


# HONG-TRI NGUYEN


Dr. Tech in Computer Science

 hong3nguyen.github.io

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 01/11/1993

 Scholar/Hong-TriNguyen

 /in/tri-hong-nguyen

## 2. DEGREES

- 06/2019 - 11/2023 **Doctor in Computer Science and Engineering** **University of Oulu, Finland**  
Supervisor: Docent. Susanna Pirttikangas, Docent. Juha Partala, Dr. Lauri Lovén  
Reviewers: Prof. Raimundas Matulevicius, Assoc. Prof. Anh Dinh,  
Opponent: Prof. Hong-Linh Truong
- 09/2016 - 10/2018 **Master in Computer Science (99/110)** **University of Pisa, Italy**  
Supervisor: Prof. Fabrizio Baiardi, Prof. Laura Ricci
- 09/2011 - 07/2015 **Bachelor in Computer Science (Honour)** **University of Information Technology, Vietnam**  
Supervisor: Dr. Duc Minh Duong, Dr. Thanh Duc Ngo

## 3. OTHER EDUCATION AND EXPERTISE

- 09/2022 - 06/2024 **University Pedagogy, Basic Studies (25 ETCs)** **University of Oulu, Finland**  
Basic of University Pedagogy  
Research-based teacher-hood  
Teaching practice in university pedagogy
- 10/2019 - 01/2020 **Research Visit - Insight SFI Research Centre for Data Analytics** **University College Dublin, Ireland**  
Supervisor: Prof. Tahar Kechadi and Dr. Ngoc Tran  
Blockchain technology in 6G applications and reputation systems

## 4. LANGUAGE SKILLS

Native	<b>Vietnamese</b>
Advanced	<b>English</b>
Intermediate	<b>Finnish</b>
	Read, speak, and write - Intermediate
	Listen - Elementary

## 5. CURRENT EMPLOYMENT

- 05/2024 - present **Postdoc researcher at The Aalto Systems and Services Engineering Analytics** **Aalto University, Finland**  
Supervisor: Prof. Hong-Linh Truong

## 6. PREVIOUS WORK EXPERIENCE

- 01/2024 - 04/2024 **Postdoc researcher in Center for Ubiquitous Computing** **University of Oulu, Finland**  
Supervisor: Dr. Timo Bräysy and Docent. Susanna Pirttikangas
- 11/2018 - 12/2023 **Doctoral researcher in Center for Ubiquitous Computing** **University of Oulu, Finland**  
Supervisor: Docent. Susanna Pirttikangas, Docent. Juha Partala, Dr. Lauri Lovén
- 01/2016 - 04/2016 **Teaching Assistant in Department of Information System** **University of Information Technology, Vietnam**  
Supervisor: Dr. Duong Minh Duc

## 7. CAREER BREAKS

- 07/2015 - 12/2015 **No fund support after Bachelor graduation** **University of Information Technology, Vietnam**

## 8. RESEARCH FUNDING AND GRANTS

- 2022 **Tauno Tönningin Säätiö**  
Scholarship celebrates individuals who promote and support technological and other scientific research for economic growth
- 2021 **Nokia Foundation**  
Scholarship celebrates individuals making significant contributions to information and communications technologies

## 9. RESEARCH OUTPUT

#### Book Chapters

1. **Nguyen, T.**, Lovén, L., Partala, J., & Pirttikangas, S. (2021). The intersection of blockchain and 6G technologies. In 6G Mobile Wireless Networks (pp. 393-417). Cham: Springer International Publishing.

#### Journals

1. **Nguyen, T.**, Nguyen, H., Nguyen Gia, T. (2024). Exploring the Integration of Edge Computing and Blockchain IoT: Principles, Architectures, Security, and Applications. Journal of Network and Computer Applications.
2. **Nguyen, T.**, Nguyen, H., Partala, J., & Pirttikangas, S. (2023). TrustedMaaS: Transforming trust and transparency Mobility-as-a-Service with blockchain. Future Generation Computer Systems, 149, 606-621.
3. **Nguyen, T.**, Katila, R., & Gia, T. N. (2023). An advanced internet-of-drones system with blockchain for improving quality of service of search and rescue: A feasibility study. Future Generation Computer Systems, 140, 36-52.

#### Conferences

1. Nguyen, H., **Nguyen, T.**, Lauri Lovén, & Pirttikangas, S. (2024, July). Wait or Not to Wait: Evaluating Trade-Offs between Speed and Precision in Blockchain-based Federated Aggregation. In International Conference on Distributed Computing Systems. IEEE.
2. Prateek, S., **Nguyen, T.**, Mayukh, R C., Pirttikangas, S., and Aloizio, P. S. (2024). Fair Consensus in Blockchain with Heterogeneous Miners using Reinforcement Learning Aided Adaptive Proof-of-Work. IEEE.
3. Nguyen, H., **Nguyen, T.**, Leppänen, T., Partala, J., & Pirttikangas, S. (2022, June). Situation awareness for autonomous vehicles using blockchain-based service cooperation. In International Conference on Advanced Information Systems Engineering (pp. 501-516). Cham: Springer International Publishing.
4. **Nguyen, T.**, Tran, N., Loven, L., Partala, J., Kechadi, M. T., & Pirttikangas, S. (2020). Privacy-aware blockchain innovation for 6G: Challenges and opportunities. 2020 2nd 6G Wireless Summit (6G SUMMIT), 1-5.
5. **Nguyen, T. H.**, Partala, J., & Pirttikangas, S. (2019, July). Blockchain-based mobility-as-a-service. In 2019 28th international conference on computer communication and networks (icccn) (pp. 1-6). IEEE.
6. **Nguyen, T. H.**, Duong, D. M., & Duong, D. A. (2015, January). Robust and high capacity watermarking for image based on DWT-SVD. In The 2015 IEEE RIVF International Conference on Computing & Communication Technologies-Research, Innovation, and Vision for Future (RIVF) (pp. 83-88). IEEE.
7. **Nguyen, T. H.**, & Duong, D. M. (2015, October). Reversible medical image watermarking technique based on choosing threshold values in histogram shifting. In 2015 Seventh International Conference on Knowledge and Systems Engineering (KSE) (pp. 204-209). IEEE.

#### Tech Reports

1. Ylianttila, M., Kantola, R., Gurtov, A., Mucchi, L., Oppermann, I., Yan, Z., **Nguyen, T.**,...& Rönning, J. (2020). 6G white paper: Research challenges for trust, security and privacy. arXiv preprint arXiv:2004.11665.

### 10. RESEARCH SUPERVISION AND LEADERSHIP EXPERIENCE

01/2024 - 04/2024	<b>Coordinator</b> Work package 4 - Blockchain and 6G in logistic	University of Oulu, Finland
2012 - 2014	<b>Leader and key member of a CTF team</b>	"KQCQ" in ctftime.org

### 11. TEACHING MERITS

2019 - 2024	<b>Teaching Assistant and joint Lecturer - "Distributed Systems" course</b> Students' exercises & projects	University of Oulu, Finland
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### 12. AWARDS AND HONOURS

2018	<b>Scholarships of the University of Pisa, Italy</b> Scholarship is reserved for the best-performing students from non-EU countries	
2015	<b>"Information Technology and Communication" award by Ho Chi Minh City People's Committee</b>	
2015	<b>Award and Representative for Ho Chi Minh City in the 2<sup>nd</sup> Vietnam Talent Youth Congress</b>	
2014	<b>Third prize in "Information security" CTF competition</b>	University of Information Technology, Vietnam
2013	<b>Award for Hacking Excellence in "Toaster War" (PicoCTF)</b>	CMU Cybersecurity Competition

### 13. OTHER KEY ACADEMIC MERITS, SUCH AS:

Professional Services	<b>Reviewers</b> Journals: IEEE Trans on Mobile Computing, IEEE Trans on AI, IEEE IoT Journal, IEEE Access, Springer Arabia Journal for Science and Engineering, Journal of Big Data, and Computing Conferences: Percom	
22/08/2021 25/08/2021	<b>Identifying Key Enablers in Edge Intelligence Organization</b> Organizing the connection between on-site and online participants	Dagstuhl Seminar 21342, Germany
21/03/2022 25/03/2022	<b>The 20th International Conference on Pervasive Computing and Communications</b> Organizing the connection from online participants	Virtual

#### 14. SCIENTIFIC AND SOCIETAL IMPACT

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/10/2024 /10/2024	<b>UbiComp / ISWC</b> Local chair	Aalto University, Finland
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#### 15. OTHER MERITS

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