

CONTACT INFORMATION	AAU Connectivity Aalborg University 9220 Aalborg Denmark	Homepage: <a href="https://lamnd09.github.io/lamnd/">https://lamnd09.github.io/lamnd/</a> Github: <a href="https://github.com/lamnd09">https://github.com/lamnd09</a> ✉ E-mail: <a href="mailto:ndl@es.aau.dk">ndl@es.aau.dk</a> Tel: +45 52 613 252
RESEARCH INTERESTS	Distributed Ledger Technologies, Data Trading, Consensus Algorithms, Internet of Things (IoT), Smart-grid, Distributed Systems, Federated Learning, Cryptography, Network Virtualization.	
EDUCATION	<b>Aalborg University</b> , Aalborg, Denmark	2019–present
	<ul style="list-style-type: none"> <li>• <b>Ph.D.</b> in Department of Electronics Systems.</li> <li>• Topics: DLT-based Internet of Things, Blockchain and Smart Contract.</li> <li>• Advisor: <a href="#">Prof. Petar Popovski</a>.</li> </ul>	
	<b>Seoul National University</b> , Seoul, Republic of Korea	2016–2018
	<ul style="list-style-type: none"> <li>• <b>M.Sc.</b> in Department of Computer Science, GPA: <b>3.31/4.3</b>.</li> <li>• Thesis: <i>Towards Efficient Load Balancing Strategy of RPL Routing Protocol in IoT Networks</i>.</li> <li>• Advisor: Prof. Chong-Kwon Kim.</li> </ul>	
	<b>Hanoi University of Science and Technology (HUST)</b> , Vietnam.	2010–2015
	<ul style="list-style-type: none"> <li>• <b>B.Sc.</b>, Electronics and Telecommunications. GPA: <b>3.09/4</b>.</li> <li>• Thesis: <i>A Generalized Resource Allocation Framework in Support of Multi-layer Virtual Network Embedding based on SDN. (Score: 10/10, Top 1% of EE Department)</i></li> <li>• Advisor: Prof. Nguyen Huu Thanh</li> </ul>	
SELECTED PUBLICATIONS	<b>Journal Articles</b> <ol style="list-style-type: none"> <li>1. <b>Lam D. Nguyen</b>, Israel Leyva, Amari Lewis, Petar Popovski (2020). Modeling and Analysis of Blockchain-based Data Trading in NB-IoT Networks. <i>IEEE Internet of Things Journal (Submitted)</i> [<b>Impact Factor: 9.908</b>].</li> <li>2. <b>Lam D. Nguyen</b>, Kalor, A. E., Israel Leyva, Petar Popovski (2020). Trusted Wireless Monitoring based on Distributed Ledgers over NB-IoT Connectivity. <i>IEEE Communication Magazine</i>. 2020 [<b>Impact Factor: 11.05</b>]</li> <li>3. Danzi, P., Kalor, A. E., Sorensen, R. B., Hagelskjær, A. K., <b>Nguyen, L. D.</b>, Stefanovic, C., &amp; Popovski, P. (2020). Communication aspects of the integration of wireless iot devices with distributed ledger technology. <i>IEEE Network</i>, 34(1), 47-53. [<b>Impact Factor: 8.8</b>]</li> <li>4. <b>Lam Nguyen</b>, and Chong-Kwon Kim. "Towards Skewness and Balancing of RPL Trees for the Internet of Things." arXiv preprint arXiv:1903.01839 (2019).</li> <li>5. <b>Nguyen Duc Lam</b>, Chong-Kwon Kim. "Towards Efficient Dynamic Virtual Network Embedding Strategy for Cloud Networks". <i>International Journal of Distributed and Sensor Networks</i>, 2018. [<b>SCIE</b>]</li> <li>6. Nguyen, Huu Thanh, Anh Vu Vu, <b>Nguyen Duc Lam</b>, Manh Nam Tran, Quynh Thu Ngo, Thu-Huong Truong, Tai Hung Nguyen, and Thomas Magedanz. "A generalized resource allocation framework in support of multi-layer virtual network embedding based on SDN." <i>Computer Networks</i> 92 (2015): 251-269. [<b>SCI</b>]</li> </ol> <b>Conference Papers</b> <ol style="list-style-type: none"> <li>1. <b>Lam D. Nguyen</b>, Israel Leyva, Petar Popovski (2020). witness-based approach for scaling Distributed Ledgers to massive iot scenarios. WF-IoT 2020, New Orleans, Louisiana (<b>Outstanding Paper Award</b>).</li> <li>2. <b>Nguyen Duc Lam</b>, Naeon Kim, Seohyang Kim, and Chong-Kwon Kim. "RT-VNE: A real-time strategy for Virtual Network Embedding towards resource efficiency." <i>In Information Networking (ICOIN), 2017 International Conference on</i>, pp. 185-190. IEEE, 2017.</li> </ol>	

3. **Duc-Lam Nguyen**, Naeon Kim, Seohyang Kim, Chong-Kwon Kim, "Exploiting the Impact of RPL Objective Functions on Transmission Performance in RPL Network." in *The International Conference on Computer Science and Technology (ICCST)*, Seoul, Republic of Korea, Nov 2016.
4. **Duc-Lam Nguyen**, JunHyun Park, Bruyn Cho, Chong-Kwon Kim, "A Scheduling Strategy for Network Virtualization Towards Resource Efficiency." in *Korean Information Science Society Proceedings of KISTI Conference*, Jeju, Republic of Korea, Jun 2016.
5. Tran Manh Nam, Huu-Thanh Nguyen, Kim Bao Long, **Duc-Lam Nguyen**, Nguyen Van Huynh, Nguyen Van Ca, "Constructing Energy-Aware Software Defined Networking," in *Proceedings of Asia-Pacific Advanced Network Research Workshop (APAN-NRW)*, Malaysia, June 2015. (**Best Paper Award**)

#### TECHNICAL SKILLS

- *Programming Languages*: C/C++, Python, Solidity, Golang, NodeJS.
- *Technical Softwares*: HyperLedger Fabric, IOTA, Ethereumx, Bitcoin, Kubernetes, Docker.
- *Background*: Blockchain, Cryptography, Convex Optimization, Federated Learning, SDN/OpenFlow.

#### HONORS & AWARDS

- Best Student Paper Award - WF-IoT 2020. 2020
- **Winner** of Student's Scientific Research Competition, HUST, Vietnam. 2015
- **First Prize** 32nd Student's Scientific Research Contest, SET, Vietnam. 2015
- **Global Scholarship** for Outstanding Graduate Student. 2017
- **Best Student Paper Award** - APAN-NRW 2015. 2015
- **Global Scholarship** at GIST SCENT. 2016
- **Gold and Bronze Medal**, Vietnam Football Student. 2015, 2016

#### RESEARCH EXPERIENCE

**Connectivity Section, Aalborg University, Denmark.** 2019–present

- Distributed Ledger Technologies over IoT Connectivity
  - Optimal Blockchain-enabled IoT Data Trading over NB-IoT
  - Designing Lightweight Blockchain Architectures for Internet of Things .
  - Hyperledger-based IoT over NB-IoT to monitor Air Pollution, Climate Change.
  - Optimal consensus algorithms towards lightweight Blockchain.

**Social and Computer Networks Laboratory, SNU, Republic of Korea.** 2016–2018

- Blockchains and Smart Contracts for Internet of Things
  - Designing a Blockchain Architecture for Internet of Things .
  - Secured D2D transactions of Blockchain for Internet of Things
  - Consensus mechanism and Mining management in Blockchain Networks.
- Routing Attacks Detection of RPL for IoT Networks
  - Studied anti-jamming techniques for improvement of RPL routing protocol.
  - Designed and implemented proposed mechanism for RPL trees in 6LoWPAN.

**Future Internet Laboratory, HUST, Vietnam.** 2013–2015

- Network Virtualization based on SDN
  - Designed a generalized resource allocation framework in support multi-layer network virtualization based on SDN.

**BKAV R&D Center, Hanoi, Vietnam.** 2011–2013

- R&D System Engineer
  - Constructed VPN for connecting Android Mobile Phones using BKAV Digital Certificate.
  - Built and Managing Certificate Authority Services for BKAV R&D Security Center

#### PROFESSIONAL AFFILIATIONS & ACTIVITIES

**Member of Technical Program Committee (TPC)**

- TPC member of several conferences: SCS-NCC2018, SIRS'18, ICCAIS 2018, SIRS'17, SET-CAC'17

#### Reviewer for Journals & Conferences

- International Journal of Distributed Wireless Sensor Networks (2017)
- Several conferences namely SCS-NCC2018, SIRS'18, ICCAIS 2018, SIRS'17, SETCAC'17