Genya Ishigaki

Ph.D. student
Advanced Networks Research Lab
Department of Computer Science
The University of Texas at Dallas
Email: gishigaki@utdallas.edu

Address: The University of Texas at Dallas
ECSS4.414
800 West Campbell Rd
Richardson, TX 75080-3021
Homepage: http://genyajoe.github.io/

Education

May 2020 (Expected) — **Ph.D. in Computer Science** from The University of Texas at Dallas
engage in research of survivability problems in multilayer networks enabling the next-generation Virtualized Networks and Cyber Physical Systems under the guidance of Prof. Jason P. Jue.
Courses: Advanced Operating Systems · Design and Analysis of Computer Algorithms · Game Theory · Optical Networks · Performance of Computer Systems and Networks · Algorithmic Aspects of Telecom. Networks · Combinatorics and Graph Algorithms

March 2016 — **M.S. in Engineering** from Soka University, Japan **[GPA: 4.0]**
Department of Information Systems Science
run five-students research group proposing design and routing methodology for scalable Software Defined Networking with Prof. Norihiko Shinomiya.

March 2014 — **B.S. in Engineering** with honors from Soka University, Japan **[GPA: 3.95]**
Department of Information Systems Science

Professional Experiences

May 2018 - present — Course Instructor at The University of Texas at Dallas
CS3305 Discrete Mathematics for Computing II (Genya Ishigaki)

January 2017 - May 2017 — Teaching Assistant at The University of Texas at Dallas
CS4390 Computer Networks (Dr. Zygmunt J. Haas)

April 2016 - August 2016 — Student researcher at Soka University, Japan
Networking Lab led by Prof. Norihiko Shinomiya

April 2014 - March 2016 — Teaching Assistant at Soka University
INFO161 Introduction to Programming with C I & II
INFO251 Mathematical Programming
INFO372 Graph Theory and Algorithms

Research Interests

Survivability problems in layered networks, Graph optimization algorithms, Software Defined Networking

Honors and Awards

Full Scholarship for Ph.D. Study (Japanese government-funded, 2016 - present)
Full Scholarship for Master Study (Japanese government-funded, 2014 - 2016)
NEC C&C Foundation Travel Grant (2015)
Student Research Award of Technical Committee on Circuits and Systems, IEICE ES Society (2014)
Top Graduate of Dept. of Information Systems Science (Soka University, class of 2014)
Soka University Tuition Merit Scholarship (2010 - 2014)
Honor Student of Soka University (2010, 2011, 2012, 2013)

Selected Publications

Journals

1. **Genya Ishigaki**, Riti Gour, Jason P. Jue, "*Improving the Survivability of Clustered Interdependent Networks by Restructuring Dependencies*," IEEE Transactions on Communications, Vol. XX, Issue X, pp. XX-XX, 2018 [Accepted]

2. Riti Gour, **Genya Ishigaki**, Jian Kong, Ashkan Yousefpour, Sangjin Hong, Jason P. Jue, "*Finding Survivable Routes in Multi-domain Optical Networks with Geographically Correlated Failures*," IEEE/OSA Journal of Optical Communications and Networking, Vol. 10, Issue 8, pp. C39-C49, 2018.

3. Ashkan Yousefpour, **Genya Ishigaki**, Riti Gour, Jason P. Jue, "*On Reducing IoT Service Delay via Fog Offloading*," IEEE Internet of Things Journal, Volume: 5, Issue: 2, Apr. 2018.

Conferences

1. **Genya Ishigaki**, Riti Gour, Jason P. Jue, "*Improving the Survivability of Interdependent Networks by Restructuring Dependencies*," 2018 IEEE International Conference on Communications (ICC), May 2018.

2. **Genya Ishigaki**, Riti Gour, Ashkan Yousefpour, NorihikoShinomiya, Jason P. Jue, "*Cluster Leader Election Problem for Distributed Controller Placement in SDN*," 2017 IEEE Global Communications Conference (GLOBECOM), Dec. 2017.

3. **Genya Ishigaki**, Norihiko Shinomiya, "*On Composing a Resilient Tree in a Network with Intermittent Links Based on Stress Centrality*," 2016 IEEE Symposium on Computers and Communication (ISCC), Jun. 2016.

4. **Genya Ishigaki**, Norihiko Shinomiya, "*Controller placement algorithm to alleviate burdens on communication nodes*," 2016 International Conference on Computing, Networking and Communications (ICNC), Feb. 2016.

5. **Genya Ishigaki**, Norihiko Shinomiya, "*Distributed Network Flow Optimization Algorithm with Tie-set Control based on Coloring for SDN*," 2015 International Conference on Computing, Networking and Communications (ICNC), Feb. 2015.

6. **Genya Ishigaki**, Masao Yoshida, Norihiko Shinomiya, "*On maximizing tree reliability based on minimum diameter spanning tree*," 2014 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS), Nov. 2014.

Conferences - Coauthorship

1. Hideo Kobayashi, **Genya Ishigaki**, Riti Gour, Jason P. Jue, Norihiko Shinomiya, "*Embedding Chains of Virtual Network Functions in Inter-Datacenter Networks*" 2018 International Conference on Computing, Networking and Communications (ICNC), Mar. 2018.

2. Riti Gour, Jian Kong, **Genya Ishigaki**, Ashkan Yousefpour, Sangjin Hong, Jason P. Jue, "*Survivable Routing in Multi-domain Optical Networks with Geographically Correlated Failures*," 2017 IEEE Global Communications Conference (GLOBECOM), Dec. 2017.

3. Ashkan Yousefpour, **Genya Ishigaki**, Jason P. Jue, "*Fog Computing: Towards Minimizing Delay in the Internet of Things*," 2017 IEEE EDGE, Jun. 2017.

4. Hideki Shindo, Hideo Kobayashi, **Genya Ishigaki**, Norihiko Shinomiya,"*Multi-Leader Election in a Clustered Graph for Distributed Network Control*," 31st IEEE International Conference on Advanced Information Networking and Applications (AINA 2017), Mar. 2017.

Professional Services

April 2015 - present	IEEE Tokyo Young Professionals (YPs) committee
2017 - present	Peer reviewer for Optical Switching and Networking (Elsevier), IEEE Globecom 2018, IEEE ICC 2018, RNDM 2018, IEEE GCCE 2017, IEEE Globecom 2017
2018	IEEE GCCE 2018 Technical Program Committee

References

Jason P. Jue Ph.D.
Professor in Dept. of Computer Science at the University of Texas at Dallas
Email: jjue@utdallas.edu

Norihiko Shinomiya Ph.D.
Professor in Faculty of Science and Engineering, Soka University
Email: shinomi@soka.ac.jp