Tran Duc Muoi (Muoi Tran)

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Research Interests

Network security; blockchain security and privacy

Education

School of Computing, National University of Singapore   *Singapore*
Ph.D., Computer Science   *08/2016 – Present*

- Advisor: Dr. Min Suk Kang, Assistant Professor
- CAP: 4.33/5.0

University of Engineering and Technology, Vietnam National University   *Hanoi, Vietnam*
B.S., Computer Science   *08/2011 – 07/2015*

- CAP: 3.49/4.0. Honor programme with highest distinction
- Thesis: "Some Improvements for Regular Expression Solving in Z3-Regex"
- Thesis advisor: Associate Professor Hoang Truong

Employment

IBM Blockchain Research, IBM Studio   *Singapore*
Intern Researcher   *05/2018 – 08/2018*

- Supervisor: Dr. Pralhad Deshpande

School of Computing, National University of Singapore   *Singapore*
Research Assistant   *01/2016 – 07/2016*

- Supervisor: Associate Professor Chin Wei Ngan

School of Computing, National University of Singapore   *Singapore*
Intern Researcher   *07/2015 – 01/2016*

- Supervisor: Associate Professor Chin Wei Ngan

Honors & Awards

President's Graduate Fellowship   *2019 – 2020*

- Awarded by National University of Singapore

I&E Practicum@SoC   *2018*

- 10,000 SGD grant

NUS Research Scholarship   *2016 – 2019*

- Awarded by National University of Singapore

Honda Y-E-S Award Vietnam   *2015*

- Awarded by Honda Foundation to 10 Vietnamese students

Best undergraduate thesis defense   *2015*

- Awarded by University of Engineering and Technology, Vietnam National University

1st Prize in Student Scientific Research Contest   *2015*

- Awarded by University of Engineering and Technology, Vietnam National University

GE Foundation Scholar Leadership   *2012*

- Awarded by GE Foundation to 10 best first-year undergraduate students

Publications

1. A Stealthier Partitioning Attack against Bitcoin Peer-to-Peer Network   *San Francisco, CA, USA*
Muoi Tran, Inho Choi, Gi Jun Moon, Anh V. Vu, Min Suk Kang   *05/2020*

- (To Appear) In Proceedings of IEEE Symposium on Security and Privacy (**IEEE S&P**)

2. Practical Verifiable In-network Filtering for DDoS defense   *Dallas, TX, USA*
Deli Gong(*), Muoi Tran(*), Shweta Shinde, Hao Jin, Vyas Sekar, Prateek Saxena, Min Suk Kang   *07/2019*

- (*) Lead authors alphabetically ordered
- In Proceedings of IEEE International Conference on Distributed Computing Systems (**IEEE ICDCS**)
- Acceptance rate: 19.6%

3. On the Feasibility of Rerouting-based DDoS Defenses   *San Francisco, CA, USA*
Muoi Tran, Min Suk Kang, Hsu-Chun Hsiao, Wei-Hsuan Chiang, Shu-Po Tung, Yu-Su Wang   *05/2019*

- In Proceedings of IEEE Symposium on Security and Privacy (**IEEE S&P**)
- Acceptance rate: 11.7% (84 out of 720)

4. Obscuro: A Bitcoin Mixer using Trusted Execution Environments   *San Juan, PR, USA*
Muoi Tran, Loi Luu, Min Suk Kang, Iddo Bentov, Prateek Saxena   *12/2018*

- In Proceedings of Annual Computer Security Applications Conference (**ACSAC**)
- Acceptance rate: 20.1% (60 out of 299)

Teaching

School of Computing, National University of Singapore   *Singapore*
Teaching Assistant

- CS5231 — System Security (Sem1 2017/18)
- CS5321 — Network Security (Sem2 2016/17)
- CS2106 — Introduction to operating systems (Sem2 2016/17)
- CS2104 — Programming language concepts (Sem1 2016/17)

Professional Service

Program committee

- NUS Computer Science Research Week 2019

Conference external reviewer

- 18th World Conference on Information Security Applications (WISA'17)
- 18th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI'17)
- Proceeding of Object-oriented Programming, Systems, Languages, and Applications (OOPSLA'16)

Exhibition presenter

- GovWare 2017 - Singapore International Cyber Week (SICW'17)

References

Dr. Min Suk Kang (advisor)
Assistant Professor

- School of Computing, National University of Singapore
- Email: kangms@comp.nus.edu.sg

Dr. Prateek Saxena (collaborator)
Assistant Professor

- School of Computing, National University of Singapore
- Email: prateeks@comp.nus.edu.sg