Son Dinh

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INDUSTRY EXPERIENCE

Object Computing Inc., Saint Louis, Missouri

- Senior Software Engineer — Jan 2022 – Present
  - Develop and maintain OpenDDS, an open-source implementation of the Object Management Group's Data Distribution Service.
  - Work on client projects that use open-source softwares such as OpenDDS and Micronaut.
- Software Engineer — Feb 2020 – Dec 2021
  - Developed and maintained OpenDDS, an open-source implementation of the Object Management Group's Data Distribution Service.
  - Worked on integrating OpenDDS with the Robot Operating System 2 (ROS 2) through the ROS middleware interface.
  - Worked on client projects that used OpenDDS as the underlying communication framework.

Wala Jsc., Hanoi, Vietnam

- Software Engineer — Aug 2012 – Apr 2013
  - Developed and maintained the backend system for a mobile social media application, which allows users to call, send instant messages, connect and share photos.

VNG Corp., Hanoi, Vietnam

- R&D Engineer — Aug 2011 – Mar 2012
  - Maintained and improved performance of a distributed key-value store for Zing Me, a Vietnamese online social network.

Xener Systems Inc., Hanoi, Vietnam

- R&D Engineer — Jul 2009 – Feb 2011
  - Developed application servers for IP Multimedia Subsystem, a core subsystem of the Third Generation (3G) cellular network. Worked with various multimedia Internet protocols, including Session Initiation Protocol and Session Description Protocol.

EDUCATION

Washington University in Saint Louis, Saint Louis, Missouri, USA

- Ph.D. in Computer Science — Aug 2013 – Jan 2020
  - Advisors: Prof. Christopher Gill, Prof. Kunal Agrawal.
  - Dissertation: Toward Efficient Scheduling for Parallel Real-Time Tasks on Multiprocessors.

Hanoi University of Science and Technology (HUST), Hanoi, Vietnam

- B.E. in Electronics and Telecommunications — Sep 2004 – May 2009
  - Advisor: Prof. Thanh Huu Nguyen.

CONTINUING EDUCATION

Machine Learning, Stanford University, Coursera — Jun 2019

Algorithms II, Princeton University, Coursera — Jan 2019

RESEARCH EXPERIENCE

Washington University in Saint Louis,
Department of Computer Science and Engineering

- Graduate Research Assistant — Aug 2013 – Present
  - Topic: Analysis and Design of Real-Time Scheduling Algorithms and Resource Sharing Protocols for Parallel Tasks.
  - Supervisors: Prof. Christopher Gill and Prof. Kunal Agrawal.

Hanoi University of Science and Technology,
School of Electronics and Telecommunications

- Research Assistant — Nov 2011 – Dec 2012
  - Project: Reducing Energy Consumption in Data Center Networks based on Traffic Engineering (ECODANE), a joint project between HUST and Wuerzburg University, Germany.
  - Supervisors: Prof. Thanh Huu Nguyen, Assoc. Prof. Huong Thu Truong.
- Undergraduate Research Assistant — 2008 – 2009
  - Project: German – Vietnamese Next Generation Network Services Research and Development Testbed (GVNext), a joint project between HUST and Fraunhofer FOKUS Berlin, Germany.

- Supervisor: Prof. Thanh Huu Nguyen.

PUBLICATIONS

JOURNALS

[1] **S. Dinh**, J. Li, K. Agrawal, C. Gill, and C. Lu, "Blocking Analysis for Spin Locks in Real-Time Parallel Tasks", *IEEE Transactions on Parallel and Distributed Systems*, vol. 29, no. 4, Apr 2018.

CONFERENCES

[1] **S. Dinh**, C. Gill, and K. Agrawal, "Efficient Deterministic Federated Scheduling for Parallel Real-Time Tasks", in *Proceedings of* 26^{th} *IEEE International Conference on Embedded and Real-Time Computing Systems and Applications*, South Korea, Aug 2020 (*Best paper candidate*).

[2] **S. Dinh**, C. Gill, and K. Agrawal, "Analysis of Global Fixed-Priority Scheduling for Generalized Sporadic DAG Tasks", arXiv:1905.05119 [cs.DC], 2019.

[3] J. Li, **S. Dinh**, K. Kieselbach, K. Agrawal, C. Gill, and C. Lu, "Randomized Work Stealing for Large Scale Soft Real-Time Systems", in *Proceedings of* 37^{th} *IEEE Real-Time Systems Symposium*, Porto, Portugal, Dec 2016.

TEACHING EXPERIENCE

CSE 522S: Advanced Operating Systems,
Washington University in Saint Louis

- Teaching Assistant — Spring 2018
  - Role: Contributed to the course material, including labs and studios. Held office hours and helped students with the course content.
  - Instructor: Prof. Christopher Gill.

AWARDS & SCHOLARSHIPS

- Vietnam Education Foundation Fellowship Alternate — 2013
  Alternate for receiving financial support for graduate study in the U.S.
- Vietnam's Ministry of Education and Training Scholarship — 2004 – 2009
  For attaining very good academic performance.
- Third Place in Hanoi's Chemistry Olympiad — 2002
  Organized by Hanoi province for high school students excellent in chemistry.

PROFESSIONAL SERVICES

Reviewer: ACM Transactions on Parallel Computing (TOPC), IEEE Transactions on Parallel and Distributed Systems (TPDS), IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS)

LANGUAGES

- English: Professional working proficiency.
- Vietnamese: Native language.

SKILLS

- Programming Languages: C/C++, Java, Perl, Python, OpenMP, CilkPlus, Shell, MATLAB.
- Platforms & Tools: GNU/Linux, macOS, Git, LaTeX.

CERTIFICATE

- Cisco Certified Network Associate, version 3.1 — 2009

REFERENCES

- **Prof. Christopher Gill**
  Professor of Computer Science and Engineering
  Washington University in Saint Louis
  1 Brookings Drive, St. Louis, Missouri 63130, USA
  E-mail: cdgill@wustl.edu

- **Prof. Kunal Agrawal**
  Professor of Computer Science and Engineering
  Washington University in Saint Louis
  1 Brookings Drive, St. Louis, Missouri 63130, USA
  E-mail: kunal@wustl.edu