

HUAMING WU

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[\[Homepage\]](#) [\[Google Scholar\]](#) [\[Publons\]](#) [\[Researchgate\]](#)

Top Peer Reviewer 2019 in Computer Science & Cross-Field



Research Interests

Mobile Cloud Computing, Edge/Fog Computing, Offloading, Wireless Networks, Stochastic Optimization, Deep Learning

Education

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|-----------------|---|
| 09/2011-11/2015 | Dr. rer. nat. (PhD) at Freie Universität Berlin, Germany. Doctoral dissertation: <i>Analysis of Offloading Decision Making in Mobile Cloud Computing</i> . Grade <i>Summa cum laude (with highest honors)</i> |
| 09/2019-07/2011 | Master of Science (Msc) at Harbin Institute of Technology, Harbin, China, GPA: 89.07/100, Rank: 27/164 |
| 09/2005-07/2009 | Bachelor at Harbin Institute of Technology, GPA: 90.09/100, Rank: 2/98 |

Work Experience

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| 01/2019.01– 02/2019 | Visiting Scholar, Cloud Computing and Distributed Systems (CLOUDS), University of Melbourne, Australia, Supervisor: Prof. Rajkumar Buyya |
| 06/2018-now | Associate Professor, Center for Applied Mathematics, Tianjin University, Tianjin, China |
| 05/2016-06/2018 | Assistant Professor, Center for Applied Mathematics, Tianjin University, Tianjin, China |
| 06/2010-08/2010 | Internship, Gwangju Institute of Science and Technology, Korea |

Academic Activity

- **Guest Editor**, Journal of Systems Architecture (CCF: B), Special Issue on Computational Offloading for Edge Intelligence, 2020-2021
- **Lead Guest Editor**, Journal of Cloud Computing, Special Issue on Edge-cloud computing cooperation for task offloading in internet-of-things, 2020-2021
- **Lead Guest Editor**, Security and Communication Networks (CCF: C), Special Issue on Security Threats to Artificial Intelligence-Driven Wireless Communication Systems, 2019-2020
- **Lead Guest Editor**, Wireless Communications and Mobile Computing, Special issue on Deep Learning Driven Wireless Communications and Mobile Computing
- **General Chair**, Workshop on Computing and Scheduling in Wireless Power and Communication Networks (CSWPCN 2020), in conjunction with ICDCS 2020, July 8 - 10, 2020, Singapore. (CCF: B)
- **General Chair**, The First Workshop on Intelligent Offloading for Internet of Things (IOIoT 2020), in conjunction with [ICCCN 2020](#), August 3-6, 2020, Honolulu, Hawaii, USA
- **WIP/Vision Track Chair & PC**, ACM International Conference on Performance Engineering (ICPE), 2019 in Mumbai, India.
- **PC**, 31th IEEE International Symposium on Software Reliability Engineering (ISSRE 2020) in Wuhan, China.
- **Workshop Chair & PC**, 30th IEEE International Symposium on Software Reliability Engineering (ISSRE 2019) in Berlin, Germany.
- **Publicity Chair & PC**, ACM International Conference on Performance Engineering (ICPE), 2018 in Berlin.
- **PC Member**, 2nd International Workshop on Intelligent Cloud Computing and Networking (ICCN 2020) in conjunction with IEEE INFOCOM 2020, Beijing, China.
- **TPC**, First International Workshop on Intelligent Cloud Computing and Networking (ICCN 2019) in conjunction with IEEE INFOCOM 2019 in Paris, France.
- **Committee Chair**, Asia Pacific Society for Computing and Information Technology (APSCIT).

- **Student Forum Chair & PC**, Conference on Quantitative Evaluation of SysTems (QEST) 2017 in Berlin.
- **TPC**, Computer Vision Conference (CVC) 2019 in Las Vegas, Nevada, United States.
- **TPC**, Intelligent Systems Conference (IntelliSys) 2019, London, United Kingdom.
- **TPC**, Computing Conference (Computing 2020), London, United Kingdom.
- **TPC**, Future of Information and Communication Conference (FICC) 2020, San Francisco.
- **TPC**, Future of Information and Communication Conference (FICC) 2019, San Francisco.
- **PC** of the Conference on Quantitative Evaluation of SysTems (QEST) 2018 in Beijing.
- **PC**, 15th European Performance Engineering Workshop (EPEW) 2018 in Paris.
- **PC**, 14th European Performance Engineering Workshop (EPEW) 2017 in Berlin.
- **TPC**, 1st International Workshop on Intelligent Cloud Computing and Networking (Big Data Pipelines 2019) in conjunction with IEEE HiPC 2019, Hyderabad, India.
- **PC**, 17th IEEE International Symposium on Parallel and Distributed Processing with Applications (ISPA 2019) Xiamen, China.
- **TPC**, 5th International Conference of Pioneering Computer Scientists, Engineers and Educators (ICYCSEE 2019) Guilin, China.
- **TPC**, 3rd Annual International Conference on Data Science and Business Analytics (ICDSBA 2019) Istanbul, Turkey.

Journal Reviews

- IEEE Communications Surveys and Tutorials (COMST)
- IEEE/ACM Trans. Networking (TON)
- IEEE Trans. Parallel and Distributed Systems (TPDS)
- IEEE Internet of Things Journal (IoT-J)
- IEEE Trans. Industrial Informatics (TII)
- IEEE Trans. Wireless Communications (TWC)
- IEEE Trans. Services Computing (TSC)
- IEEE Trans. Communications (TCOM)
- IEEE Trans. Cybernetics (TCYB)
- IEEE Trans. Neural Networks and Learning Systems (TNNLS)
- IEEE Trans. Image Processing (TIP)
- IEEE Trans. Cloud Computing (TCC)
- IEEE Trans. Information Forensics and Security (TIFS)
- IEEE Trans. Vehicular Technology (TVT)
- IEEE Trans. Multimedia (TMM)
- IEEE Trans. Emerging Topics in Computational Intelligence (TETCI)
- IEEE Trans. Green Communications and Networking (TGCN)
- IEEE Trans. Cognitive Communications and Networking (TCCN)
- IEEE Trans. Sustainable Computing (T-SUSC)
- IEEE Trans. Multi-Scale Computing Systems (TMSCS)
- IEEE Access
- Journal of Network and Computer Applications (JNCA)
- Journal of Systems and Software (JSS)
- Future Generation Computer Systems (FGCS)
- Neurocomputing
- Performance Evaluation (PEVA)

Honors & Awards

- "Top Peer Reviewer 2019 in Computer Science", *Publons*
- "Top Peer Reviewer 2019 in Cross-Field", *Publons*
- "Outstanding Reviewer Award": *Future Generation Computer Systems*
- "National Fund for Scientific and Technological Development (FONDECYT)", *external reviewer, 2020*
- "Outstanding Invited Speaker": *CITR 2018*
- "Innovative Talent Promotion Program of Tianjin", *Tianjin, 2018*
- Alibaba Living Water Scholar 2018

Grants

- Delay-Constrained Hybrid Task Offloading in Joint Cloud and Fog Computing Environments, sponsored by *National Natural Science Foundation of China*. 2019/01-2022/12. (PI)

- Multi-Objective Decision Making for Task Offloading in Mobile Cloud Computing, sponsored by *Natural Science Foundation of Tianjin*. 2018/04-2021/3. (PI)
- App cooperation in client-cloud system, sponsored by *Huawei Innovation Research Program (HIRP) grant*, 2017/10-2018/9. (PI)
- Hot spots and development trends of new generation of information technology, sponsored by *Alibaba Living Water*, 2018-2019. (PI)
- Unstructured data simulation generation for AI training, sponsored by *Huawei Innovation Research Program (HIRP) grant*, 2018-2019. (PI)
- Efficient learning using generative adversarial network in wireless environment, sponsored by *Huawei Innovation Research Program (HIRP) grant*, 2018-2019. (PI)
- Key Technologies of Community Risk Monitoring and Prevention, sponsored by *National Key Research and Development Plan*, 2018/07-2021/06. (CO-PI)
- Touchable anatomy teaching virtual reality system, sponsored by *Major Science and Technology Project of Tianjin*, 2018-2021. (CO-PI)

Journal Publications

- [1] **Huaming Wu***, William J. Knottenbelt, Katinka Wolter. An Efficient Application Partitioning Algorithm in Mobile Environments. *IEEE Trans. Parallel and Distributed Systems*, vol. 30, no. 7, pp. 1464 - 1480, 2019.
- [2] **Huaming Wu*** and Katinka Wolter. Stochastic Analysis of Delayed Mobile Offloading in Heterogeneous Networks. *IEEE Trans. Mobile Computing*, vol. 17, no. 2, pp. 461-474, 2018.
- [3] Mohammad Goudarzi, **Huaming Wu**, Marimuthu Palaniswami, Rajkumar Buyya. A Task Placement Technique for IoT-enabled Fog Computing. *IEEE Tran. Mobile Computing*, in press, 2020.
- [4] **Huaming Wu***, Yi Sun, Katinka Wolter. Energy-Efficient Decision Making for Mobile Cloud Offloading. *IEEE Trans. Cloud Computing*, in press, 2018.
- [5] Pengfei Jiao, Minghu Tang, Yaping Wang, Hongtao Liu, **Huaming Wu***. Variational Autoencoder based Bipartite Network Embedding by Integrating Local and Global Structure. *Information Sciences*, Volume 519, Pages 9-21, May 2020.
- [6] Congcong Liu, **Huaming Wu***. Channel Pruning Based on Mean Gradient for Accelerating Convolutional Neural Networks. *Signal Processing*, vol.156, pp.84-91, 2018.
- [7] Zhangling Chen, Ce Wang, **Huaming Wu**, Kun Shang, Jun Wang. DMGAN: Discriminative Metric-based Generative Adversarial Networks. *Knowledge-Based Systems*, in press, 2020.
- [8] Tianpeng Li, Wenjun Wang, Xunxun Wu, Huaming Wu, Pengfei Jiao, Yandong Yu. Exploring the transition behavior of nodes in temporal networks based on dynamic community detection. *Future Generation Computer Systems*, accepted.
- [9] Xiangyi Li, **Huaming Wu***. Spatio-Temporal Representation with Deep Neural Recurrent Network in MIMO CSI Feedback. *IEEE Wireless Communications Letters*, in press, 2020.
- [10] **Huaming Wu**. Performance Modeling of Delayed Offloading in Mobile Wireless Environments with Failures. *IEEE Communications Letters*, vol. 22, no.11, pp. 2334-2337, 2018.
- [11] **Huaming Wu**, Zhu Han, Katinka Wolter, Yubin Zhao, Haneul Ko, Deep Learning Driven Wireless Communications and Mobile Computing. *Wireless Communications and Mobile Computing*, vol. 2019, Article ID 4578685, 2 pages, 2019.
- [12] Monica M.Y. Zhang, Kun Shang, **Huaming Wu**. Learning Deep Discriminative Face Features by Customized Weighted Constraint. *Neurocomputing*, vol.332, pp.71-79, 2019.
- [13] Ce Wang, Zhangling Chen, Kun Shang, **Huaming Wu**. Label-Removed Generative Adversarial Networks Incorporating with K-Means. *Neurocomputing*, vol.361, pp.126-136, 2019.
- [14] Bowen Wu, Zhangling Chen, Jun Wang, **Huaming Wu**. Exponential Discriminative Metric Embedding in Deep Learning. *Neurocomputing*, vol.290, pp.108-120, 2018.
- [15] Tianhui Meng, Katinka Wolter, **Huaming Wu**, Qiushi Wang. A Secure and Cost-efficient Offloading Policy for Mobile Cloud Computing Against Timing Attacks. *Pervasive and Mobile Computing*, vol.45, pp.4-18, 2018.
- [16] Monica M.Y. Zhang, Kun Shang, **Huaming Wu**. Deep Compact Discriminative Representation for Unconstrained Face Recognition. *Signal Processing: Image Communication*, vol.75, pp.118-127, 2019.
- [17] Zhang-Ling Chen, Jun Wang, Wen-Juan Li, Nan Li, **Hua-ming Wu**, Da-Wei Wang. Convolutional Neural Network with Nonlinear Competitive Units. *Signal Processing: Image Communication*, vol. 60, pp. 193-198, 2018.
- [18] **Huaming Wu**. Multi-Objective Decision-Making for Mobile Cloud Offloading: A Survey. *IEEE Access*, vol. 6, pp. 3962-3976, 2018.
- [19] Bowen Wu, **Huaming Wu***. Scalable Similarity-Consistent Deep Metric Learning for Face

- Recognition. *IEEE ACCESS*, vol. 7, pp. 104759 - 104768, 2019.
- [20] Wei Yu, Wenjun Wang, Pengfei Jiao, **Huaming Wu**, Yueheng Sun, Minghu Tang. Modeling the Local and Global Evolution Pattern for Community Mining in Dynamic Networks. *IEEE Access*, vol.7, pp.71350-71360, 2019.
- [21] Monica M.Y. Zhang, Yifang Xu, **Huaming Wu**. Orientation Truncated Center Learning for Deep Face Recognition. *IET Electronics Letters*, Vol. 54, No. 19, 1110–1112, 2018.
- [22] Yuan Yang, **Huaming Wu**, Peng Dai, Bo Zhang. One Time-step Particle Smoothing for Radio Range-based Indoor Position Tracking. *IET Electronics Letters*, in press, 2020.
- [23] **Huaming Wu**, Yi Sun, Katinka Wolter. Analysis of the energy-response time tradeoff for delayed mobile cloud offloading. *ACM SIGMETRICS Performance Evaluation Review*, 43(2),33-35, 2015.
- [24] **Huaming Wu**, Qiushi Wang, Katinka Wolter. Optimal cloud-path selection in mobile cloud offloading systems based on QoS criteria. *International Journal of Grid and High Performance Computing*, 5(4),30-47, 2013.
- [25] **Huaming Wu**, Qianrui Liu, Yaohong Wang. Face Image Translation Based on Generative Adversarial Networks. *Journal of Tianjin University (Science and Technology)*,2019, 52(03):306-314.
- [26] **Huaming Wu**, William J. Knottenbelt, Katinka Wolter. Energy-Performance Tradeoffs for Mobile Cloud Offloading in Heterogeneous Networks. *IEEE Trans. Mobile Computing*, in major revision.
- [27] Muhammed Tawfiqul Islam, **Huaming Wu***, Shanika Karunasekera, Rajkumar Buyya. SLA-based Scheduling of Spark Jobs in Hybrid-Cloud Environment. *IEEE Trans. Parallel and Distributed Systems*, under review.
- [28] M. SriRaghavendra, Priyanka Chawla, **Huaming Wu**, Sukhpal Singh Gill. NextGenFog: An Effective Framework for QoS-aware Service Placement for IoT Applications in Fog Computing Environment. *IEEE Trans. Parallel and Distributed Systems*, under review.
- [29] **Huaming Wu***, Ziru Zhang, Chang Guan, Katinka Wolter, Minxian Xu. Distributed Deep Learning-Driven Task Offloading with Heterogeneous Clouds. *IEEE Internet of Things Journal*, under review
- [30] Pengfei Jiao, Yingying Zhu, Di Jin, **Huaming Wu**, Wenjun Wang. A Unified Bayesian Model for Generalized Community Detection and Semantic Identification in Complex Networks. *Neurocomputing*, under review.
- [31] Dong Wang, Kun Shang, Jiaxiang Guo, **Huaming Wu**. Decoupling R-CNN for Higher Accurate Localization. *Signal Processing: Image Communication*, under review.
- [32] Mohammadreza Razian, Mohammad Fathian, **Huaming Wu**, Ahmad Akbari, Rajkumar Buyya. Scalable Anomaly-Aware Service Composition for CloudIoT. *IEEE Internet of Things Journal*, in preparation
- [33] **Huaming Wu**, Mohammad Goudarzi, Pengfei Jiao, Yubin Zhao. Computation Offloading for End-Edge-Cloud Orchestrated Computing. *IEEE Internet of Things Journal*, in preparation.
- [34] Yingjun Deng, **Huaming Wu** and Mingpei Yu. Remaining Useful Lifetime Prediction with Wiener Propagation Control in Non-periodically Inspected Scenarios. in preparation

Conference Publications

- [1] Bowen Wu, **Huaming Wu**. Angular Discriminative Deep Feature Learning for Face Verification. *The 45th International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020*, accepted.
- [2] Yingjun Deng, **Huaming Wu**, Chao Jiang. Uncertainty Quantification for Remaining Useful Lifetime Prediction with Multi-channel Sensory Data. *The 45th International Conference on Acoustics, Speech, and Signal Processing, ICASSP 2020*, accepted.
- [3] Wei Yu, Rongjian Mu, Ying Sun, Xue Chen, Wenjun Wang and **Huaming Wu**. A Double Non-negative Matrix Factorization Model for Signed Network Analysis. *17th IEEE International Symposium on Parallel and Distributed Processing with Applications (IEEE ISPA 2019)*, pp. 1291-1296, 2019.
- [4] Wei Yu, Wenjun Wang, Xue Chen, **Huaming Wu**, Minghu Tang and Yang Yu. Boosting Temporal Community Detection via Modeling Community Evolution Characteristics. *17th IEEE International Symposium on Parallel and Distributed Processing with Applications (IEEE ISPA 2019)*, pp. 936-943, 2019.
- [5] **Wu, H.**, Wang, Q., & Wolter, K. Tradeoff Between Performance Improvement and Energy Saving in Mobile Cloud Offloading Systems. In *Communications Workshops (ICC), 2013 IEEE International Conference on*(pp. 728-732). IEEE.
- [6] **Wu, H.**, Wang, Q., & Wolter, K. Methods of Cloud-Path Selection for Offloading in Mobile Cloud Computing Systems. In *Cloud Computing Technology and Science (CloudCom), 2012 IEEE 4th International Conference on* (pp. 443-448). IEEE.
- [7] **Wu, H.**, Wang, Q., & Wolter, K. Mobile Healthcare Systems with Multi-cloud Offloading. In *Mobile Data Management (MDM), 2013 IEEE 14th International Conference on* (Vol. 2, pp. 188-193). IEEE.
- [8] **Wu, H.** & Wolter, K. Tradeoff Analysis for Mobile Cloud Offloading Based on an Additive Energy-Performance Metric. In *Proceedings of the 8th International Conference on Performance*

Evaluation Methodologies and Tools. ICST.

- [9] **Wu, H.**, Knottenbelt, W. J. & Wolter, K. Analysis of the Energy-Response Time Tradeoff for Mobile Cloud Offloading using Combined Metrics, Teletraffic Congress (ITC), 2015 27th International. IEEE.
- [10] **Wu, H.** & Wolter, K. Software Aging in Mobile Devices: Partial Computation Offloading as a Solution. In *Software Reliability Engineering (ISSRE), 2015 IEEE International Symposium on. IEEE*.
- [11] **Wu, H.**, Wolter, K., & Grazioli, A. Cloudlet-based Mobile Offloading Systems: A Performance Analysis. In *IFIP WG 7.3 Performance 2013 31st International Symposium on Computer Performance, Modeling, Measurements and Evaluation 2013 Student Poster Abstracts* September 24-26, Vienna.
- [12] Wang, Q., **Wu, H.**, & Wolter, K. Model-based Performance Analysis of Local Re-execution Scheme in Offloading System. In *Dependable Systems and Networks (DSN), 2013 43rd Annual IEEE/IFIP International Conference on* (pp. 1-6). IEEE.
- [13] Sun, Y., **Wu, H.**, & Schiller, J. A Step Length Estimation Model for Position Tracking. In *Localization and GNSS (ICL-GNSS), 2012 International Conference on. IEEE, 2015*.

Book Chapters

- [1] **Wu, H.** (2015). Analysis of mHealth Systems with Multi-Cloud Computing Offloading. In *Mobile Health* (pp. 589-608). Springer International Publishing.
- [2] **Wu, H.**, & Wolter, K. (2014). Dynamic Transmission Scheduling and Link Selection in Mobile Cloud Computing. In *Analytical and Stochastic Modeling Techniques and Applications* (pp. 61-79). Springer International Publishing.
- [3] **Wu, H.**, Knottenbelt, W. J., & Wolter, K. (2016). An Optimal Offloading Partitioning Algorithm in Mobile Cloud Computing. In *Quantitative Evaluation of Systems* (pp. 311-328). Springer International Publishing.

Patent

- [1] Duan, Y., Yan, M., and Wu, H. 解剖教学系统中一种带有力反馈结构的软组织仿真方法. 2019.7.23