Conference Papers

[1] Bangwen Deng and **Wenfei Wu***. "**NFOpt: Eliminating Redundant Logic in NF Programs using Operation-Time Configurations**". In: *the 2021 IEEE International Conference on Computer Communications*. INFOCOM '21. 2021.

[2] Yongchao He, **Wenfei Wu***, Xuemin Wen, Haifeng Li, and Yongqiang Yang. "**Scalable On-Switch Rate Limiters for the Cloud**". In: *the 2021 IEEE International Conference on Computer Communications*. INFOCOM '21. 2021.

[3] Hongyi Huang, **Wenfei Wu***, Yongchao He, Bangwen Deng, Ying Zhang, Yongqiang Xiong, Guo Chen, Yong Cui, and Peng Cheng. "**NFD: A Development Framework for Cross-Platform Network Functions**". In: *the 2021 IEEE International Conference on Computer Communications*. INFOCOM '21. 2021.

[4] ChonLam Lao, Yanfang Le, Kshiteej Mahajan, Yixi Chen, **Wenfei Wu**, Aditya Akella, and Michael Swift. "**ATP: In-Network Aggregation for Multi-Tenant Learning**". In: *the 18th USENIX Symposium on Networked Systems Design and Implementation*. NSDI '21. 2021.

[5] Ming Sun, Ya Su, Shenglin Zhang, Junliang Tang, Yuanpu Cao, Yuqing Liu, **Wenfei Wu***, Dan Pei, Yongsu Zhang, and Xiaozhou Liu. "**CTF: Anomaly Detection in High-Dimensional Time Series with Coarse-to-Fine Model Transfer**". In: *the 2021 IEEE International Conference on Computer Communications*. INFOCOM '21. 2021.

[6] Bangwen Deng, **Wenfei Wu***, and Linhai Song. "**Redundant Logic Elimination in Network Functions**". In: *Proceedings of the 2020 Symposium on SDN Research*. SOSR '20. Google Scholar Citation 0. 2020.

[7] Qingxiu Liu, **Wenfei Wu***, Qingsong Liu, and Qun Huang. "**T2DNS: A Third-Party DNS Service with Privacy Preservation and Trustworthiness**". In: *Proceedings of the 29th International Conference on Computer Communications and Networks*. ICCCN '20. Google Scholar Citation 0. 2020.

[8] Harsha Sharma, **Wenfei Wu***, and Bangwen Deng. "**Symbolic Execution for Network Functions with Time-Driven Logic**". In: *Proceedings of the 2020 Symposium on Modelling, Analysis, and Simulation of Computer and Telecommunication Systems*. MASCOTS '20. Google Scholar Citation 0. 2020.

[9] Yongheng Chen, Linhai Song, Xinyu Xing, Fengyuan Xu, and **Wenfei Wu**. "**Automated Finite State Machine Extraction**". In: *Proceedings of the 2019 Workshop on Forming an Ecosystem Around Software Transformation*. FEAST '19. Google Scholar Citation 0. 2019.

[10] Yimin Jiang, Yong Cui, **Wenfei Wu**, Zhe Xu, Jiahan Gu, K. K. Ramakrishnan, Yongchao He, and Xuehai Qian. "**SpeedyBox: Low-Latency NFV Service Chains with Cross-NF Runtime Consolidation**". In: *Proceedings of the 39th IEEE International Conference on Distributed Computing Systems*. ICDCS '19. Google Scholar Citation 6. 2019.

[11] Junfeng Li, Dan Li, **Wenfei Wu**, K. K. Ramakrishnan, Jinkun Geng, Fei Gui, Fanzhao Wang, and Kai Zheng. "**Sphinx: A Transport Protocol for High-Speed and Lossy Mobile Networks**". In: *Proceedings of the 38th IEEE International Performance Computing and Communications Conference*. IPCCC '19. Google Scholar Citation 0. 2019.

[12] Soo-Jin Moon, Jeffrey Helt, Yifei Yuan, Yves Bieri, Sujata Banerjee, Vyas Sekar, **Wenfei Wu**, Mihalis Yannakakis, and Ying Zhang. "**Alembic: Automated Model Inference for Stateful Network Functions**". In: *Proceedings of the 16th USENIX Symposium on Networked Systems Design and Implementation*. NSDI '19. Google Scholar Citation 8. 2019.

[13] Qi-An Fu and **Wenfei Wu***. "**TUS: A Transactional Update Service for SDN Applications**". In: *Proceedings of the 9th ACM SIGOPS Asia-Pacific Workshop on Systems*. APSys '18. Google Scholar Citation 0. 2018.

[14] Qingmei Ren, Yong Cui, **Wenfei Wu**, Changfeng Chen, Yuchi Chen, Jiangchuan Liu, and Hongyi Huang. "**Improving Quality of Experience for Mobile Broadcasters in Personalized Live Video Streaming**". In: *2018 IEEE/ACM 26th International Symposium on Quality of Service*. IWQoS '18. Google Scholar Citation 1. 2018.

[15] Ye Yu, Ying Zhang, **Wenfei Wu**, and Chen Qian. "**NetCP: Consistent, Non-interruptive and Efficient Checkpointing and Rollback of SDN**". In: *2018 IEEE/ACM 26th International Symposium on Quality of Service*. IWQoS '18. Google Scholar Citation 3. 2018.

[16] Anubhavnidhi Abhashkumar, Joon-Myung Kang, Sujata Banerjee, Aditya Akella, Ying Zhang, and **Wenfei Wu**. "**Supporting Diverse Dynamic Intent-based Policies using Janus**". In: *Proceedings of the 13th ACM International on Conference on emerging Networking Experiments and Technologies*. CoNEXT '17. Google Scholar Citation 18. 2017.

[17] Anubhavnidhi Abhashkumar, Jeongkeun Lee, Jean Tourrilhes, Sujata Banerjee, **Wenfei Wu**, Joon-Myung Kang, and Aditya Akella. "**P5: Policy-driven optimization of P4 pipeline**". In: *Proceedings of the 2017 Symposium on SDN Research*. SOSR '17. Google Scholar Citation 15. 2017.

[18] Keqiang He, Weite Qin, Qiwei Zhang, **Wenfei Wu**, Junjie Yang, Tian Pan, Chengchen Hu, Jiao Zhang, Brent Stephens, Aditya Akella, and Ying Zhang. "**Low Latency Software Rate Limiters for Cloud Networks**". In: *Proceedings of the 2017 Asia-Pacific Workshop on Networking*. APNet '17. Google Scholar Citation 9. 2017.

[19] Ying Zhang, **Wenfei Wu**, Sujata Banerjee, Joon-Myung Kang, and Mario A Sanchez. "**SLA-Verifier: Stateful and Quantitative Verification for Service Chaining**". In: *Proceedings of the 2017 IEEE Conference on Computer Communications*. INFOCOM '17. Google Scholar Citation 16. 2017.

[20] Linhai Song, Heqing Huang, Wu Zhou, **Wenfei Wu**, and Yiying Zhang. "**Learning from Big Malwares**". In: *Proceedings of the 7th ACM SIGOPS Asia-Pacific Workshop on Systems*. APSys '16. Google Scholar Citation 5. 2016.

[21] **Wenfei Wu**, Ying Zhang, and Sujata Banerjee. "**Automatic Synthesis of NF Models by Program Analysis**". In: *Proceedings of the 15th ACM Workshop on Hot Topics in Networks*. HotNets '16. Google Scholar Citation 27. 2016.

[22] Aaron Gember-Jacobson, **Wenfei Wu**, Xiujun Li, Aditya Akella, and Ratul Mahajan. "**Management plane analytics**". In: *Proceedings of the 2015 ACM Conference on Internet Measurement Conference*. IMC '15. Google Scholar Citation 16. 2015.

[23] **Wenfei Wu**, Keqiang He, and Aditya Akella. "**Perfsight: Performance diagnosis for software dataplanes**". In: *Proceedings of the 2015 ACM Conference on Internet Measurement Conference*. IMC '15. Google Scholar Citation 30. 2015.

[24] Mehrdad Moradi, **Wenfei Wu**, Li Erran Li, and Zhuoqing Morley Mao. "**SoftMoW: recursive and reconfigurable cellular WAN architecture**". In: *Proceedings of the 10th ACM International on Conference on emerging Networking Experiments and Technologies*. CoNEXT '14. Google Scholar Citation 63. 2014.

[25] **Wenfei Wu**, Li Erran Li, Aurojit Panda, and Scott Shenker. "**PRAN: Programmable radio access networks**". In: *Proceedings of the 13th ACM Workshop on Hot Topics in Networks*. HotNets '14. Google Scholar Citation 28. 2014.

[26] **Wenfei Wu**, Yizheng Chen, Ramakrishnan Durairajan, Dongchan Kim, Ashok Anand, and Aditya Akella. "**Adaptive data transmission in the cloud**". In: *2013 IEEE/ACM 21st International Symposium on Quality of Service*. IWQoS '13. Google Scholar Citation 5. 2013.

[27] **Wenfei Wu**, Guohui Wang, Aditya Akella, and Anees Shaikh. "**Virtual network diagnosis as a service**". In: *Proceedings of the 4th annual Symposium on Cloud Computing*. SoCC '13. Google Scholar Citation 33. 2013.

[28] Dongsu Han, Ashok Anand, Fahad Dogar, Boyan Li, Hyeontaek Lim, Michel Machado, Arvind Mukundan, **Wenfei Wu**, Aditya Akella, David G. Andersen, John W. Byers, Srinivasan Seshan, and Peter Steenkiste. "**XIA: Efficient Support for Evolvable Internetworking**". In: *Proceedings of the 9th USENIX Symposium on Networked Systems Design and Implementation*. <u>NSDI '12</u>. Google Scholar Citation 196. 2012.

[29] Ashok Anand, Fahad Dogar, Dongsu Han, Boyan Li, Hyeontaek Lim, Michel Machado, **Wenfei Wu**, Aditya Akella, David G Andersen, John W Byers, et al. "**XIA: An architecture for an evolvable and trustworthy Internet**". In: *Proceedings of the 10th ACM Workshop on Hot Topics in Networks*. <u>HotNets '11</u>. Google Scholar Citation 154. 2011.

[30] Kai Chen, Chuanxiong Guo, Haitao Wu, Jing Yuan, Zhenqian Feng, Yan Chen, Songwu Lu, and **Wenfei Wu**. "**Generic and Automatic Address Configuration for Data Center Networks**". In: *Proceedings of the ACM SIGCOMM 2010 Conference*. <u>SIGCOMM '10</u>. Google Scholar Citation 71. 2010.

[31] Chuanxiong Guo, Guohan Lu, Helen J. Wang, Shuang Yang, Chao Kong, Peng Sun, **Wenfei Wu**, and Yongguang Zhang. "**SecondNet: A Data Center Network Virtualization Architecture with Bandwidth Guarantees**". In: *Proceedings of the 6th International COnference on emerging Networking EXperiments and Technologies (CoNEXT)*. <u>CoNEXT '10</u>. Google Scholar Citation 713. 2010.

Journal Papers

[1] **Wenfei Wu** and Ying Zhang. "**Network Function Modeling and Its Applications**". In: *IEEE Internet Computing* (2017). Google Scholar Citation 3.

[2] Kai Chen, Chuanxiong Guo, Haitao Wu, Jing Yuan, Zhenqian Feng, Yan Chen, Songwu Lu, and **Wenfei Wu**. "**DAC: generic and automatic address configuration for data center networks**". In: *IEEE/ACM Transactions on Networking* (2012). Google Scholar Citation 33.

Patents

[1] Joon Myung Kang, Anubhavnidhi Abhashkumar, Sujata Banerjee, Ying Zhang, and **Wenfei Wu**. "**Generating composite network policy**". In: (2018). US Patent 10812342.

[2] **Wenfei Wu**, Ying Zhang, and Sujata Banerjee. "**Middlebox modeling**". In: (2018). US Patent 10594574.

[3] Ying Zhang, **Wenfei Wu**, and Sujata Banerjee. "**Selectively monitoring a network of network function chains based on probability of service level agreement violation**". In: (2018). US Patent 10491528.

Posters

[1] Hongyi Huang and Wenfei Wu. "**ART: Learning Operation Tree Patterns for Cloud Remediation**". In: *Proceedings of the 15th European Conference on Computer Systems*. <u>EuroSys Poster '20</u>. 2020.

[2] Yongchao He and **Wenfei Wu**. "**Fully Functional Rate Limiter Design on Programmable Hardware Switches**". In: *Proceedings of the ACM SIGCOMM 2019 Conference*. <u>SIGCOMM Poster '19</u>. 2019.

[3] Hongyi Huang and **Wenfei Wu**. "**NFD: Using Behavior Models to Develop Cross-Platform NFs**". In: *Proceedings of the ACM SIGCOMM 2019 Conference*. <u>SIGCOMM Poster '19</u>. 2019.

[4] Bangwen Deng and **Wenfei Wu**. "**Redundant Logic Elimination for Network Functions**". In: *Proceedings of the ACM SIGCOMM 2018 Conference*. <u>SIGCOMM Poster '18</u>. 2018.

[5] Keqiang He, Weite Qin, Qiwei Zhang, **Wenfei Wu**, Junjie Yang, Tian Pan, Chengchen Hu, Jiao Zhang, Aditya Akella, and Ying Zhang. "**Improving Latency and Burst-tolerance for Software Rate Limiters**". In: *Presented in the 14th USENIX Symposium on Networked Systems Design and Implementation*. NSDI Poster '17. 2017.

[6] Cong Liu, Yong Cui, **Wenfei Wu**, and Jianping Wu. "**Protecting Privacy of NF states in NFV management Systems with Trusted Execution Environment**". In: *Proceedings of the 2017 Asia-Pacific Workshop on Networking*. APNet Poster '17. 2017.

[7] **Wenfei Wu** and Ying Zhang. "**Lancet: Extracting Forwarding Models from NF Programs**". In: *Proceedings of the 2017 IEEE Conference on Computer Communications*. INFOCOM Poster '17. 2017.

[8] **Wenfei Wu**, Guohui Wang, Aditya Akella, and Anees Shaikh. "**Virtual network diagnosis as a service**". In: *Proceedings of 2014 Open Networking Summit*. ONS Poster '14. 2014.

[9] **Wenfei Wu**, Yoshio Turner, and Mike Schlansker. "**Routing optimization for ensemble routing**". In: *Proceedings of the 2011 ACM/IEEE Seventh Symposium on Architectures for Networking and Communications Systems*. ANCS Poster '11. 2011.

Last updated: December 17, 2020