),” *the 32nd IEEE International Conference on Data Engineering (IEEE ICDE’16)*, May 16-20, 2016, Helsinki, Finland.
 80. Han Hu^{*}, **Yonggang Wen**, Lei Yin and Ling Qiu, “Towards Cost-Efficient Workload Scheduling For a Tango between Geo-Distributed Data Center and Power Grid,” *2016 IEEE International Conference on Communications (IEEE ICC’16)*, 23-27 May 2016, Kuala Lumpur, Malaysia.

79. Lei Yin[^], Zheng Chen, Ling Qiu and **Yonggang Wen**, “Interference Based Virtual Network Embedding,” *2016 IEEE International Conference on Communications* (IEEE ICC’16), 23-27 May 2016, Kuala Lumpur, Malaysia.
78. Trisha T.C. Lin, **Yonggang Wen** and Yean Jean Thong, “Understanding user experiences of a multiscreen social TV system: A mix-method study,” *2016 Broadcast & Education Association* (BEA), April 17-20 2016, Las Vegas, USA. [1st Place of Top Faculty Paper, Interactive Media & Emerging Technologies Division]
77. Haibo Shi, Yong Luo*, Chao Xu and **Yonggang Wen**, “Manifold Regularized Transfer Distance Metric Learning,” *the 26th British Machine Vision Conference* (BMVC’15), Swansea, UK, 7-10 September, 2015.
76. Haoting Liang[^], Han Hu* and **Yonggang Wen**, “Influence Analysis for Celebrities via Microblog Platform,” *2015 IEEE International Conference on Digital Signal Processing* (IEEE DSP’15), July 21-24, 2015, Singapore.
75. Weizheng Hu[^], Weiwen Zhang*, Han Hu* and **Yonggang Wen**, “Wearable Computing Going Green: Energy-Optimal Data Transmission for Multi-Sensor Wearable Devices,” *the 10th EAI International Conference on Communications and Networking in China* (EAI ChinaCom’15), August 15-17, 2015, Shanghai, China. [Best Paper Award]
74. Guanyu Gao[^], **Yonggang Wen**, Weiwen Zhang* and Han Hu*, “Cost-Efficient and QoS-aware Content Management in Media Cloud: Implementation and Evaluation,” *2015 IEEE International Conference on Communication* (IEEE ICC’15), June 8-12, 2015, London, UK.
73. Weiwen Zhang[^] and **Yonggang Wen**, “Cloud-assisted Collaborative Execution for Mobile Applications with General Task Topology,” *2015 IEEE International Conference on Communication* (IEEE ICC’15), June 8-12, 2015, London, UK.
72. Quang Anh Pham[^], Rui Fan and **Yonggang Wen**, “Reducing Vector I/O for Faster GPU Sparse Matrix-Vector Multiplication,” *the 29th IEEE International Parallel & Distributed Processing Symposium* (IEEE IPDPS’15), May 25-29, 2015, Hyderabad, India.
71. Ming Yang, Jianfei Cai, Weiwen Zhang[^], **Yonggang Wen**, and Chuan Heng Foh, “Adaptive Configuration of Cloud Video Transcoding,” *2015 IEEE International Symposium on Circuits and Systems* (IEEE ISCAS’15), May 24-27, 2015, Lisbon, Portugal.
70. Yichao Jin[^], **Yonggang Wen** and Cedric Westphal, “Towards Joint Resource Allocation and Routing to Optimize Video Distribution over Future Internet,” *IFIP Networking 2015 Conference*, May 20-22, 2015, Toulouse, France. [Student Travel Grant Award]
69. **Yonggang Wen** and Wenwu Zhu, “Fuelling Big-Data Intelligence into Future Multimedia System: Reflection and Outlook (Invited Paper),” *the 1st IEEE International Conference on Multimedia Big Data* (IEEE BigMM’15), April 20-22, 2015, Beijing, China.
68. Meng Liu, Yong Luo*, Dacheng Tao, Chao Xu and **Yonggang Wen**, “Low-Rank Multi-View Learning in Matrix Completion for Multi-Label Image Classification,” *the 29th AAAI Conference on Artificial Intelligence* (AAAI) - Main Technical Track, January 25-29, 2015, Austin, Texas, USA.

67. Rajesh Vellore Arumugam[^], Quanqing Xu, Haixiang Shi, Qingchao Cai and **Yonggang Wen**, “VirtCache: Managing Virtual Disk Performance Variation In Distributed File Systems For The Cloud,” *the 6th IEEE International Conference on Cloud Computing Technology and Science (IEEE CloudCom’14)*, 15-18 December 2014, Singapore.
66. Huazi Zhang*, Yichao Jin[^], Weiwen Zhang[^] and **Yonggang Wen**, “Enhancing User Experience for Multi-Screen Social TV Streaming over Wireless Networks,” *IEEE Globecom 2014 Workshop - Cloud Computing Systems, Networks and Applications*, December 8-12, 2014, Austin, Texas, USA.
65. Quanqing Xu, Rajesh Vellore Arumugam[^], Khai Leong Yong, **Yonggang Wen** and Yew-Soon Ong, “C²: Adaptive Load Balancing for Metadata Server Cluster in Cloud-Scale Storage Systems,” *the 18th Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES 2014)*, 10-12 November, 2014, Singapore.
64. Weiwen Zhang[^] and **Yonggang Wen**, “Energy-Efficient Dispatching Policy for Virus Scanning as a Service under N-Version Protection,” *2014 International Conference on Wireless Communications and Signal Processing (WCSP’14)*, October 23-25, 2014, Hefei, Anhui, China. **[Best Paper Award]**
63. Guanyu Gao[^], Weiwen Zhang[^], **Yonggang Wen**, Zhi Wang, Wenwu Zhu and Yap Peng Tan, “Cost Optimal Video Transcoding in Media Cloud: Insights from User Viewing Pattern (Oral),” *2014 IEEE International Conference on Multimedia and Expo (IEEE ICME’14)*, July 14-18, 2014, Chengdu, Sichuan, China.
62. Han Hu*, **Yonggang Wen**, Tat-Seng Chua, Zhi Wang, Jian Huang, Wenwu Zhu and Di Wu, “Community-Based Effective Social Video Contents Placement in Cloud-Centric CDN Network(Oral),” *2014 IEEE International Conference on Multimedia and Expo (IEEE ICME’14)*, July 14-18, 2014, Chengdu, Sichuan, China.
61. Jonathan Chase, Rakpong Kaewpuang, **Yonggang Wen** and Dusit Niyato, “Joint Virtual Machine and Bandwidth Allocation in Software Defined Network (SDN) and Cloud Computing Environments,” *2014 IEEE International Conference on Communications (IEEE ICC’14)*, 10-14 June, 2014, Sydney, Australia.
60. Zongqing Lu[^], Xiao Sun, **Yonggang Wen** and Guohong Cao, “Skeleton Construction in Mobile Social Networks: Algorithms and Applications,” *2014 IEEE International Conference on Sensing, Communication and Networking (IEEE SECON’14)*, 30 June - 3 July, 2014, Singapore.
59. Zhiming Hu, Yan Qiao, Jun Luo, Peng Sun[^] and **Yonggang Wen**, “CREATE: CoRelation Enhanced traffic matrix Estimation in Data Center Networks,” *2014 IFIP Networking*, June 2-4, 2014, Trondheim, Norway.
58. Yichao Jin[^] and **Yonggang Wen**, “PAINT: Partial In-Network Transcoding for Adaptive Streaming in Information-Centric Network”, *2014 IEEE/ACM International Symposium on Quality of Service (IEEE IWQoS’14)*, May 26-27, 2014, Hong Kong, China.
57. Long Gong[^], **Yonggang Wen**, Zuqing Zhu and Tong Lee, “Toward Profit-Seeking Virtual Network Embedding Algorithm via Global Resource Capacity,” *the 33rd Annual IEEE International Conference on Computer Communications (IEEE Infocom’14)*, April 27-May 2, 2014, Toronto, Canada.
56. Zongqing Lu[^], **Yonggang Wen** and Guohong Cao, “Information Diffusion in Mobile Social Networks: The Speed Perspective,” *the 33rd Annual IEEE International*

- Conference on Computer Communications* (IEEE Infocom'14), April 27-May 2, 2014, Toronto, Canada.
55. Jian He[^], **Yonggang Wen** and Di Wu, "Power-Efficient Collaborative Distribution of Social Videos over Wireless Community Cloud," *IEEE Global Communications Conference, Exhibition & Industry Forum* (IEEE Globecom'13), December 9-13, 2013, Atlanta, GA, USA.
 54. Yichao Jin[^], **Yonggang Wen** and Han Hu, "Minimizing Monetary Cost via Cloud Clone Migration in Multi-Screen Cloud Social TV Systems," *IEEE Global Communications Conference, Exhibition & Industry Forum* (IEEE Globecom'13), December 9-13, 2013, Atlanta, GA, USA. [**Best Paper Award**]
 53. Long Gong[^], **Yonggang Wen**, Zuqing Zhu and Tony Lee, "Revenue-Driven Virtual Network Embedding Based on Global Resource Information," *IEEE Global Communications Conference, Exhibition & Industry Forum* (IEEE Globecom'13), December 9-13, 2013, Atlanta, GA, USA.
 52. Haiyong Xie, Yanhua Li, Jin Wang, Diego Lopez, Tina Tsou and **Yonggang Wen**, "vRGW: Towards Network Function Virtualization Enabled by Software Defined Networking (extended abstract)," *the 21st IEEE International Conference on Network Protocols* (IEEE ICNP'13), October 2013, Gottingen, Germany.
 51. Jayantha Siriwardana, Wong Yew Wah, Toh Kok Chuan and **Yonggang Wen**, "Optimization of Outdoor Air Cooling System for Modular Data Centres," *SB 13 Singapore - Realising Sustainability in the Tropics*, September 9-10, 2013, Singapore.
 50. Hao Zhang[^], **Yonggang Wen**, Honggang Hu and Nenghai Yu, "Toward Optimal Additive Noise Distribution for Privacy Protection in Mobile Statistics Aggregation," *2013 International Workshop on Vehicular Sensor and Ad-Hoc Networks* (co-host with IEEE International Conference on Green Computing and Communication), August 20-23, 2013, Beijing, China.
 49. Hao Zhang[^], **Yonggang Wen**, Nenghai Yu and Xinwen Zhang, "Privacy-Preserving Computation for Location-based Information Survey via Mobile Cloud Computing," *2013 IEEE/CIC International Conference on Communications in China* (IEEE/CIC ICC'13), August 12-14, 2013, Xi'an, China.
 48. Yichao Jin[^], **Yonggang Wen**, Kyle Guan, Dan Kilper and Haiyong Xie, "Toward Monetary Cost Effective Content Placement in Cloud Centric Media Network (Oral)," *2013 IEEE International Conference on Multimedia and Expo* (IEEE ICME'13), July 15-19, San Jose, California, USA. [**Acceptant Rate: 12.7%**]
 47. Yanhua Li, Haiyong Xie, **Yonggang Wen** and Zhi-Li Zhang, "Coordinating In-Network Caching in Content-Oriented Networks: Model and Analysis," *the 33rd International Conference on Distributed Computing Systems* (ICDCS'13), July 8-11, 2013, Philadelphia, USA.
 46. Long Gong[^], Wenwen Zhao, **Yonggang Wen** and Zuqing Zhu, "Dynamic Transparent Virtual Network Embedding over Elastic Optical Infrastructures," *2013 IEEE International Conference on Communications* (IEEE ICC'13), 9-13 June 2013, Budapest, Hungary.
 45. Yichao Jin[^], Xiao Liu*, **Yonggang Wen** and Jianfei Cai, "Inter-Screen Interaction for Session Recognition and Transfer Based on Cloud Centric Media Network," *2013 IEEE International Symposium on Circuits and Systems* (IEEE ISCAS'13), May 19-23, 2013, Beijing, China.

44. Wen Gao, Ling-Yu Duan, Jun Sun, Junsong Yuan, **Yonggang Wen**, Yap-Peng Tan, Jianfei Cai and Alex C. Kot, "Mobile Media Communication, Processing and Analysis: a review of recent advances," *2013 IEEE International Symposium on Circuits and Systems (IEEE ISCAS'13)*, May 19-23, 2013, Beijing, China.
43. Weiwen Zhang[^], **Yonggang Wen** and Dapeng Wu, "Energy-Efficient Scheduling Policy for Collaborative Execution in Mobile Cloud Computing," *the 32th IEEE International Conference on Computer Communications (IEEE Infocom'13)*, April 14-19, 2013, Turin, Italy.
42. Zongqing Lu[^], **Yonggang Wen** and Guohong Cao, "Community Detection in Weighted Networks: Algorithms and Applications," *2013 IEEE International Conference on Pervasive Computing and Communications (IEEE PerCom'13)*, March 18-22, 2013, San Diego, California, USA. [Acceptance Rate: 15%]
41. Ge Zhang[^], **Yonggang Wen** and Yew Soon Ong, "Near-Optimal Packet Allocation Algorithm for Content Uploading to Media Cloud via Collaborative Wireless Network," *2013 International Conference on Computing, Networking and Communications (IEEE ICNC'13)*, January 28-31, 2013, San Diego, USA.
40. Hui Zhao, Haigang Gong, Ke Liu, Ming Liu and **Yonggang Wen**, "IPAD: Intelligent Parking-assisted Ads Dissemination over Urban VANETS," *the 8th International Conference on Mobile Ad-Hoc and Sensor Networks (MSN'12)*, December 14-16, 2012, Chengdu, Sichuan, China.
39. Zongqing Lu[^] and **Yonggang Wen**, "Distributed and Asynchronous Solution to Operator Placement in Large Wireless Sensor Networks," *the 8th International Conference on Mobile Ad-Hoc and Sensor Networks (MSN)*, December 14-16, 2012, Chengdu, Sichuan, China.
38. Chin-Feng Lai, Man Lin, **Yonggang Wen**, Yi-Wei Ma, Jiann-Liang Chen, "Applied Lightweight Parallel Multi-Appliance Recognition on Smart Meter", *the 10th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (IEEE EUC'12)*, December 5-7, 2012, Paphos, Cyprus. [Best Paper Award]
37. Di Wu, Yupeng Zeng, Jian He[^], Yi Liang and **Yonggang Wen**, "On P2P Mechanisms for VM Image Distribution in Cloud Data Centers: Modeling, Analysis and Improvement," *the 4th IEEE International Conference on Cloud Computing Technology and Science (IEEE CloudCom'12)*, December 3-6, 2012, Taipei, Taiwan.
36. Weiwen Zhang[^], **Yonggang Wen**, Zhenzhong Chen and Ashisi Khitsi, "QoE-Driven Cache Management for HTTP Adaptive Bit Rate (ABR) Streaming over Wireless Networks," *2012 IEEE Global Communications Conference (IEEE Globecom'12)*, December 3-7, 2012, California, CA, USA.
35. Yichao Jin[^] and **Yonggang Wen**, "Content Routing and Lookup Schemes using Global Bloom Filter for Content-Delivery-as-a-Service," *2012 IEEE Global Communications Conference (IEEE Globecom'12)*, December 3-7, 2012, California, CA, USA.
34. Shuo Fang, Hui Li, Chuan Heng Foh, **Yonggang Wen** and Khin Mi Mi Aung, "Energy Optimization for Data Center Networks: Formulation and its Solution," *2012 IEEE Global Communications Conference (IEEE Globecom'12)*, December 3-7, 2012, California, CA, USA.
33. Haifeng Lu, Foh Chuan Heng, **Yonggang Wen** and Jianfei Cai, "Optimizing Content Retrieval Delay for LT-based Distributed Cloud Storage Systems," *2012 IEEE Global Communications Conference (IEEE Globecom'12)*, December 3-7, 2012, California, CA, USA.

32. Jian He[^], Xiang Deng, Dan Wu, **Yonggang Wen** and Di Wu, “Socially-Responsible Load Scheduling Algorithms for Sustainable Data Centers over Smart Grid,” *the 3rd IEEE International Conference on Smart Grid Communications* (IEEE SmartGridComm’12), November 5-8, 2012, Taiwan.
31. Zongqing Lu[^] and **Yonggang Wen**, “Credit Routing for Source-Location Privacy Protection in Wireless Sensor Networks,” *the 9th IEEE International Conference on Mobile Ad-Hoc and Sensor Systems* (IEEE MASS’12), October 8-11, 2012, Las Vegas, Nevada, USA.
30. Chao Song, Ming Liu, **Yonggang Wen**, Guihai Chen and Jiannong Cao, “Towards the Traffic Hole Problem in VANETs,” *the 9th ACM international workshop on Vehicular Inter-networking, systems and application*, June 25, 2012, United Kingdom.
29. Ming Yang, **Yonggang Wen**, Jianfei Cai and Foh Chuan Heng, “Energy Minimization via Dynamic Voltage Scaling for Real-Time Video Encoding on Mobile Devices,” *2012 IEEE International Conference on Communications* (IEEE ICC’12), June 10-15, 2012, Ottawa, Canada.
28. Yichao Jin[^], **Yonggang Wen** and Qinghua Chen, “Energy Efficiency and Server Virtualization in Data Centers: An Empirical Investigation,” *the 1st IEEE INFOCOM Workshop on Communications and Control for Sustainable Energy Systems: Green Networking and Smart Grids* (co-host with Infocom’12), March 25-30, 2012, Orlando, Florida, USA.
27. **Yonggang Wen**, Weiwen Zhang[^] and Haiyun Luo, “Energy-Optimal Mobile Application Execution: Taming Resource-Poor Mobile Devices with Cloud Clones,” *the 31st IEEE International Conference on Computer Communications* (IEEE Infocom’12), March 25-30, 2012, Orlando, Florida, USA.
26. Wee Keong Ng, **Yonggang Wen** and Huafei Zhu, “Private Data Deduplication Protocols in Cloud Storage,” *the 27th ACM Symposium on Applied Computing* (ACM SAC’12), March 25-29, 2012, Trento, Italy.
25. Huijun Xiong, Xinwen Zhang, Danfeng Yao, Xiaoxin Wu and **Yonggang Wen**, “Towards End-to-End Secure Content Storage and Delivery with Public Cloud,” *the 2rd ACM Conference on Data and Application Security and Privacy* (ACM CODASPY’12), February 7-9, 2012, San Antonio, Texas, USA.
24. Yichao Jin[^], **Yonggang Wen**, Guangyu Shi, Guoqiang Wang and Athanasios V. Vasilakos, “CoDaaS: An Experimental Cloud-Centric Content Delivery Platform for User-Generated Contents,” *2012 IEEE International Conference on Computing, Networking and Communications* (IEEE ICNC’12), January 30 - February 2, 2012, Maui, Hawaii, USA.
23. Chao Song, Ming Liu, **Yonggang Wen**, Jiannong Cao and Guihai Chen, “Buffer and Switch: an Efficient Road-to-Road Routing Scheme for VANETs,” *the 7th international conference on Mobile ad-hoc and Sensor Network* (MSN’11), 16-18 December 2011, Beijing, China.
22. Ming Yang, Jianfei Cai, **Yonggang Wen** and Chuan Heng Foh, “Complexity-rate-distortion Evaluation of Video Encoding for Cloud Media Computing,” *the 17th IEEE International Conference On Networks* (IEEE ICON’11), December 14-16, 2011, Singapore.
21. **Yonggang Wen**, Ge Zhang[^] and Xiaoqing Zhu, “Lightweight Packet Scheduling Algorithms for Content Uploading from Mobile Devices to Media Cloud,” *the 2nd*

IEEE Workshop on Multimedia Communications & Services (GC'11 Workshop - MCS), December 5-9, 2011, Houston, TX, USA.

20. Ge Zhang[^], **Yonggang Wen**, Jiang Zhu and Qinghua Chen, "On Delay Minimization for File-Based Content Uploading to Media Cloud via Collaborative Wireless Networks (invited paper)," *2011 International Conference on Wireless Communications and Signal Processing* (WCSP'11), 9-11 November 2011, Nanjing, China.
19. Ng Wee Keong, **Yonggang Wen** and Huafei Zhu, "Private Query Processing on Inverted Index," *IEEE 3rd Latin-American Conference on Communications* (IEEE LATINCOM'11), 24-26 October 2011, Belém, Pará, Brazil.
18. Xinwen Zhang, Katharine Chang, Huijun Xiong, **Yonggang Wen**, Guangyu Shi and Guoqiang Wang, "Towards Name-based Trust and Security for Content-centric Network," *the 2rd International Workshop on Security & Trust in the Future Internet*, October 2011, Vancouver, BC Canada.
17. **Yonggang Wen**, Guangyu Shi and Guoqiang Wang, "Designing an Inter-Cloud Messaging Protocol for Content Distribution as a Service (CoDaas) over Future Internet," *the 6th International Conference on Future Internet Technologies 2011* (CFI'11), June 2011, Seoul, Korea.
16. Jun Sun, **Yonggang Wen** and Lizhong Zheng, "On File-based Content Distribution over Wireless Networks via Multiple Paths: Coding and Delay Trade-off," *2011 IEEE Conference on Computer Communication* (IEEE Infocom'11), April 2011, Shanghai, China.
15. Ming Liu, Haigang Gong, **Yonggang Wen**, Guihai Chen and Jiannong Cao, "The Last Minute: Efficient Data Evacuation Strategy for Sensor Networks in Post-Disaster Applications," *2011 IEEE Conference on Computer Communication* (IEEE Infocom/11), April 2011, Shanghai, China.
14. Zuqing Zhu and **Yonggang Wen**, "Architecting Green Broadband Cable Access Network: Energy-Delay Trade-off," *2011 IEEE OFC/NFOEC*, March 2011, Los Angeles, CA, USA.
13. **Yonggang Wen**, and Kevin W. Wilson, "Optical Performance Monitoring via Histogram: A Data-Driven Approach," *the 14th OptoElectronics and Communication Conference* (OECC/09), 2009, Hong Kong, China.
12. **Yonggang Wen**, Vincent W. S. Chan and Eric Swanson, "Cost-efficient Deployment of Transmitters and Receivers for Proactive Fault Diagnosis in All-optical Networks," *2008 IEEE International Conference on Communications* (IEEE ICC'08), May 2008, Beijing, China.
11. Nicholas Harvey, Mihai Patrascu, **Yonggang Wen**, Sergey Yekhanin and Vincent W. S. Chan, "Non-adaptive Fault Diagnosis for All-optical Networks via Combinatorial Group Testing on Graphs," *2007 IEEE Conference on Computer Communications* (IEEE Infocom'07), May 2007, Anchorage, Alaska, USA (student authors are listed in an alphabetic order).
10. C. R. Berger, Shengli Zhou, **Yonggang Wen**, P. Willett, and K. Pattipati, "Optimizing Joint Erasure- and Error-Correction Coding for Wireless Packet Transmissions," *2007 IEEE Communication Theory Workshop* (Poster Session), April, 2007, Sedona, AZ, USA.
9. **Yonggang Wen** and Jun Sun, "On Minimum-Delay Data Block Transport over Two-Connected Mesh Networks," *2007 IEEE Wireless Communication and Networking Conference* (IEEE WCNC'07), March 2007, Hong Kong, China.

8. **Yonggang Wen**, Vincent W. S. Chan, and Lizhong Zheng, "Efficient Fault Detection and Localization for All-optical Networks," *2006 IEEE Global Communications Conference (IEEE GlobeCom'06)*, December 2006, San Francisco, California, USA.
7. **Yonggang Wen**, Vincent W. S. Chan, and Lizhong Zheng, "Efficient Fault Diagnosis Algorithms for All-optical Networks: An Information Theoretical Approach," *2006 IEEE International Symposium on Information Theory (IEEE ISIT'06)*, July 2006, Seattle, Washington, USA.
6. Tracey Ho, Ben Leong, Yu-Han Chang, **Yonggang Wen**, Ralf Koetter, "Network Monitoring in Multicast Networks Using Network Coding," *2005 International Symposium on Information Theory (IEEE ISIT'05)*, September 2005, Adelaide, Australia.
5. **Yonggang Wen**, Vincent W. S. Chan, and Lizhong Zheng, "Efficient Network Diagnosis Algorithms for All-optical Networks with Independent Failures," *the 39th Conference on Information Sciences and Systems (CISS'05)*, March 2005, Johns Hopkins University, Baltimore, Maryland, USA.
4. **Yonggang Wen** and Vincent W. S. Chan, "Ultra-reliable Communication over Unreliable Optical Networks via Lightpath Diversity: Receiver Architecture and Performance," *2004 IEEE International Conference on Communications (IEEE ICC'04)*, June 2004, Paris, France.
3. **Yonggang Wen** and Vincent W. S. Chan, "Ultra-reliable Communication over Unreliable Optical Networks via Lightpath Diversity: System Characterization and Optimization," *2003 IEEE Global Communications Conference (IEEE Globecom'03)*, December 2003, San Francisco, California, USA. [[Travel Grant Award](#)]
2. **Yonggang Wen**, Lian-Kuan Chen and Frank Tong, "Fundamental Limitation and Optimization on Optical Code Conversion for WDM Packet Switching Net," *2001 IEEE Optical Fiber Communication Conference and Exposition (IEEE OFC'01)*, March 2001, Anaheim, California, USA. [[Travel Grant Award](#)]
1. **Yonggang Wen**, Lian-Kuan Chen, Keang-Po Ho, and Frank Tong, "An All-optical Code Converter Scheme for OCDM Routing Networks," *2000 European Conference on Optical Communication (ECOC'00)*, September 2000, Munich, Germany.

Open-Source Competition & Posters & Demos (in reverse chronological order)

10. Jie Li[^], Wei Zhang and **Yonggang Wen**, "An Urban Tropical Thermal Comfort Dataset for Smart Buildings," *the 7th ACM International Conference on Systems for Energy-Efficient Built Environments (BuildSys'20)*, - Posters and Demos, November 19-20, 2020, Yokohama, Japan.
9. Huaizheng Zhang[^], Yuanming Li^{*}, Yizheng Huang^{*}, Kyle Guan, Jiangxiong Yin and **Yonggang Wen**, "The MLModelCI System: Bring Order to Deep Learning Model Management Chaos," *the 28th ACM International Conference on Multimedia (MM'20)*, - Open Source Software Competition, October 12-16 2020, Seattle, USA.
8. Huaizheng Zhang[^], Yuanming Li^{*}, Qiming Ai^{*}, Yong Luo^{*}, Nguyen Binh Duong Ta and **Yonggang Wen**, "Hysia: An Efficient Research Platform for DNN-Based Video-to-Retail Applications," *the 28th ACM International Conference on Multimedia (MM'20)*, - Open Source Software Competition, October 12-16 2020, Seattle, USA.

7. Guanyu Gao[^] and **Yonggang Wen**, “Morph: A Fast and Scalable Cloud Transcoding System,” the *2016 ACM Conference on Multimedia (MM’16)* - Open Source Software Competition, October 15-19, 2016, Amsterdam, The Netherlands.
6. Han Hu*, Yichao Jin[^], **Yonggang Wen**, Tat-Seng Chua and Xuelong Li, “Toward a Bio-Aware Cloud Service Engine for Multi-Screen Video Applications,” *ACM SIGCOMM’14*, Posters and Demos Session, August 17-22, 2014, Chicago, Illinois, USA.
5. Yichao Jin[^], Han Hu*, Xiao Liu[^] and **Yonggang Wen**, “MUTAS: Multi-Screen TV Experience as a Service Through Cloud-Centric Media Network,” *2014 IEEE International Conference on Sensing, Communications and Networking (IEEE SECON’14)*, Demo & Poster Session, 30 June - 3 July 2014, Singapore.
4. Han Hu*, Jian Huang[^], He Zhao[^], **Yonggang Wen**, Chang Wen Chen and Tat-Seng Chua, “Social TV Analytics: a Novel Paradigm to Transform TV Watching Experience,” *2014 ACM Multimedia Systems (ACM MMSys’14)* - Demo Session, 19-21 March 2014, Singapore.
3. Yichao Jin[^], Tian Xie*, **Yonggang Wen** and Haiyong Xie, “Multi-Screen Cloud Social TV: Transforming TV Experience into 21th Century,” *the 21st ACM Multimedia Conference (ACM MM’13)*, October 21-25, 2013, Barcelona, Spain. [**Best Demo Paper Finalist**]
2. Jianxiong Yin*, Peng Sun[^], **Yonggang Wen**, Haigang Gong, Ming Liu, Xuelong Li, Haipeng You, Jinqi Gao and Cynthia Zhao, “Cloud3DView: An Interactive Tool for Cloud Data Center Operations,” Posters and Demos Session, *ACM SIGCOMM’13*, August 12-16, 2013, Hong Kong, China. [**Travel Grant Award**]
1. Xiang Li[^], Tian Xie* and **Yonggang Wen**, “Multi-Screen Social TV over Cloud-Centric Media Platform: Video Presentation Abstract,” Video Program, *the 11th International Conference on Mobile Systems, Applications and Services (ACM MobiSys’13)*, June 25-28, 2013, Taipei, Taiwan.

Work in Progress

2. Yuanlong Li*, Linsen Dong[^], **Yonggang Wen** and Kyle Guan, “Intelligent Trainer for Model-Based Reinforcement Learning,” arXiv:1805.09496v2 [cs.LG].
1. Wuqiong Luo, Wee Peng Tay, Peng Sun and **Yonggang Wen**, “On Distributed Algorithms for Cost-Efficient Data Center Placement in Cloud Computing,” arXiv:1802.01289 [cs.NI].

SELECTED TALKS **Keynote and Plenary Speeches**

9. “DCWiz: Transforming Data Centre Operations and Management via AI,” *2019 Asia Supercomputing Conference*, March 11-14, 2019, Singapore.
8. “Learning to Appreciate: Transforming Multimedia Communications via Deep Video Analytics,” *2019 International Conference on Computing, Networking and Communications (ICNC 2019)*, February 18-21, 2019, Honolulu, Hawaii, USA.
7. “Training Acceleration for Distributed Machine Learning Systems at Scale: a Network-Centric Approach,” *the 16th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2018)*, December 11-13, 2018, Melbourne, Australia.

6. “Learning to Appreciate: Transforming Multimedia Communications via Deep Video Analytics,” *the 1st workshop on Multimedia for Accessible Human Computer Interface*, a joint workshop with ACM MM 2018, October 21-24, 2018, Seoul, Korea.
5. “Blockchain and Its Application to the Energy Internet,” *2018 IEEE Fog World Congress*, October 1-3, 2018, San Francisco, CA, USA.
4. “Learning to Appreciate: Transforming Multimedia Communications via Deep Video Analytics,” 2018 Pacific-Rim Conference on Multimedia (PCM’18), September 21-22, 2018, Hefei, China.
3. “Blockchain and Its Application to the Energy Internet,” *the 6th NTU China Alumni Conference*, September 7-8, 2018, Beijing, China.
2. “Toward Cost-driven Control and Management for Virtualized Content Delivery Networks(vCDN) (Keynote),” *IEEE workshop on Multimedia and the Cloud*, co-located with 2017 IEEE International Conference on Multimedia and Expo, 10-14 July 2017, Hong Kong, China.
1. “Multi-Screen Cloud Social TV: Transforming TV Experience into 21st Century (Keynote),” *Chinese Cloud Computing Conference (CCCC’2013)*, November 2013, Guangzhou, Guangdong, China.

Industry Forums

4. “DCWiz: Transforming Data Centre Operations and Management via AI,” Invited Talk, *DCD - Singapore 2019*, September 17-18, 2019, Singapore.
3. “Plenary Panel: How will AI change the world around us?” *DCD - Zettastructure 2017*, Singapore, September 20-21, 2017.
2. “Expert Panel: The Open Data Center revolution, from OCP to Open19 and beyond,” *DCD - Zettastructure 2017*, Singapore, September 20-21, 2017.
1. “Toward Light-out Data Centre Operations: Insights from AI Revolution,” *the 5th Asia CDN Summit*, April 2017, Beijing, China.

Panel Discussions

3. “ShakeAI: Bridging TV contents with online commencers,” *2017 ChinaMM*, Nanjing, China, September 15-17, 2017
2. “Opportunities and Challenges of Globally Networked Cameras,” *ACM Multimedia 2015*, October 26-30, 2015, Brisbane, Australia. [Peer Panelists: Joanna Batstone (IBM, Australia), Touradj Ebrahimi (EPFL, Switzerland), Tiejun Huang (Peking University, China) and Yung-Hsiang Lu (Purdue University, USA)]
1. “Multi-Screen Social TV to Rebuild Water-Cooler Effect over Digital Life,”” *WKWSCI Symposium on Big Data, Big Ideas for Smarter Communities*, March 21, 2014, Singapore.

Invited Talks

DCWiz: Transforming Data Centre Operations & Management via AI

- YIDU AI, Monthly Seminar, Singapore, August 2019
- Future Facilities, London, UK, May 2019

Training Acceleration for Distributed Machine Learning Systems at Scale: a Network-Centric Approach

- School of Information and Electronics, Beijing Institute of Technology, Beijing, China, November 2018
- CCF ChinaMM 2019, Dalian, China, August 2019

Learning to Appreciate: Transforming Multimedia Communications via Deep Video Analytics

- the first symposium on multimedia networking, Chinese Institute of Electronics, March 24-25, 2018, Chongqing, China.

DeepOps: Transforming Data Centre Operations via Artificial Intelligence

- Alibaba Data Centre Optimization Hackathon, Singapore, August 2018
- Alibaba-NTU Joint Workshop on AI, November 2017

Optimizing Performance for Large-Scale Distributed Machine-Learning Applications: A Swiss-Army-Knife Approach

- Department of Computer Science, Virginia Polytechnic Institute and State University, Falls Church, Virginia, August 2018
- 2018 International Conference of Biomedical Information Preception and Microsystems (ICBIPM 2018), June 13-15, 2018 Chengdu, Sichuan, China
- School of Information Science and Technology, University of Science and Technology of China, Hefei, China, April 2017
- NTU-GIC Joint Workshop on Data Analytics, Singapore, March 2017
- 2016 International Workshop on Mathematical Issues in Information Sciences, Shenzhen, China, December 2016

Towards a Unified Decision-Making Framework for Judicious Mobile App Offloading onto the Cloud: From Theory to Products

- 2017 Fog Computing Workshop, Shanghai, China, April 2017.
- Department of Computer Science, Sichuan University, Chengdu, China, September 2016
- Department of Computer Science, Tsinghua University, Beijing, China, March 2016
- Department of Computer Science, Tongji University, Shanghai, China, March 2016
- Department of Computer Engineering, University of California at Santa Cruz, CA, USA, December 2015
- Department of Electrical and Computer Engineering, University of Massachusetts at Dartmouth, MA, USA, September 2015
- Department of Electrical and Computer Engineering, Northeastern University, Boston, MA, USA, September 2015

Multi-Screen Cloud Social TV: Transforming TV Experience into 21st Century

- Summer School on Cloud Computing, Shenzhen University, Shenzhen, China, July 2015
- College of Telecommunications and Information Engineering, Nanjing University of Posts and Telecommunications, Nanjing, Jiangsu, China, July 2015
- Chinese Network TV, Beijing, China, April 2015
- Microsoft Research Asia, Beijing, China, April 2015
- School of Computer Science, University of Science and Technology of China, Su Zhou, China, March 2015
- *the 289th Young Scientist Forum* on Collaborative Technologies for Multimedia Computing and Communication, China Science Association, Beijing, November 2014
- Department of Information Engineering, The Chinese University of Hong Kong, Hong Kong, China, May 2014

- WKW School of Communication and Information, Nanyang Technological University, October 2013
- School of Digital Media, Sichuan Normal University, October 2013

Big Data Primer: Value Chain, Application and Business Model

- School of Electronic and Electrical Engineering, Shanghai University of Engineering Science, Shanghai, July 2015
- School of Information Management, Jiangxi University of Finance and Economy, Nanchang, Jiangxi, April 2015

Multi-Screen Cloud Social TV: Case in Point for Learning-Based System Prototype and Optimization

- *US-Singapore Workshop on Understanding the World by Analyzing Many Video Streams*, SoC, NUS, Singapore, December 2014

Toward Social Media Driven Optimizations for Wireless Networks and Services

- USTC Symposium on Wireless Big Data, Hefei, China, September 2014

QoE-driven Content Cache Management for ABR and Its Application to Cloud Social TV

- *ADSC Workshop on Immersive Telepresence and Adaptive Streaming*, ASTAR, Singapore, March 18, 2014

Cloud-Centric Media Network (CCMN): Empowering Rich Media Experience with Social Interactive Features

- Huawei R & D Center, Santa Clara, California, December 2012
- Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, Xi'an, Shaanxi, China, April, 2012
- Department of Information Engineering, the Chinese University of Hong Kong, Hong Kong, May 2011
- School of Information Science and Technology, University of Science and Technology of China, Hefei, Anhui, March 2011
- HP Labs, Singapore, June, 2011
- A*STAR, May, 2011

Energy-Optimal Mobile Application Execution: Taming Resource-Poor Mobile Devices with Cloud Clones

- School of Electronic Information and Electrical Engineering, Shanghai Jiaotong University, August 2012
- Department of Engineering Science, National Cheng Kung University, Tainan, Taiwan, August 2012
- Department of Computer Science, Sun Yat-Sen University, August 2012

Delay Minimization Strategies for File-Based Content Distribution over Multi-Path Connection

- School of Computer Science, University of Electronic Science and Technology of China, Chengdu, Sichuan, March 2010
- School of Software Engineering, Sichuan University, Chengdu, Sichuan, March 2010
- School of Software Engineering, Nanchang University, Nanchang, Jiangxi, April 2010

On Delay Minimization for File-Based Content Distribution over Multi-Path Connection: An End-to-End Perspective

- School of Computer Engineering, Nanyang Technological University, September 2009
- Shanghai JiaoTong University-University of Michigan Joint Institute, September 2009
- Deutsche Telecom Research Laboratory, Mountain View, California, July 2009

Cost-effective Fault Diagnosis for All-Optical Networks via Group Testing over Graphs: An Information-theoretic Approach

- AT&T Shannon Research Laboratories, November 2007
- Department of Information Engineering, The Chinese University of Hong Kong, March 2007
- Deutsche Telecom Research Laboratory, Mountain View, California, July 2009
- Sycamore Networks, Inc., March 2006
- *the 11th MIT LIDS Student Conference*, MIT, February 2006

On Cost-Optimized Reliable Communications over All-Optical Networks: Fault Diagnosis and Lightpath Diversity

- Bell Laboratories, January 2007

Ultra-reliable Communication over Vulnerable All-optical Networks via Lightpath Diversity

- The Chinese University of Hong Kong, January 2005
- *the 8th MIT LIDS student conference*, January 2003

Comparison of Several Categories of Optical CDMA En(De)coders

- IEE Hong Kong Association, March 2000

TEACHING
EXPERIENCE

Nanyang Technological University, Singapore

• **Course - Lecturing**

Academic Term	Course	Enrollment	Score
Spring 2017	RE1016: Computational Thinking	60	4.51
Fall 2017	CE3005: Computer Networks	75	4.48
Spring 2016	CE3005: Computer Networks	56	4.59
Fall 2016	CE3005: Computer Networks	74	4.39
Spring 2015	CE3005: Computer Networks	69	4.17
Fall 2015	CE3005: Computer Networks	53	4.41
Spring 2014	CE3005: Computer Networks	129	3.93
Fall 2014	CE3005: Computer Networks	68	4.14
Spring 2013	CE3005: Computer Networks	75	4.11
Fall 2013	CE3005: Computer Networks	31	4.27
Spring 2012	CE3005: Computer Networks	86	3.90
Fall 2012	CPE302: Computer Networks	65	4.08
Spring 2011	CPE421: Mobile & Personal Comm.	42	4.25
Fall 2011	CPE302: Computer Networks	63	3.89

• **Program Development**

- Master Program on Cloud Computing
- Certificate Program on ICT for Financial Industry
- Executive Training Course on Cloud Computing
- Executive Training Course on Big Data
- Executive Training Course on AI

- Executive Training Course on Blockchain

- **Course - Tutorial**

Academic Term	Course	Score
Fall 2017	CE2005: Operating Systems	4.43
Spring 2016	CE3005: Computer Networks	4.67
Fall 2016	CE3005: Computer Networks	4.25
Spring 2015	CE3005: Computer Networks	4.52
Fall 2015	CE3005: Computer Networks	4.67
Spring 2014	CE3005: Computer Networks	4.25
Fall 2014	CE3005: Computer Networks	4.64
Spring 2013	CE3005: Computer Networks	4.66
Fall 2013	CE3005: Computer Networks	4.09
Spring 2012	CE3005: Computer Networks	3.89
Fall 2012	CPE302: Computer Networks	3.89
Spring 2011	CZ1006: Computer Organization & Arch.	3.89
Fall 2011	CPE302: Computer Networks	4.57
Spring 2010	CPE302: Computer Networks	4.49

GRADUATE
SUPERVISION AND
EXAMINATION

Nanyang Technological University, Singapore

- **PhD Thesis Supervision or Co-supervision**

<i>Name</i>	<i>Defence Date</i>	<i>Dissertation Title or Topic</i>
Erdong Chen	-	TBC: Robotic Process Automation
Weiming Zhuang	-	TBC: Federated Machine Learning
Meng Shen	-	TBC: Fog AI
Ruihang Wang	-	TBC: Digital Twin for Enterprise Infrastructure Operations and Management
Sikang Gan	-	TBC: Video Generation
Huaizheng Zhang	-	TBC: Distributed Machine Learning System
Yi Dong	-	Emerging Technologies for Silver Productivity
Weizheng Hu	December 2019	Transforming Thermal Comfort Model and Control in the Tropics: A Machine-Learning Approach
Peng Sun	January 2018	Performance Optimization for Distributed Machine Learning and Graph Processing at Scale over Virtualized Infrastructure
Guanyu Gao	November 2017	Video Transcoding for QoE-aware Adaptive Bitrate Streaming in the Cloud
Pham Nguyen Quang Anh	May 2017	Optimized GPU Algorithms for Sparse Data Problems
Yichao Jin	November 2015	Towards Cost-Driven Control and Management for Cloud-Centric Media Network
Vellore Arumugam Rajesh	November 2015	Performance Enhancements in Large-Scale Storage Systems
Weiwen Zhang	February 2015	Towards Energy Efficient Task Execution in Mobile Cloud Computing

Zongqing Lu	February 2014	Exploring Social Structures for Network Protocol Designs
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• **PhD/Master Thesis Examination**

<i>Name</i>	<i>Graduate Date</i>	<i>Dissertation Title or Topic</i>
Quanyu (HKPolyU)	May 2020	Effective Representation Learning for Graph-Structured Data with Adversarial Learning
Qingye Jiang (USyd)	February 2020	Executing Large-Scale Workloads in Public Clouds
Zhang Cong (SFU)	February 2018	Crowdsourced Livecast Systems: Measurement and Enhancement
Mohammad Y H Abu Alsheikh	April 2017	A Framework for Big Sensor Data Collection and Trading
Swagato Barman Roy	February 2017	Resource Optimization and Interference Management for Multiuser Communication Systems in a Cooperative Environment
Lai Pan	March 2016	New Resource Allocation Algorithms for Emerging Computer Systems
Lei Wei	March 2016	Economical and QoS-aware Resource Allocation for Cloud Computing
Ran Wang	March 2016	Intelligent Microgrid Management and EV Control under Uncertainties in Smart Grid
Shanjiang Tang	March 2015	Optimization Techniques on Job Scheduling and Resource Allocation for MapReduce System
Prasad Gokhale (IIT)	March 2015	Business Models and Technology Solutions to the Telecommunications Industry for Emerging Markets (Case Study - India)
Changbing Chen (Master)	March 2015	Monetary Efficiency in the Dynamic Public Cloud Environments
Renuga Kanagavelu	January 2015	Software-Defined Networks and Virtual Machine Placement for Data Centre Networks
LUA Rui Ping	December 2014	Anti-Fragile Internet With Autonomous Swarm Networks
Diwen Zhu	September 2014	Efficient Query Processing on Large Graphs
Tianyu Xiang (master)	September 2014	Co-Existence of ZigBee and WiFi Networks: Adaptive Frequency-Temporal Co-Existence
Jalaluddin Qureshi	April 2014	Achieving Reliability in Wireless Multicast Network Using Network Coding,
Yifan Li	April 2014	Game-Theoretic Modeling for Resource Allocation in Relay-based Wireless Networks
Kun Zhu	July 2012	Dynamic Games and Applications in Wireless Communication Networks
Zhao Yizhi	October 2012	Adaptive MAC Protocols for Wireless Sensor Networks

• **PhD Confirmation Committee**

<i>Name</i>	<i>Graduate Date</i>	<i>Dissertation Title or Topic</i>
Zeng Zhiwei	January 2018	Explainable and Persuasive AI for Early Risk Analytics of Dementia

Zehui Xiong	August 2017	An Optimal Pricing Framework for Socially-Aware Communication Service Delivery with Network Effects
Lin Xi	August 2017	Effective Methods for Transportation System Improvement through Smart Card and Taxi Trajectory Data
Huang Keke	August 2017	Algorithm Design and Optimization for Influence Maximization
Ran Wang	April 2013	Advance Management and Control Services for Smart Grid
Zhiming Hu	October 2013	Managing Data Traffic in Datacenter Networks
Lua Rui Ping	May 2012	Mitigating DDoS Attacks using Autonomous Swarm Networks
Renuga Kanagavelu	August 2012	Traffic Engineering in Data Center Networks
Lu Haifeng	April 2011	Enhancement of LT Codes and Its Applications
Fan Shizhao	December 2011	Analysis of microwave multiport networks

• **Master Thesis Supervision**

<i>Name</i>	<i>Graduate Date</i>	<i>Dissertation Title or Topic</i>
Jie Li	June 2021 (tbc)	Blockchain-based P2P Energy Trading on Microgrids via Deep Reinforcement Learning
Linsen Dong	June 2020 (tbc)	Model-based Reinforcement Learning and Its Application in Data Center Optimization
Deliang Yi	November 2019	Toward Efficient Compute-Intensive Job Allocation for Green Data Centers: A Deep Reinforcement Learning Approach
Shengsheng Zhou	December 2019	Core Utility Development for Hysia Performance Optimization
Ziyuan Liu	June 2019	Towards Audio-Assist Cognitive Computing: Algorithms and Applications
Weida Xu	June 2016	Data Centre Virtualization and Visualization
Weibin Wu	June 2014	Cloud Social TV - Content Management Systems
Kai Wang	June 2014	3D Models for Data Center Visualization
Weiqi Zheng	June 2014	Cloud Social TV - Technology, Market and Ecosystem
Jingwei Wang	June 2014	Cloud Social TV - Web Portal Design and Implementation
Jinqi Gao	June 2013	Polygon Mesh Modeling in Autodesk 3Ds Max for Data Center Visualization
Jing Tang	June 2013	Insights into Multi-Screen Cloud Social TV

SOCIETY
MEMBERSHIPS

Professional Society

- Fellow (2020 - Present), Institute of Electrical and Electronic Engineering (IEEE)
- Senior Member (2014-2019), Institute of Electrical and Electronic Engineering (IEEE)
- Member (2008 - 2013), Institute of Electrical and Electronic Engineering (IEEE)

- Student Member (2000 - 2007), Institute of Electrical and Electronic Engineering (IEEE)
- Member (2020 - Present), American Association for the Advancement of Science (AAAS)
- Member (2014 - Present), Association for Computing Machinery (ACM)

Honorable Society

- Sigma Xi, the Scientific Research Society

Technical Committee

- Member (2019 - Present), *Technical Committee on Multimedia Computing* (TCMC), IEEE Computer Society (CS)
- Member (2019 - 2021), *Multimedia Systems & Applications Technical Committee* (MSATC), IEEE Circuits and Systems Society (CAS)
- Member (2016 - 2022), *Multimedia Signal Processing Technical Committee* (MMSP), IEEE Signal Processing Society (SPS)
- Member (2012 - Present), *Multimedia Communications Technical Committee* (MMTC), IEEE Communications Society (ComSoc)

PROFESSIONAL SERVICE

Committee Leadership

- *Member of Steering Committee*, IEEE Transactions on Network Science and Engineering (2021 - 2022)
- *Member of Steering Committee*, IEEE Transactions on Multimedia (2019 - 2021, 2014-2016)
- *Secretary*, Singapore Chapter, IEEE Signal Processing Society (2019 - 2019)
- *Board Member*, Technical Services, IEEE Communication Society (2016 - 2017)
- *Chair*, IEEE ComSoc MMTC (2014 - 2016)
- *Member of Steering Committee*, IEEE ICME (2014 - 2016)
- *Member of Steering Committee*, ICST/ACM MOBIMEDIA (2015 - 2016)
- *Vice Chair - Asia*, IEEE ComSoc MMTC (2012 - 2014)
- *SIG Co-Chair*, IEEE ComSoc TSCGSC (2012 - 2014)
- *SIG Co-Chair*, IEEE ComSoc MMTC (2010 - 2012)

Judge Panels

- *Judge Panel Member*, 2019 TR 35 - Asia Pacific, October 2019
- *Judge Panel Member*, 2018 TR 35 - Asia Pacific, October 2018
- *Judge Panel Member*, 2017 Datacentre Dynamics Awards, December 2017
- *Judge Panel Member*, Present Around the World (PATW), IET, March 2017
- *Judge Panel Member*, The Undergraduate Awards, The UA Global Summit(2016)

Journal Editorship

- *Senior Editor*, IEEE Access Journal, 08/2020 - Present
- *Area Editor*, IEEE Internet of Things Journal (IoTJ), 02/2020 - Present
- *Associate Editor*, IEEE Network, 08/2020 - Present
- *Associate Editor*, IEEE Transactions on Big Data (TBD), 06/2018 - Present
- *Associate Editor*, Springer Knowledge and Information Systems (KAIS), 05/2018 - Present
- *Associate Editor*, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), 01/2018 - Present
- *Associate Editor*, IEEE Access Journal, 10/2013 - 07/2020
- *Associate Editor*, IEEE Wireless Communication Magazine (WCM), 02/2015 - 05/2020
- *Area Editor*, IEEE Communications Surveys and Tutorials (ComST), 05/2018 - 04/2020
- *Associate Editor*, IEEE Internet of Things Journal (IoTJ), 01/2016 - 12/2019
- *Associate Editor*, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), 01/2016 - 12/2019
- *Associate Editor*, Elsevier Ad Hoc Networks, 12/2013 - 12/2019
- *Editor*, IEEE Communications Surveys and Tutorials (ComST), 06/2015 - 04/2018
- *Associate Editor*, IEEE Transactions on Signal and Information Processing over Networks (TSIPN), 10/2014 - 12/2018
- *Associate Editor*, IEEE Transactions on Multimedia (TMM), 01/2014 - 12/2018
- *Lead Guest Editor*, China Communications, Special Issue on Mobile Cloud Media (2016)
- *Lead Guest Editor*, IEEE Transactions on Circuits and Systems for Video Technology, Special Issue on Visual Computing in the Cloud - Mobile Computing (2015)
- *Guest Editor*, IEEE Journal on Selected Areas in Communications (JSAC), Special Issue on Advanced in Artificial Intelligence and Machine Learning for Networking (2019)
- *Guest Editor*, IEEE Journal on Selected Areas in Communications (JSAC), Special Issue on Artificial Intelligence and Machine Learning for Networking (2018)
- *Guest Editor*, Elsevier Neurocomputing, Special Issue on Deep Neural Networks for Emerging Multimedia Computing and Applications (2017)
- *Guest Editor*, Journal of Computer Science and Technology, Special Issue on Data-driven Design for Edge Networking and Cloud (2016)
- *Guest Editor*, IEEE Internet of Things Journal, Special Issue on Multimedia communication in the Internet of Things, (2016)
- *Guest Editor*, ACM/Springer Mobile Networks and Applications (MONET), Special Section for MOBIMEDIA 2016 (2016)

- *Guest Editor*, Elsevier Signal Processing, Special Issue on Big Data Meets Multimedia Analysis (2015)
- *Guest Editor*, Journal of Computer Science and Technology, Special Issue on Networking and Distributed Computing for Big Data (2015)
- *Guest Editor*, IEEE Wireless Communications, Special Issue on Mobile Cloud Computing (2013)
- *Guest Editor*, International Journal of Distributed Sensor Network, Special Issue on Ubiquitous Sensing - Services and Applications (2013)
- *Guest Editor*, IEEE Transactions on Multimedia, Special Issue on Cloud Mobile Media (2012)

Conference Organization Committee

- *General Co-Chair*, 2022 IEEE Multimedia Signal Processing Workshop (MMSP'22), July 23-27 2022, Shanghai, China.
- *TPC Co-Chair*, 2021 IEEE International Conference on Multimedia and Expo (IEEE ICME'21), July 23-27 2021, Shenzhen, China.
- *Web and Social Media Chair*, the 28th ACM Multimedia Conference (ACM MM'20), October 12-16 2020, Seattle, USA.
- *Award Committee Co-Chair*, the Fifth IEEE International Conference on Multimedia Big Data (IEEE BiMM'19), September 11-13 2019, Singapore.
- *Award Committee Co-Chair*, 2019 IEEE International Conference on Multimedia and Expo (IEEE ICME'19), July 23-27 2019, Shanghai, China.
- *TPC Area Chair*, the 26th ACM Multimedia Conference (ACM MM'18), October 22-26 2018, Seoul, Korea.
- *Special Session Co-Chair*, 2018 IEEE International Conference on Multimedia and Expo (IEEE ICME'18), July 23-27 2018, San Diego, California, USA.
- *Associate Chair*, 2018 ACM International Conference on Interactive Experiences for Television and Online Video (ACM TVX), June 26-28 2018, Seoul, Korea.
- *TPC Co-Chair*, 2018 International Conference on Quality of Multimedia Experience (QoMEX 2018), June 5-7 2018, Cagliari, Italy.
- *Panel Co-Chair*, 2017 IEEE Global Communications Conference (IEEE Globecom'17), December 4-8 2017, Singapore.
- *TPC Co-Chair*, 2017 IEEE International Conference on Multimedia and Expo (IEEE ICME'17), July 10-14 2017, Hong Kong, China.
- *TPC Area Chair*, the 25th ACM Multimedia Conference (ACM MM'17), October 16-20 2017, San Jose, CA, USA.
- *Publicity Co-Chair*, 2016 IEEE International Symposium on Multimedia (IEEE ISM'16), December 11-13 2016, San Jose, CA, USA.
- *General Co-Chair*, 2016 International Symposium on Information Technology Convergence (ISITC'16), October 13-15 2016, Shanghai, China.
- *TPC Chair*, 2016 International Conference on Cloud Computing Research and Innovation (ICCCR'16), May 4-5 2016, Singapore.

- *Workshop Co-Chair*, the 35th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'16), April 10-15 2016, San Francisco, CA, USA.
- *Area TPC Chair*, the 17th IEEE International Symposium on Multimedia (IEEE ISM'15), December 14-16 2015, Miami, Florida, USA.
- *Publicity Co-Chair*, the 7th IEEE International Conference on Cloud Computing Technology and Science (IEEE CloudCom'15), November 30 - December 3 2015, Vancouver, Canada.
- *Lead TPC Chair*, the 8th International Conference on Mobile Multimedia (MOBIMEDIA'15), May 25-27 2015, Chengdu, Sichuan, China.
- *Track Co-Chair*, 2015 IEEE Vehicular Technology Conference (IEEE VTC'15 - Fall), September 6-9 2015, Boston, MA, USA.
- *TPC Co-Chair*, 2015 International Workshop on Multimedia Cloud Communication (MMCloudCom'15), in conjunction with the 34th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'15), 26 April - 1 May 2015, Hong Kong, China.
- *Workshop Co-Chair*, the 1st IEEE International Conference on Multimedia Big Data (IEEE BigMM'15), April 13-15 2015, Beijing, China.
- *Publicity Co-Chair*, the 7th IEEE International Conference on Cloud Computing Technology and Science (IEEE CloudCom'15), November 30 - December 3 2014, Vancouver, Canada.
- *Symposium TPC Co-Chair*, SAC on Cloud Computing, 2014 IEEE International Conference on Communications (IEEE ICC'14), June 10-14 2014, Sydney, Australia.
- *TPC Co-Chair*, the 9th IEEE International Conference on Networking, Architecture and Storage (IEEE NAS'14) August 6-8 2014, Tianjin, China
- *Publicity Co-Chair*, 2014 International Conference on Selected Topics in Mobile and Wireless Networking (MoWNet'14), September 8-20 2014, Rome, Italy.
- *Area TPC Chair*, 2014 IEEE Visual Communications and Image Processing Conference (IEEE VICP'14), December 7-10 2014, Valletta, Malta.
- *Symposium TPC Chair*, the 2rd IEEE International Conference on Communications in China (IEEE ICC'13), August 12-14 2013, Xi'an, China.
- *Area TPC Chair*, 2013 IEEE Visual Communications and Image Processing Conference (IEEE VCIP'13), November 12-20 2013, Kuching, Sarawak, Malaysia.
- *Area TPC Chair*, 2013 IEEE International Conference on Multimedia and Expo (IEEE ICME'13), July 15-19 2013, San Jose, California, USA.
- *TPC Co-Chair*, the 3rd International Conference on Game Theory for Network (GameNet'12), May 24-26 2012, Vancouver, Canada.
- *TPC Co-Chair*, the 8th International Conference on Mobile Ad-hoc and Sensor Networks (MSN'12), December 14-16 2012, Chengdu, China.
- *Publicity Co-Chair*, the 2012 Pacific-Rim Conference on Multimedia, December 4-7 2012, Singapore.
- *Publicity Co-Chair*, The 20th International Conference on Computer Communication Networks (ICCCN 2011), July 31 - August 4 2011, Maui, Hawaii.

- *Session Co-Chair*, 2010 SPIE Visual Communications and Image Processing - Special Session on Internet Video Content Distribution
- *TPC Co-Chair*, High Speed Network (HSN) Workshop (co-host with INFOCOM 2009)

Membership in Technical Program Committees (in reverse chronological order)

- *Area PC Member*, the 28th ACM International Conference on Multimedia (ACM MM'19), October 12-16, 2020, Seattle, USA.
- *Senior PC Member*, the 29th International Joint Conference on Artificial Intelligence and the 17th Pacific Rim International Conference on Artificial Intelligence (IJCAI-PRICAI2020), July 11-17, 2020, Yokohama, Japan.
- *Area TPC Member*, IEEE International Conference on Multimedia & Expo (ICME'20), July 6-10, 2020, London, United Kingdom.
- *TPC Member*, the 39th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'20), July 6-9, 2020, Toronto, Canada.
- *Senior TPC Member*, The 28th ACM International Conference on Information and Knowledge Management (ACM CIKM'19), November 03-07, 2019, Beijing, China.
- *TPC Member*, the 27th ACM International Conference on Multimedia (ACM MM'19), October 21-25, 2019, Nice, France.
- *TPC Member*, the 38th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'19), April 29 - May 2, 2019, Paris, France.
- *TPC Member*, Packet Video Workshop 2018, June 12 2018, Amsterdam, Netherlands.
- *TPC Member*, ACM Multimedia Systems 2018, June 12-15 2018, Amsterdam, Netherlands.
- *TPC Member*, the 37th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'18), April 15-19, 2018, Honolulu, HI, USA.
- *TPC Member*, the 19th IEEE International Symposium on Multimedia (ISM'17), December 11-13 2017, Taichung, Taiwan.
- *TPC Member*, IEEE 19th International Workshop on Multimedia Signal Processing (MMSP'17), October 16-18 2017, Bedfordshire, UK.
- *TPC Member*, ACM Multimedia Systems 2017, June 20-13 2017, Taipei, Taiwan.
- *TPC Member*, the 6th International Workshop on Energy-Efficient Data Centres (*E²DC'17*), May 16 2017, Hong Kong, China.
- *TPC Member*, the 36th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'17), April 10-15 2017, San Francisco, California, USA.
- *TPC Member*, the 3rd IEEE International Conference on Multimedia Big Data (IEEE BigMM'17), April 19-21 2017, Laguna Hills, California, USA.
- *TPC Member*, ACM Multimedia 2016, October 15-19 2016, Amsterdam, The Netherlands
- *TPC Member*, the 35th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'16), April 10-15 2016, San Francisco, California, USA.
- *TPC Member*, ACM Multimedia 2015, October 26-30 2015, Brisbane, Australia.

- *TPC Member*, the 34th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'15), 26 April - 1 May 2015, Hong Kong, China.
- *TPC Member*, International Conference on Cloud Computing Research and Innovation (ICCCRI 2015), October 28-29 2015, Singapore.
- *TPC Member*, the 33th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'14), April 25 - May 2 2014, Toronto, Canada.
- *TPC Member*, the 9th International Conference on Green, Pervasive and Cloud Computing (GPC'14), May 26-28 2014, Wuhan, China.
- *TPC Member*, the 20th International Packet Video Workshop (PV'13), December 12-13 2013, San Jose, CA, USA.
- *TPC Member*, the 2rd International Workshop on Network Forensics, Security and Privacy (NFSP'13), co-host with ICDCS 2013, July 8 -11 2013, Philadelphia, USA.
- *TPC Member*, the 32th Annual IEEE International Conference on Computer Communications (IEEE INFOCOM'13), April 14-19 2013, Turin, Italy.
- *TPC Member*, 2013 IEEE Wireless Communications and Networking Conference (IEEE WCNC'13), April 07-10 2013, Shanghai, China.
- *Senior TPC Member*, the 11th International Conference on Machine Learning and Applications (ICMLA'12), December 12-15 2012, Boca Raton, Florida, USA.
- *TPC Member*, the 31st Annual IEEE International Conference on Computer Communications, (IEEE INFOCOM'12), March 25-30 2012, Orlando, Florida, USA.
- *TPC Member*, the 10th IEEE/IFIP international conference on Embedded and ubiquitous computing, October 3-5 2012, Paphos, Cyprus.
- *TPC Member*, the 1st International ACM Workshop on "Cloud-Based Multimedia Applications and Services for E-Health," October 29 - November 2 2012, Nara, Japan.
- *TPC Member*, AsiaFI Summer School, August 2012, Kyoto, Japan.
- *TPC Member*, 2012 IEEE International Conference on Communications (IEEE ICC'12), Ottawa, Canada.
- *TPC Member*, 2012 IEEE Global Communications Conference, Exhibition and Industry Forum (IEEE GLOBECOM'12), Anaheim, California, USA.
- *TPC Member*, 2012 IEEE International Conference on Smart Grid Communications, Tainan, Taiwan.
- *TPC Member*, 2012 IEEE International Conference on Communications in China (IEEE ICC'12), Beijing, China
- *TPC Member*, AsiaFI Summer School, August 2011, Daejeon, Korea.
- *TPC Member*, 2011 IEEE International Conference on Communications (IEEE ICC'11), Kyoto, Japan.
- *TPC Member*, 2009 International Conference on Advanced Infocomm Technology (ICAIT).
- *TPC Member*, IEEE Globecom 2009.
- *TPC Member*, 2008 IEEE International Symposium on Advanced Networks and Telecommunication Systems (ANTS).

Technical Reviewership for Referred Journals

- IEEE Journal of Selected Areas in Communications (JSAC)
- IEEE Transactions on Communications
- IEEE Transactions on Networking (TON)
- IEEE Transactions on Mobile Computing (TMC)
- IEEE Transactions on Parallel and Distributed Systems (TPDS)
- IEEE Transactions on Information Theory (IT)
- IEEE Transactions on Wireless Communications
- IEEE/OSA Journal of Lightwave Technology (JLT)
- IEEE Photonic Technology Letters (PTL)
- IEEE Journal of Optical Networks (JON)

REFERENCES

References available upon request