

# Quang-Trung LUU

📍 ANSA Lab, 1 Dai Co Viet Str., Hanoi 100000, Vietnam    @ trung.luuquang@hust.edu.vn  
🔗 [luuquangtrung.github.io](https://luuquangtrung.github.io)    🌐 [luuquangtrung](#)    📺 [luuquangtrung](#)    ☎ +84 866 477 681

## ACADEMIC EXPERIENCES

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- 2023–pres.    **Lecturer**, [Hanoi University of Science and Technology](#), Hanoi, Vietnam
- 2021–2022    **Postdoctoral Fellow**, [French National Centre for Scientific Research \(CNRS\)](#), Toulouse, France
- 2017–2021    **Doctoral Fellow**, [CentraleSupélec](#), [Paris-Saclay University](#), France
- 2017–2020    **Research Engineer**, [Nokia Bell Labs](#), Paris, France
- 04–09/2017    **Research Intern**, [Inria](#) & [Ecole Normale Supérieure](#), Lyon, France

## EDUCATION

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- 2017–2021    **Ph.D. in Information & Communication Networks**, [CentraleSupélec–Paris-Saclay University](#), France  
Thesis : *Dynamic Control and Optimization of Wireless Virtual Networks*  
Industrial Ph.D program financed by French government (ANRT) and Nokia Bell Labs  
Advisors : Prof. [Michel Kieffer](#) (Paris-Saclay) and Dr. [Sylvaine Kerboeuf](#) (Nokia Bell Labs)  
Prize : [Best PhD Dissertation on Distributed Systems and Networks](#), by GDR-RSD & ACM SigOps
- 2016–2017    **M.Sc. in Multimedia Networking**, [Paris-Saclay University](#) & [Télécom Paris](#), France  
Thesis : *Optimization of 802.11-based Wireless Networks*  
Advisors : Profs. [Anthony Busson](#) and [Isabelle Guérin-Lassous](#) (U. Lyon 1)
- 2015–2016    **M.Sc. in Antennas and Telecom Devices**, [Paris-Saclay University](#), France  
Thesis : *Wireless Power Transfer for Implantable Medical Devices*  
Advisors : Profs. [Antoine Diet](#), [Yann Le Bihan](#) (Paris-Saclay), and [Stavros Koulouridis](#) (U. Patras)
- 2008–2013    **B.Sc. in Electronics and Telecoms**, [Hanoi University of Science and Technology \(HUST\)](#), Vietnam  
Thesis : *Optimization of Resonator Configuration for Wireless Power Transmission Systems*  
Advisors : Profs. [Ta Cao Minh](#) and [Vu Van Yem](#) (HUST)  
Prize : [HUST Student Research Prize \(first runner-up\)](#)

## SUPERVISION

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### Doctoral Students

1. **Truong Tuan Vu** ([VinUniversity](#), 03/2023–present, co-supervise with [Prof. Van-Dinh Nguyen](#)). Topic : Resource allocation for network slicing in open radio access network (O-RAN).
2. **Nguyen Minh Tuong** ([VinUniversity](#), 03/2023–present, co-supervise with [Prof. Van-Dinh Nguyen](#)). Topic : Resource allocation for serverless functions in mobile edge cloud environments

### Master's Students

1. **Xavier Goeman and Carlos Guzman** ([Institut Polytechnique de Paris](#), 11/2020–04/2021). Topic : Modeling and implementation of embedding algorithms for network slices dedicated to multimedia services.
2. **Jobayer Morshed and Abdel Ouahd Alouane** ([Institut Polytechnique de Paris](#), 11/2021–04/2022). Topic : Scheduling coflows in datacenter networks.

## TEACHING

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1. **Multimedia** (AC4010), *Hanoi University of Science and Technology*, Fall 2023.
2. **Augmented and Virtual Reality** (AC4020, AC4020), *Hanoi University of Science and Technology*, Fall 2023.
3. **Foundations of Computer Science** (CS310), *Hanoi University of Science and Technology*, Fall 2023.
4. **Computer Network and Communications** (CSE3030), *Vietnam-Japan University*, Fall 2023.

## SKILLS

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**Techniques :** mathematical programming, optimization, applied AI/ML (e.g., RL/DRL, GNN)  
**Programming :** Python, MATLAB, C/C + +, Bash scripts  
**Tools :** git, ns-3, CPLEX, Jupyter notebook, Microsoft Office, L<sup>A</sup>T<sub>E</sub>X, InkScape  
**Libraries :** matplotlib, NumPy, TensorFlow, Pandas, scikit-learn, NetworkX  
**Languages :** *Vietnamese* (mother tongue), *English* (fluent), *French* (fluent)

## HONORS, AWARDS, AND GRANTS

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**Best PhD Dissertation Award on Distributed Systems and Networks**, by [GDR-RSD & ACM SigOps](#) May 2022  
**ENSA Publication Award**, by Nokia Bell Labs Oct. 2020  
**Travel Grant**, by the Global Young Vietnamese Scholars Network Dec. 2019  
**Student Travel Grant**, by IEEE Communications Society Dec. 2018  
**CIFRE Fellowship**, by the French National Association for Technical Research 2017–2020  
**International Master’s Scholarship**, by Paris-Saclay University 2015–2016  
**Student Research Prize** (first runner-up), by the Hanoi University of Science and Technology May 2013

## ACTIVITIES

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**Organizer**, *Vietnam Summer School of Science (VSSS)*, Quy Nhon, Vietnam Aug. 2023  
**Organizer**, *Global Young Vietnamese Scholars Network*, Hanoi, Vietnam Nov. 2020  
**Founder & admin**, [telecom-vn](#) — a group of Vietnamese researchers in networking and telecoms May 2020  
**Jury member**, *Annual Ph.D Student Workshop of CentraleSupélec* (session “AI and networking”) Sept. 2020  
**Invited lecturer**, *Vietnam Summer School of Science (VSSS)*, Hanoi, Vietnam Aug. 2015  
**Member of technical committee**, *ICN’20*, *ICN’21*, *AlgoTel’21*, *CoRes’21*, *SoICT’22*  
**Regular reviewer for**  
Journals : IEEE (*JSAC*, *TON*, *TNSM*, *Sys. J.*, *Comm. Lett.*), Elsevier (*Computer Communications*)  
Conferences : *ICN’20*, *AlgoTel’21*, *CoRes’21*, *ATC’22*, *SoICT’22*, *VTC’23-Fall*.

## PUBLICATIONS

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Google Scholar profile : <https://scholar.google.com/citations?user=GqQcLAIAAAAJ>

### Patents

- (b<sub>1</sub>) S. Kerboeuf, Q.-T. Luu, M. Kieffer, and A. Mouradian, [Slice Resource Provisioning Method Addressing Multiple Slice Demands with SLA Guarantee](#), *US Patent 11,431,562 B2*, filed 07 December 2018, issued 16 December 2021, granted 30 August 2022.

## Peer-reviewed journal papers

- (j<sub>1</sub>) O. Brun, R. El-Azouzi, Q.-T. Luu, F. De Pellergrini, B.-J. Prabhu, and C. Richier, "Weighted Scheduling of Time-Sensitive Coflows," *to be submitted to IEEE Transactions on Cloud Computing*, 2023.
- (j<sub>2</sub>) Q.-T. Luu, S. Kerboeuf, and M. Kieffer, "Admission Control and Resource Provisioning for Prioritized Slice Requests with Uncertainties," *IEEE Transactions on Network and Service Management*, 2022 (hal-03614028).
- (j<sub>3</sub>) Q.-T. Luu, S. Kerboeuf, and M. Kieffer, "Uncertainty-Aware Resource Provisioning for Network Slicing," in *IEEE Transactions on Network and Service Management*, vol. 18, no. 1, pp. 79-93, Mar. 2021. (hal-03418308).
- (j<sub>4</sub>) Q.-T. Luu, M. Kieffer, A. Mouradian, and S. Kerboeuf, "Coverage-Aware Resource Provisioning Method for Network Slicing," in *IEEE/ACM Transactions on Networking*, vol. 28, no. 6, pp. 2393-2406, Dec. 2020. (hal-03097001).

## Peer-reviewed conference papers

- (c<sub>1</sub>) K.-H. Do, Q.-T. Luu, T.-H. Nguyen, M.-T. Nguyen, and T.-A. Do, "Accelerating Network Slice Embedding with Reinforcement and Deep Reinforcement Learning," *submitted to the 18th Asian Internet Engineering Conference (ACM AINTEC)*, Hanoi, Dec. 2023.
- (c<sub>2</sub>) Q.-T. Luu, O. Brun, R. El-Azouzi, F. De Pellergrini, and B.-J. Prabhu, "DCoflow: Deadline-Aware Scheduling Algorithm for Coflows in Datacenter Networks," *IFIP Networking Conference*, Catania, June 2022, pp. 1-9.
- (c<sub>3</sub>) Q.-T. Luu, S. Kerboeuf, and M. Kieffer, "Foresighted Resource Provisioning for Network Slicing," in *Proc. IEEE International Conference on High Performance Switching and Routing (HPSR)*, Paris, June 2021, pp. 1-8.
- (c<sub>4</sub>) Q.-T. Luu, S. Kerboeuf, A. Mouradian, and M. Kieffer, "Radio Resource Provisioning for Network Slicing with Coverage Constraints," in *Proc. IEEE International Conference on Communications (ICC)*, Dublin, Ireland, June 2020, pp. 1-6. (Bell Labs Publication Award).
- (c<sub>5</sub>) Q.-T. Luu, M. Kieffer, and A. Mouradian, and S. Kerboeuf, "Aggregated Resource Provisioning for Network Slices," in *Proc. IEEE Global Communications Conference (GLOBECOM)*, Abu Dhabi, Dec. 2018, pp. 1-6 (IEEE ComSoc Student Travel Award).
- (c<sub>6</sub>) Q.-T. Luu, S. Koulouridis, A. Diet, Y. Le Bihan, and L. Pichon, "Investigation of Inductive and Radiating Energy Harvesting for an Implanted Biotelemetry Antenna," in *Proc. European Conference on Antennas and Propagation (EuCAP)*, Paris, Mar. 2017.
- (c<sub>7</sub>) A. Diet, S. Koulouridis, Y. Le Bihan, Q.-T. Luu, O. Meyer, L. Pichon, and M. Biancheri-Astier, "Sub-GHz Inductive Power Transmission from Helical Coils for Implanted Medical Devices," in *Proc. IEEE International Workshop on Antenna Technology (iWAT)*, Athens, Greece, Mar. 2017.

## Workshops/Posters

- (w<sub>1</sub>) Q.-T. Luu, M. Kieffer, A. Mouradian, and S. Kerboeuf, "Resource Provisioning for Network Slices with Coverage Constraints," *ANR MAESTRO-5G Workshop on Orchestration of 5G Networks and Beyond*, CentraleSupélec, Gif-sur-Yvette, Dec. 2020.

## Demonstrations

- (de<sub>1</sub>) B. Orlandi, S. Kerboeuf, F. Faucheux, J.-L. Lafrayette, A. Boubendir, and Q.-T. Luu, "Network Slicing Made Easy! From Graph-based Design to Automated Deployment of Network Slices in 5G," *Nokia 5G Smart Campus Event*, Nozay, 2018 (in partnership with Orange Labs).

## REFERENCES

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Available upon request.