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RESEARCH INTERESTS	Multimedia networking, immersive video, Internet-of-Things (IoT), smart-space, distributed systems, networked games, cloud/fog computing, mobile computing, broadcast/wireless networks, and computer networks	
EXPERIENCE	National Tsing Hua University , Hsin Chu, Taiwan <i>Professor</i> August 2021 to Present <i>Associate Professor</i> August 2014 to July 2021 <i>Assistant Professor</i> August 2011 to July 2014 University of California , Irvine, California, USA <i>Lecturer</i> January 2019 to March 2019 <i>Research Scholar / Visiting Associate Researcher</i> August 2018 to June 2019 <i>Visiting Assistant Researcher</i> July 2013 to September 2013 University of Illinois , Urbana-Champaign, Illinois, USA <i>Visiting Scholar</i> January 2016 to February 2016 Qatar Computing Research Institute , Doha, Qatar <i>Visiting Research Consultant</i> July 2014 to August 2014 Deutsche Telekom, Inc., R&D Lab USA , Los Altos, California, USA <i>Senior Research Scientist</i> December 2009 to July 2011 Simon Fraser University , Burnaby, British Columbia, Canada <i>Research Assistant</i> Spring 2006 to November 2009 <i>Teaching Assistant</i> Fall 2005 to Spring 2006 <i>MITACS Intern</i> Spring 2007 Motorola Inc. , Champaign, Illinois, USA <i>Senior Network Engineer</i> January 2005 to July 2005 Lucent Technologies , Landover, Maryland, USA <i>Member of Technical Staff</i> April 2001 to January 2005	
EDUCATION	Simon Fraser University , Surrey, British Columbia, Canada Ph.D, School of Computing Science, November 2009 <ul style="list-style-type: none">• Advisor: Prof. Mohamed Hefeeda• Thesis: <i>Efficient Mobile Multimedia Streaming</i>	

University of Maryland, College Park, Maryland, USA

M.Eng., Department of Electrical and Computer Engineering, August 2003

National Chung Cheng University, Chia Yi, Taiwan

M.S., Department of Computer Science and Information Engineering, August 2000

- Advisor: Prof. Daniel J. Buehrer
- Thesis: Making Java Applications Run Remotely

B.S., Department of Mathematics, June 1996

JOURNAL AND
MAGAZINE
ARTICLES

- [1] C. Hsu, Y. Li, C. Tsai, J. Wang, and C. Hsu, “Federated learning using multi-modal sensors with heterogeneous privacy sensitivity levels,” *ACM Transactions on Multimedia Computing, Communications, and Applications*, July 2024, Accepted to Appear.
- [2] K. Lee, A. Singla, P. Cesar, and C. Hsu, “Adaptive cloud VR gaming optimized by gamer QoE models,” *ACM Transactions on Multimedia Computing, Communications, and Applications*, July 2024, Accepted to Appear.
- [3] C. Wu, C. Hsu, T. Hung, C. Griwodz, W. Ooi, and C. Hsu, “Quantitative comparison of point cloud compression algorithms with PCC Arena,” *IEEE Transactions on Multimedia*, vol. 25, pp. 3073–3088, 2023.
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PAPERS

- [1] C. Wu, Y. Sun, C. Lee, and C. Hsu, “Optimally planning drone trajectories to capture 3D Gaussian Splatting objects,” in *Proc. of International Conference on Multimedia Modeling (MMM’25)*, Nara, Japan, January 2025.
- [2] C. Wu, C. Lai, N. Venkatasubramanian, and C. Hsu, “A software-defined approach to enabling network controllers for smart environment digital twins,” in *Proc. of IEEE International Conference on Cloud Computing Technology and Science (CloudCom’24)*, Abu Dhabi, UAE, December 2024.
- [3] Y. Li, C. Hsu, J. Wang, C. Tsai, and C. Hsu, “MAFS: Modality-aware federated semi-supervised learning with selective data sharing specified by individual clients,” in *Proc. of ACM Multimedia Asia Conference (MMAAsia’24)*, Auckland, New Zealand, December 2024.
- [4] C. Lai, A. Sarkar, P. Dinh, S. Gaikwad, and C. Hsu, “Urban digital-twin planning for sustainable smart cities: System architecture, preliminary experiments, and open challenges,” in *Proc. of ACM/IFIP (Midd4DT’24)*, Hong Kong, China, December 2024.
- [5] H. Chiang, G. Li, F. Wang, S. Shirmohammadi, and C. Hsu, “Enhancing skeletal pose estimation from mmWave point clouds through uncertainty reduction,” in *Proc. of ACM International Workshop on Human-Centric Multimedia Analysis (HCMA’24)*, Melbourne, Australia, October 2024, pp. 45–53.
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- [8] Y. Wei, Y. Sun, S. Zheng, H. Hsu, C. Huang, and C. Hsu, “Mitigating privacy threats without degrading visual quality of VR applications: Using re-identification attack as a case study,” in *Proc. of IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR’24)*, San Jose, CA, August 2024, pp. 214–220.
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- [15] H. Chiang, Y. Wu, S. Shirmohammadi, and C. Hsu, “Memory-efficient high-accuracy food intake activity recognition with 3D mmWave radar,” in *Proc. of ACM International Workshop on Multimedia Assisted Dietary Management (MADiMa’23)*, Ottawa, Canada, October 2023, pp. 33–41, **Best Paper Award**.
- [16] K. Lee, J. Fang, Y. Sun, and C. Hsu, “Modeling gamer quality-of-experience using a real cloud VR gaming testbed,” in *Proc. of ACM International Workshop on Immersive Mixed and Virtual Environment Systems (MMVE’23)*, Vancouver, Canada, June 2023, pp. 12–17.
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- [21] M. Hefeeda, C. Hsu, and K. Mokhtarian, “pCache: A proxy cache for peer-to-peer traffic,” in *Proc. of ACM SIGCOMM Conference (SIGCOMM’08) Demo Session*, Seattle, WA, August 2008, pp. 539.

PATENTS

- [1] M. Hefeeda and C. Hsu, “System and method for multiplexing of variable bit-rate video streams in mobile video systems,” US Patent Grant, Publication # US9215486 B2, December 2015.
- [2] C. Hsu, S. Shu, K. Nahrstedt, and R. Campbell, “Real-time video coding using graphics rendering contexts,” US Patent Grant, Publication # US8872895 B2, October 2014.
- [3] C. Hsu, N. Freris, J. Singh, and X. Zhu, “Distortion-aware multihomed scalable video streaming to multiple clients,” US Patent Grant, Publication # US 8793391 B2, July 2014.

- [4] C. Hsu, K. Kim, J. Singh, D. Chen, S. Tsai, and B. Girod, “A smartphone-based asset management system,” US Patent Application, Publication # US20120202515 A1, August 2012.

EXTERNAL GRANT
FUNDING

Government Grants, Serving as Principal Investigator

- 2023–2025: “Digital Twin Enabled Smart Cities: Architectural Design, Implementation, and Optimization,” NSTC General Research Project (#112-2221-E-007-090-MY3), NTD 2637k, PI.
- 2022: “Dynamic Point Cloud Compression, Adaptation, and Concealment Under Heterogeneous Streaming Scenarios,” NSTC General Research Project (#111-2221-E-007-060), NTD 740k, PI.
- 2021: “6DoF Edge-Assisted Cloud XR Gaming Platform with Observer Support: Implementation and Optimization,” MOST General Research Project (#110-2221-E-007-102), NTD 754k, PI.
- 2019–2020: “VR Video Streaming Services in 5G edge Computing Architecture,” NTHU Cross-Strait Tsing Hua Collaborative Project, NTD 600k, PI.
- 2018–2020: “Teleporting Through Space Across Time Using Head-Mounted Displays: A Case Study for Real Estate,” MOST General Research Project (#107-2221-E-007-091-MY3), NTD 3657k, PI.
- 2018: “Optimizing Internet-of-Things Analytics Platforms in Smart Spaces Using Multimedia Edge Computing,” MOST Subsidy for Short-Term Research Abroad for Technologists Project (#107-2918-I-007-014), NTD 556k, PI.
- 2017: “Optimal 360 Video Streaming for Social VR Systems,” MOST General Research Project (#106-2221-E-007-101), NTD 737k, PI.
- 2016: “Research on Fog Computing for Next-generation Distributed Multimedia Applications,” MOST General Research Project (#105-2221-E-007-088), NTD 715k, PI.
- 2016: “Network Infrastructure Virtualization and Cloud Platform for Future Mobile Communications,” NTHU Cross-Strait Tsing Hua Collaborative Project, NTD 500k, PI.
- 2013–2015: “An Efficient Crowdsourcing Platform for Multimedia Content Gathering and Sharing,” MOST Excellent Junior Research Investigator Research Project (#102-2221-E-007-062-MY3), NTD 1865k, PI.
- 2011–2012: “An Efficient Multimedia Dissemination Platform for Multihomed Smartphones,” NSC New Staff Research Project (#100-2218-E-007-015-MY2), NTD 1217k, PI.

Industrial Grants, Serving as Principal Investigator

- 2024: “Unmanned Vehicle Communication and Collaborative Management Technology,” Industrial Technology Research Institute, NTD 600k, PI.
- 2023: “Standards for Drone Swarm Collaboration and Management System,” Industrial Technology Research Institute, NTD 600k, PI.
- 2022–2025: “Enabling XR Cloud Gaming in 6G Cellular Networks: Prototype and Optimization,” MediaTek Inc., NTD 4200k, PI.
- 2017–2019: “Managed Internet-of-Things Platforms - Mechanisms and Optimization,” LITE-ON Technology Corporation, NTD 4800k, PI.
- 2017: “CPS Knowledge Base Database,” Industrial Technology Research Institute, NTD 198k, PI.
- 2016: “CPS Knowledge Base Web Service,” Industrial Technology Research Institute, NTD 300k, PI.
- 2016: “Research on 5G Cloud Platform Architecture,” Institute for Information Industry, NTD 1000k, PI.
- 2015–2016: “Improving Wireless Screencast in Conference Rooms,” AWIND Inc./Barco, NTD 750k, PI.

- 2013: “Research on Multi-format Video Codec Library for Embedded Systems,” Industrial Technology Research Institute, NTD 600k, PI.
- 2012: “UPDATE: User-Profile-Driven Dynamic Data Transfer–Theory and Implementation,” HTC Corporation, NTD 1949k, PI.

Government Grants, Serving as Co-Principal Investigator

- 2019–2021: “5G-AIoT Technology and Application Research Center,” MOE Higher Education Sprout Project, NTD 12580k, Co-PI.
- 2018–2019: “Research on Smart Edge Computing, Big Data, and Internet-of-Things: Taking Smart City as a Case Study,” MOE Higher Education Sprout Project, NTD 9000k, Co-PI.
- 2017: “Intelligent Life and Environments: Using Smart Bike as the Platform of Wearable Applications, Research and Promotion,” MOST Integrated Research Project (#106-3011-E-007-001), NTD 3407k, Co-PI.
- 2016–2018: “Alliance of Cloud Technology and Services,” MOST University-Industry Collaboration Project (#107-2622-8-007-004-TE2, 106-2622-8-007-005-TE2, and 105-2622-8-007-005-TE2), NTD 7324k, Co-PI.
- 2015: “Optimization and Resource Management of Cloud Computing Platform for 5G Mobile Communications,” MOST Integrated Research Project (#104-2221-E-007-053), NTD 623k, Co-PI.
- 2015: “An Experimental Cloud Computing Platform for 5G Mobile Communications,” MOST Integrated Research Project (#104-2221-E-002-082), NTD 2236k, Co-PI.
- 2015: “Development of Advanced Manufacturing Technologies for High Value Added Intelligent Coil Leveling and Pressing Machines Through Human-Centered Designs and Mechatronic Integration,” MOST Integrated Research Project (#104-3011-E-007-001), NTD 4996k, Co-PI.
- 2014–2016: “Application Platform for Next Generation Communication and Networking–Development of an Urban Computing Platform,” MOST Integrated Research Project (#103-2218-E-007-021, 104-3115-E-007-004, and 105-2218-E-007-011), NTD 14811k, Co-PI.
- 2014–2016: “Intelligent Life and Environments: Using Smart Bike as the Platform of Wearable Applications,” MOST Integrated Research Project (#103-2218-E-007-015, 104-3115-E-007-001, and 105-2218-E-007-005), NTD 16262k, Co-PI.
- 2014: “SDN-enabled Cloud-based Wireless and Broadband Network Technologies & Services,” MOST University-Industry Collaboration Project (#103-2622-E-009-012), NTD 57000k, Co-PI.

Industrial Grants, Serving as Co-Principal Investigator

- 2022–2023: “Distributed Learning for Edge AI Applications,” Qualcomm Technologies, Inc., NTD 5008k, Co-PI.
- 2020–2021: “Machine Learning on Edge Computing Platforms,” Qualcomm Technologies, Inc., NTD 5595k, Co-PI.
- 2019–2020: “Development for AI Related Edge and Infrastructure,” United Microelectronics Corporation, NTD 990k, Co-PI.
- 2018: “Artificial Intelligence Systems Integration: Edge Computing and Model Reduction,” United Microelectronics Corporation, NTD 234k, Co-PI.

SUPERVISED
THESES

- 2020: “Optimizing Immersive Video Streaming to Head-Mounted Virtual Reality,” Ching-Ling Fan (Ph.D. from 2016)
- 2020: “Social Network-Based Question Answering Systems,” Imad Ali (Co-supervised with Prof. Ronald Y. Chang, Ph.D. from 2014)
- 2018: “Optimal Resource Allocation for Analytics and Multimedia Applications in Cloud-to-Things Continuum Platforms,” Hua-Jun Hong (Ph.D. from 2014)
- 2022: “A Multi-Tenant System for Deploying Deep Neural Networks in a Thing-to-

- Cloud Continuum,” Chia-Ying Hsieh (Master from 2020)
- 2022: “HPFL: Federated Learning by Fusing Multiple Sensor Modalities with Heterogeneous Privacy Sensitivity Levels,” Yuanjie Chen (Master from 2020)
 - 2022: “Enhancing Situational Awareness with Adaptive Firefighting Drones: Leveraging Diverse Media Types and Classifiers,” Tzu-Yi Fan (Master from 2020)
 - 2022: “On Error Concealment of Dynamic 3D Point Cloud Streaming,” Tzu-Kuan Hung (Master from 2020)
 - 2021: “Optimizing Immersive Video Coding Configurations Using Deep Learning Approaches,” Tse-Hou Hung (Master from 2019)
 - 2021: “Quantitative Comparison of Point Cloud Compression Algorithms,” Cheng-Hao Wu (Master from 2019)
 - 2021: “Multi-level Feature-driven Storage Management of Surveillance Videos,” Min-Han Tsai (Master from 2020)
 - 2020: “Image Download and Rate Allocation of Internet-of-Things Analytics at Gateways in Smart Cities,” Yu-Jung Wang (Master from 2017)
 - 2019: “Preemptive Multiplexed HTTP Streaming of 360° Tiled Videos to Head-Mounted Displays,” Shou-Cheng Yen (Master from 2018)
 - 2019: “Capitalizing Light-Field Technology in Head-Mounted Virtual Reality,” Yu-Ming Lai (Master from 2017)
 - 2018: “Modeling Quality-of-Experience of 360° Videos in Head-Mounted Virtual Reality,” Shun-Huai Yao (Master from 2016)
 - 2018: “Dynamic and Salable Deployment of Edge Internet-of-Things Analytics,” Pei-Hsuan Tsai (Master from 2016)
 - 2018: “Edge-Assisted 360-degree Video Streaming for Head-Mounted Virtual Reality,” Wen-Chih Lo (Master from 2016)
 - 2017: “Building a Next-Generation Cloud Gaming Platform with Planar Map Streaming and Distributed Rendering,” Ping-Chun Wang (Master from 2016)
 - 2017: “User Experience of Gamified Mobile Crowdsourcing in Smart Cities,” Aylada Khunvaranont (Master from 2015)
 - 2017: “Traffic-Engineer in Software Defined Networks using Label Switching,” Chen-Nien Mao (Master from 2015)
 - 2017: “Efficient Mobile Crowdsourcing via Gamification for Smart City Applications,” Ying-Yi Chen (Master from 2015)
 - 2016: “Optimizing Live Game Streaming Platforms Using Segment-of-Interests,” Tao-Ya Fan Chiang (Master from 2014)
 - 2016: “Predicting Resource Availability in a Multimedia Fog Computing Platform,” Yi-Ying Huang (Master from 2014)
 - 2016: “A Load-Balanced Video Multicast Routing System in Software-Defined Networks,” Meng-Wei Lee (Master from 2013)
 - 2015: “Placing Virtual Machines to Optimize Cloud Gaming Experience,” Hua-Jung Hong (Master from 2013)
 - 2015: “Turning Mininet/Open vSwitch into A Detailed OpenFlow Emulator,” Yi-Jun Cheng (Master from 2013)
 - 2015: “Distribution of News Videos to Mobile Devices over Challenged Networks,” Shu-Ting Wang (Master from 2013)
 - 2015: “Detour Planning Problem on Mobile Crowdsensing Systems,” Chen-Chieh Liao (Master from 2012)
 - 2015: “MPEG-DASH Standard with SVC Video Streaming on Android Mobile Devices,” Chien-Chang Chen (Master from 2012)
 - 2014: “Optimizing Mobile Middleware for Coordinated Sensor Activations,” Ting-Fang Hou (Master from 2012)
 - 2014: “Mobile Cloud Offloading on Crowdsensing Platform,” Ting-Yi Lin (Master from 2012)
 - 2013: “A Resource-Constrained Asymmetric Redundancy Elimination Algorithm,”

Yu-Sian Li (Master from 2011)

- 2013: “Reducing Training Overhead of Large Time-Scale Transfer Scheduling for Mobile Devices,” Ting-An Lin (Master from 2011)

SUPERVISED
NSTC
UNDERGRADUATE
PROJECTS

- 2023: “On Privacy Preservation of Head-Mounted Display Users in Virtual Worlds,” Shin-Yi Zheng
- 2023: “First Look at Digital Twin Enabled Smart Wind Turbines for Green Electricity,” Cheng-Chia Lai
- 2022: “Optimal Camera Placement for 6 Degree-of-Freedom Multicast of 3D Scenes,” Yuan-Chun Sun
- 2020: “On Quality-of-Experience Measurements of Extended Reality (XR) Games,” Chia-Hsin Hsu
- 2020: “On Latency Reduction of XR Cloud Gaming Platforms,” Yen-Chun Li
- 2020: “Porting a Cloud Gaming System to Support XR Games with Head-Mounted Displays,” Yu-Chun Lin
- 2019: “Distributed Brokers in Internet-of-Thing Zones: Mechanism and Optimization,” Chia-Ying Hsieh
- 2018: “Streaming Scalable Video Sequences with Media-aware Network Elements,” Chao-Wen Chen
- 2018: “Joint Tile Selection and Rate Allocation for Foveated 360 Video Streaming to Eye-tracking HMD,” Yu-Tung Pai
- 2017: “Context-aware Resource Prediction of Crowdsourced Computers for Animation Rendering,” Jo-Chi Chuang
- 2016: “Cloud Game Streaming Platform to Glass-free 3D Displays,” Hsin-Yu Chang
- 2015: “Building an Efficient Software Defined Network Emulator,” Cheng-Lin Li
- 2014: “Optimizing the Encoding Bitrate of an Open-source VoIP Implementation,” Wei-Wei Tseng
- 2013: “On Prediction Algorithms for Social Media Sharing Using Mobile Devices,” Chen-Chung Hsu

SELECTED THESIS
SERVICE

- Opponent for Gazi Illahi, Ph.D., Aalto University, June 2024
- Pre-Examiner for Gazi Illahi, Ph.D., Aalto University, October 2023
- Reviewer for Jesus Aguilar Armijo, Ph.D., Klagenfurt University, April 2023
- Examiner for Branislav Jenco, Master, University of Oslo, June 2022
- Reviewer for Ashutosh Singla, Ph.D., Ilmenau University of Technology, November 2021
- Examiner for Henry Haugsteen Hansen, Master, University of Oslo, July 2020
- Examiner for Praveen Kumar Yadav, Ph.D., National University of Singapore, July 2020
- External Pre-examiner for Teemu Kamarainen, Ph.D., Aalto University, November 2019
- Opponent for Francisco Javier Velazquez-García, Ph.D., University of Oslo, May 2019
- Opponent for Kristoffer Robin Stokke, Ph.D., University of Oslo, February 2017
- Examiner for Atle Nordland, Master, University of Oslo, September 2016
- Committee Member for Chien-Nan Chen, Ph.D., University of Illinois Urbana-Champaign, September 2015
- Examiner for Warren Harrop, Ph.D., Swinburne University of Technology, February 2014
- Examiner for Ben Tomlin, Master, University of Oslo, December 2013
- Committee Member for Yichuan Wang, Ph.D., University of California Davis, March

COMMUNITY
SERVICE

- Associate Editor, ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM), January 2014 to Present
- Associate Editor, IEEE Technical Committee on Multimedia Communications (MMTC) E-Letter, October 2012 to October 2014
- Guest Editor, IEEE MultiMedia, Special Issue on Recent Advances in Immersive Multimedia, October 2022
- Guest Editor, MDPI Sensors, Special Issue on Communication in Networks of Unmanned Aerial Vehicles (UAVs), June 2020
- Guest Editor, ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM), Special Issue on Delay-Sensitive Video Computing in the Cloud, April/May 2018
- Guest Editor, ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM), Special Section on MMSys/NOSSDAV 2017 Best Papers, April/May 2018
- Key Member, IEEE Technical Committee on Multimedia Communications (MMTC) Multimedia Cloud Computing Interest Group (MCCIG), May 2015 to April 2020
- Committee Member, ACM Special Interest Group on Multimedia (SIGMM) History Preservation Committee, January 2010 to January 2014
- Committee Member, IEEE Technical Committee on Multimedia Communications (MMTC) Review Board Committee, August 2010 to July 2012
- Advanced Seminar/Tutorial Co-chair, IEEE International Conference on Mobile Data Management (MDM'25), June 2025
- Mentoring Co-chair, ACM SIGMM Conference on Multimedia Systems (MMSys'25), March 2025
- Tutorial Co-chair, IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR'24), August 2024
- Publication Co-chair, IEEE International Conference on Smart Computing (SMARTCOMP'24), June 2024
- Keynote/DEP Co-chair, IEEE/IFIP Network Operations and Management Symposium (NOMS'24), May 2024
- Distinguished Experts Panel (DEP) Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'23), September 2023
- Grand Challenge Chair, ACM SIGMM Conference on Multimedia Systems (MMSys'23), June 2023
- Publication Co-chair, IEEE International Conference on Smart Computing (SMARTCOMP'23), June 2023
- Workshop Co-Chair, IEEE International Conference on Multimedia Big Data (BigMM'22), December 2022
- Distinguished Experts Panel (DEP) Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'22), September 2022
- Publication Co-chair, IEEE International Conference on Smart Computing (SMARTCOMP'22), June 2022
- Workshop Co-Chair, IEEE International Conference on Multimedia Big Data (BigMM'21), November 2021
- Publicity Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'21), September 2021
- Publication Co-chair, IEEE International Conference on Smart Computing (SMARTCOMP'21), July 2021
- General Co-chair, ACM SIGMM Conference on Multimedia Systems (MMSys'21), June 2021
- Publicity Co-chair, IEEE Asia-Pacific Network Operations and Management Sym-

- posium (APNOMS'20), September 2020
- Demonstration Co-chair, IEEE International Conference on Multimedia Big Data (BigMM'19), September 2019
- Publicity Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'19), September 2019
- Publicity Co-chair, ACM SIGMM Conference on Multimedia Systems (MMSys'18), June 2018
- Poster Co-chair, IEEE/IFIP Network Operations and Management Symposium (NOMS'18), April 2018
- Area Co-chair, Mobile and Wearable Multimedia, ACM International Conference on Multimedia (Multimedia'17), October 2017
- Technical Program Co-chair, ACM SIGMM Conference on Multimedia Systems (MMSys'17), June 2017
- Poster Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'17), September 2017
- Poster Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'16), October 2016
- Track Co-chair, Mobile Computing and Social Media Track, IEEE International Conference on Embedded and Ubiquitous Computing (EUC'15), October 2015
- Poster Co-chair, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'15), August 2015
- Proceedings Chair, ACM SIGMM Conference on Multimedia Systems (MMSys'15), March 2015
- Publicity Chair, IEEE International Conference on Parallel and Distributed Systems (ICPADS'14), December 2014
- Symposium Co-chair, Internet Services and Applications Symposium, IEEE International Conference on Computing, Networking and Communications (ICNC'14), February 2014
- Local Arrangement Chair, Workshop on Wireless, Ad Hoc and Sensor Networks (WASN'13), August 2013
- Technical Program Co-chair, ACM Workshop on Mobile Video (MoVid'13), February 2013
- Technical Program Co-chair, ACM Workshop on Mobile Video (MoVid'12), February 2012
- Proceedings and Web Chair, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'10), June 2010
- Technical Program Committee Member, International Conference on Multimedia Modeling (MMM'25), January 2025
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'24), October 2024
- Technical Program Committee Member, IEEE International Workshop on Surpassing Latency Limits in Adaptive Live Video Streaming (LIVES'24), July 2024
- Technical Program Committee Member, IEEE International Workshop on Ultra Low-Latency and Robust Multimedia Delivery (ULRMD'24), July 2024
- Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'24), July 2024
- Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'24), June 2024
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'24), April 2024
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'23), OSS Track, October 2023
- Technical Program Committee Member, ACM International Conference on Multi-

- media (Multimedia'23), October 2023
- Technical Program Committee Member, IEEE International Conference on Network Protocols (ICNP'23), October 2023
 - Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'23), June 2023
 - Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'23), June 2023
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'22), October 2022
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'22)–Doctoral Symposium, October 2022
 - Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'22), July 2022
 - Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'22), June 2022
 - Technical Program Committee Member, IEEE/IFIP Network Operations and Management Symposium (NOMS'22), April 2022
 - Technical Program Committee Member, IEEE International Workshop on Building the Foundations of the Metaverse (METABUILD'22), March 2022
 - Technical Program Committee Member, IEEE Global Communications Conference–Communication & Information Systems Security (GLOBECOM–CISS'21), December 2021
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'21), October 2021
 - Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'21), July 2021
 - Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'21), June 2021
 - Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking and Internet Symposium (ICC–NGNI'21), June 2021
 - Technical Program Committee Member, IFIP/IEEE International Symposium on Integrated Network Management (IM'21), May 2021
 - Technical Program Committee Member, International World Wide Web Conference (WWW'21), April 2021
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'20), October 2020
 - Technical Program Committee Member, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'20), September 2020
 - Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'20), July 2020
 - Technical Program Committee Member, ACM International Packet Video Workshop (PV'20), June 2020
 - Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'20), June 2020
 - Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking and Internet Symposium (ICC–NGNI'20), June 2020
 - Technical Program Committee Member, IEEE/IFIP Network Operations and Management Symposium (NOMS'20), April 2020
 - Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'20), February 2020

- Technical Program Committee Member, ACM International Workshop on Technology Enablers and Innovative Applications for Smart Cities (TESCA'19), November 2019
- Technical Program Committee Member, IEEE International Conference on Big Data Intelligence and Computing (DataCom'19), November 2019
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'19), October 2019
- Technical Program Committee Member, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'19), September 2019
- Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'19), July 2019
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'19), June 2019
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'19) Demo Session, June 2019
- Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking and Internet Symposium (ICC–NGNI'19), May 2019
- Technical Program Committee Member, International World Wide Web Conference (WWW'19), May 2019
- Technical Program Committee Member, IFIP/IEEE International Symposium on Integrated Network Management (IM'19), April 2019
- Technical Program Committee Member, IEEE International Workshop on Context-Awareness for Multi-Device Pervasive and Mobile Computing (PerCrowd'19), March 2019
- Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'19), February 2019
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'18), October 2018
- Technical Program Committee Member, IEEE Approaches, Analyses, and Performance Issues in Virtualized Environments and Software Defined Networking (PVE-SDN'18), June 2018
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'18) Demo Session, June 2018
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'18), June 2018
- Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking and Internet Symposium (ICC–NGNI'18), May 2018
- Technical Program Committee Member, IEEE/IFIP Network Operations and Management Symposium (NOMS'18), April 2018
- Technical Program Committee Member, International Workshop on Interactive and Spatial Computing (IWISC'18), April 2018
- Technical Program Committee Member, IEEE International Conference on Multimedia Information Processing and Retrieval (MIPR'18), April 2018
- Technical Program Committee Member, International World Wide Web Conference (WWW'18), April 2018
- Technical Program Committee Member, IEEE International Conference on Cloud Engineering (IC2E'18), April 2018
- Technical Program Committee Member, IEEE International Workshop on Pervasive Systems Integration (PerSysT'18), March 2018
- Technical Program Committee Member, IEEE International Workshop on Context-Awareness for Multi-Device Pervasive and Mobile Computing (PerCrowd'18), March 2018

- Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'18), March 2018
- Technical Program Committee Member, IEEE International Symposium on Multimedia (ISM'17), December 2017
- Technical Program Committee Member, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'17), September 2017
- Technical Program Committee Member, IEEE International Conference on Computer Communications and Networks (ICCCN'17), July 2017
- Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking and Internet Symposium (ICC–NGNI'17), May 2017
- Technical Program Committee Member, IEEE International Conference on Cloud Engineering (IC2E'17), April 2017
- Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'17), January 2017
- Technical Program Committee Member, IEEE International Symposium on Multimedia (ISM'16), December 2016
- Technical Program Committee Member, ACM/IFIP/USENIX International Middleware Conference (Middleware'16), December 2016
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'16), October 2016
- Technical Program Committee Member, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'16), October 2016
- Technical Program Committee Member, ACM Workshop on Micro Aerial Vehicle Networks, Systems, and Applications for Civilian Use (DroNet'16), May 2016
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'16), Special Session on Media Synchronization, May 2016
- Technical Program Committee Member, ACM Workshop on Mobile Video (MoVid'16), May 2016
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'16), May 2016
- Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking Symposium (ICC–NGN'16), May 2016
- Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'16), February 2016
- Technical Program Committee Member, IEEE Global Conference on Signal and Information Processing (GlobalSIP'15), December 2015
- Technical Program Committee Member, ACM/IFIP/USENIX International Middleware Conference (Middleware'15), December 2015
- Technical Program Committee Member, IEEE/ACM Workshop on Network and Systems Support for Games (NetGames'15), December 2015
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'15), October 2015
- Technical Program Committee Member, IEEE Asia-Pacific Network Operations and Management Symposium (APNOMS'15), August 2015
- Technical Program Committee Member, IEEE International Conference on Computer Communications and Networks (ICCCN'15), August 2015
- Technical Program Committee Member, IEEE International Conference on Distributed Computing Systems (ICDCS'15), June 2015
- Technical Program Committee Member, IEEE International Conference on Communications–Next Generation Networking Symposium (ICC–NGN'15), June 2015
- Technical Program Committee Member, ACM Workshop on Micro Aerial Vehicle

- Networks, Systems, and Applications for Civilian Use (DroNet'15), May 2015
- Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'15) Dataset Track, March 2015
 - Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'15), March 2015
 - Technical Program Committee Member, ACM Workshop on Mobile Video (MoVid'15), March 2015
 - Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'15), February 2015
 - Technical Program Committee Member, IEEE International Conference on Parallel and Distributed Systems (ICPADS'14), December 2014
 - Technical Program Committee Member, IEEE/ACM Workshop on Network and Systems Support for Games (NetGames'14), December 2014
 - Technical Program Committee Member, Workshop on Information Technology Innovation, Industrial Application and Internet of Things (ITIIAIT'14), December 2014
 - Technical Program Committee Member, IEEE Global Communications Conference–Communications Software, Services and Multimedia Symposium (GLOBECOM–CSSM'14), December 2014
 - Technical Program Committee Member, IEEE Global Communications Conference–Wireless Networking Symposium (GLOBECOM–WN'14), December 2014
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'14), November 2014
 - Technical Program Committee Member, International Conference on High-Performance Compilation, Computing, and Communications (HP3C'14), September 2014
 - Technical Program Committee Member, ACM SIGMM Conference on Multimedia Systems (MMSys'14), March 2014
 - Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'14), March 2014
 - Technical Program Committee Member, ACM Workshop on Mobile Video (MoVid'14), March 2014
 - Technical Program Committee Member, IEEE International Conference on Communications–Mobile and Wireless Networking Symposium (ICC–MWN'14), June 2014
 - Technical Program Committee Member, IEEE Global Communications Conference–Communications Software, Services and Multimedia Symposium (GLOBECOM–CSSM'13), December 2013
 - Technical Program Committee Member, IEEE Global Communications Conference–Wireless Networking Symposium (GLOBECOM–WN'13), December 2013
 - Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'13), October 2013
 - Technical Program Committee Member, IEEE International Conference on Distributed Computing Systems (ICDCS'13), July 2013
 - Technical Program Committee Member, IEEE International Symposium on Consumer Electronics (ISCE'13), June 2013
 - Technical Program Committee Member, IEEE International Conference on Advanced Information Networking and Applications (AINA'13), March 2013
 - Technical Program Committee Member, IEEE International Conference and Workshops on Cloud Computing Technology and Science–Industrial Applications (Cloud-Com'12), December 2012
 - Technical Program Committee Member, IEEE Workshop on Quality of Experience for Multimedia Communications (QoEMC'12), December 2012

- Technical Program Committee Member, IEEE International Conference on Parallel and Distributed Systems (ICPADS'12), December 2012
- Technical Program Committee Member, IEEE Global Communications Conference–Communications Software, Services and Multimedia Symposium (GLOBECOM–CSSM'12), December 2012
- Technical Program Committee Member, IEEE Global Communications Conference–Wireless Networking Symposium (GLOBECOM–WN'12), December 2012
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'12), October 2012
- Technical Program Committee Member, International Conference on Computing, Networking, and Communications (ICNC'12), January 2012
- Technical Program Committee Member, IEEE International Conference on Parallel and Distributed Systems (ICPADS'11), December 2011
- Technical Program Committee Member, IEEE Global Communications Conference–Wireless Communications Symposium (GLOBECOM–WN'11), December 2011
- Technical Program Committee Member, IEEE International Conference on Computer Engineering and Systems (ICCES'11), November 2011
- Technical Program Committee Member, ACM International Conference on Multimedia (Multimedia'11), November 2011
- Technical Program Committee Member, International Conference on Embedded and Multimedia Computing (EMC'11), August 2011
- Technical Program Committee Member, IEEE International Conference on Multimedia and Expo (ICME'11), July 2011
- Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'11), June 2011
- Technical Program Committee Member, International ICST Conference on MOBILE Wireless MiddleWARE, Operating Systems, and Applications (MobilWare'11), June 2011
- Technical Program Committee Member, ACM Workshop on Mobile Video Delivery (MoViD'10), October 2010
- Technical Program Committee Member, International Conference on Embedded and Multimedia Computing (EMC'10), August 2010
- Technical Program Committee Member, ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV'10), June 2010

AWARDS

IEEE, ACM, and Other Institutes

- Best Paper Award, ACM SIGCOMM Workshop on Emerging Multimedia Systems (EMS'24), August 2024
- Best Paper Award, ACM International Workshop on Multimedia Assisted Dietary Management (MADiMa'23), October 2023
- Honorable Mention Associate Editor, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), October 2021
- Best of the Best Program Committee Member, International World Wide Web Conference (WWW'21), April 2021
- AMiner Scholar's AI 2000 Most Influential Scholar Honorable Mention in Multimedia, April 2021
- Best Emergent Reviewer Award, ACM International Conference on Multimedia (Multimedia'20), October 2020
- Best Paper Award, IEEE International Conference on Smart Computing (SMART-COMP'20), September 2020
- Outstanding Reviewer Award, IEEE International Conference on Multimedia and

- Expo (ICME'20), July 2020
- Best Reviewer Award, IEEE/IFIP Network Operations and Management Symposium (NOMS'20), April 2020
- Best Paper Award, IEEE International Conference on Cloud Computing Technology and Science (CloudCom'17), December 2017
- Best Paper Award, Asia-Pacific Network Operations and Management Symposium (APNOMS'16), October 2016
- Best Associate Editor, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), September 2016
- IEEE Senior Member, the IEEE, from July 2016
- Invited Presenter, Multimedia Rising Stars, ACM International Conference on Multimedia (Multimedia'15), October 2015
- TAOS Best Paper Award, IEEE Global Communications Conference (GLOBECOM'12), December 2012
- Best Paper Award, IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS'12), April 2012
- Quality Reviewers Award, IEEE International Conference on Multimedia and Expo (ICME'11), July 2011
- Best Paper Award, IEEE International Conference on Innovations in Information Technology (Innovations'08), December 2008
- Best Demo Award, ACM International Conference on Multimedia (Multimedia'08), October 2008

Foundations for the Advancement of Outstanding Scholarship (FAOS)

- Outstanding Scholar Awards (for Retaining Domestic Scholars), 2018 to 2023

National Science Council

- Excellent Junior Research Investigator Grant, 2013 to 2016

University of California Irvine

- Annual Visiting Faculty Awards by the J. Yang and Family Foundation, Center for Asian Studies, 2023-2024
- Annual Visiting Faculty Awards by the J. Yang and Family Foundation, Center for Asian Studies, 2022-2023

National Tsing Hua University

- New Faculty Research Award, College of Electrical Engineering and Computer Science, National Tsing Hua University, 2014
- Outstanding New Faculty Stipend, Fall 2012 to Summer 2014

Simon Fraser University, Canada

- President's Ph.D. Research Stipend, Fall 2009
- School of Computing Science travel award, 2008/2009/2010
- Graduate fellowship, Spring 2009
- A.B.C. Recycling Ltd. graduate scholarship in intelligent systems, Spring 2009
- Graduate fellowship, Spring 2008
- Clark Wilson graduate scholarship in intelligent systems, Spring 2008
- Faculty of applied sciences graduate fellowship, Spring 2007
- Graduate entrance scholarship, Fall 2005

ACM SIGCOMM

- Travel grant, SIGCOMM'11 Conference, 2011
- Travel grant, SIGCOMM'08 Conference, 2008

The Phi Tau Phi Scholastic Honor Society of The Republic of China
• Honorary member, 2000

REFERENCES

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