

# Tianzhu Zhang, Ph.D.

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## Experience

- Aug, 2020 – till now **Research Engineer** Nokia Bell Labs, Paris-Saclay, France.  
Permanent contract.
- Sep, 2020 – till now **Associate Member** Laboratory of Information, Networking and Communication Sciences (LINCS), Paris, France.
- Oct, 2017 – Nov, 2019 **PostDoc Researcher** Telecom ParisTech & Cisco Systems, Paris, France.  
Supervisor: Prof. Dario Rossi, Prof. Luigi Iannone
- Jun, 2017 – Aug, 2017 **Intern** Nokia Bell Labs, Paris-Saclay, France.  
Supervisor: Dr. Massimo Gallo
- Nov, 2014 – Nov, 2017 **Ph.D. Researcher** Joint Open Lab, Telecom Italia, Turin, Italy.  
Supervisor: Dr. Pino Castrogiovanni

## Education

- 2014 – 2017 **Ph.D., Politecnico di Torino** Department of Electronics and Telecommunications.  
Supervisor: Prof. Paolo Giaccone, Prof. Marcello Chiaberge.  
Thesis title: *Control plane optimization in Software Defined Networking and task allocation for Fog Computing.*
- 2012 – 2014 **M.Eng., Politecnico di Torino** in Computer and Communication Networks Engineering.  
Thesis title: *Distributed Controllers in Software Defined Networks.*
- 2008 – 2012 **B.Sc., Huazhong University of Science and Technology** in Computer Science and Technology.

## Research Publications

### Journal Articles

- Zhang, T.**, Linguaglossa, L., Giaccone, P., Iannone, L., & Roberts, J. (2021). Performance benchmarking of state-of-the-art software switches for nfv. *Computer Networks*, 107861.  
<https://doi.org/https://doi.org/10.1016/j.comnet.2021.107861>
- Zhang, T.**, Qiu, H., Linguaglossa, L., Cerroni, W., & Giaccone, P. (2021). Nfv platforms: Taxonomy, design choices and future challenges. *IEEE Transactions on Network and Service Management*, 18(1), 30–48. <https://doi.org/10.1109/TNSM.2020.3045381>
- Zhang, T.**, Linguaglossa, L., Gallo, M., Giaccone, P., & Rossi, D. (2019). FloWatcher-DPDK: Lightweight line-rate flow-level monitoring in software. *IEEE Transactions on Network and Service Management*, 16(3), 1143–1156. <https://doi.org/10.1109/TNSM.2019.2913710>
- Zhang, T.**, Chiasserini, C. F., & Giaccone, P. (2018). Tame: An efficient task allocation algorithm for integrated mobile gaming. *IEEE Systems Journal*, 13(2), 1546–1557.  
<https://doi.org/10.1109/JSYST.2018.2829496>

- 5 **Zhang, T.**, Giaccone, P., Bianco, A., & De Domenico, S. (2017). The role of the inter-controller consensus in the placement of distributed sdn controllers. *Computer Communications*, 113, 1–13.  
🔗 <https://doi.org/https://doi.org/10.1016/j.comcom.2017.09.007>

## Conference Proceedings

- 1 Shelbourne, C., Linguaglossa, L., **Zhang, T.**, & Lipani, A. (2021). Inference of virtual network functions' state via analysis of the cpu behavior, In *International teletraffic congress*.
- 2 Shelbourne, C., Linguaglossa, L., Lipani, A., **Zhang, T.**, & Geyer, F. (2019). On the learnability of software router performance via cpu measurements, In *Proceedings of the 15th international conference on emerging networking experiments and technologies student workshops*, Orlando, FL, USA, Association for Computing Machinery. 🔗 <https://doi.org/10.1145/3360468.3366776>
- 3 **Zhang, T.**, Linguaglossa, L., Roberts, J., Iannone, L., Gallo, M., & Giaccone, P. (2019). A benchmarking methodology for evaluating software switch performance for nvf, In *2019 ieee conference on network softwarization (netsoft posters and demos)*. 🔗 <https://doi.org/10.1109/NETSOFT.2019.8806695>
- 4 **Zhang, T.**, Linguaglossa, L., Gallo, M., Giaccone, P., Iannone, L., & Roberts, J. (2019). Comparing the performance of state-of-the-art software switches for NFV, In *Proceedings of the 15th international conference on emerging networking experiments and technologies*, Orlando, Florida, Association for Computing Machinery. 🔗 <https://doi.org/10.1145/3359989.3365415>
- 5 **Zhang, T.**, Linguaglossa, L., Gallo, M., Giaccone, P., & Rossi, D. (2018a). FlowMon-DPDK: Parsimonious per-flow software monitoring at line rate, In *2018 network traffic measurement and analysis conference (tma)*. 🔗 <https://doi.org/10.23919/TMA.2018.8506565>
- 6 **Zhang, T.**, Linguaglossa, L., Gallo, M., Giaccone, P., & Rossi, D. (2018b). High-speed per-flow software monitoring with limited resources, In *Proceedings of the acm sigcomm 2018 conference on posters and demos*. 🔗 <https://doi.org/10.1145/3234200.3234203>
- 7 Bianco, A., Giaccone, P., Kelki, S., Campos, N. M., Traverso, S., & **Zhang, T.** (2017). On-the-fly traffic classification and control with a stateful SDN approach, In *2017 ieee international conference on communications (icc)*. 🔗 <https://doi.org/10.1109/ICC.2017.7997297>
- 8 **Zhang, T.**, Bianco, A., Giaccone, P., & Nezhad, A. P. (2017). Dealing with misbehaving controllers in SDN networks, In *Globecom 2017-2017 ieee global communications conference*. IEEE.  
🔗 <https://doi.org/10.1109/GLOCOM.2017.8254752>
- 9 **Zhang, T.**, Bianco, A., & Giaccone, P. (2016). The role of inter-controller traffic in SDN controllers placement, In *2016 ieee conference on network function virtualization and software defined networks (nfv-sdn)*. 🔗 <https://doi.org/10.1109/NFV-SDN.2016.7919481>