

MANAF GHARAIBEH

Department of Computer Science, Princess Sumaya University for Technology (PSUT), Al-Jubaiha - Amman, Jordan

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EDUCATION

Colorado State University

Ph.D. in Computer Science

- Thesis title: "Characterizing the Visible Address Space to Enable Efficient Continuous IP Geolocation"
- Advisor: Prof. Christos Papadopoulos

Fort Collins, CO, USA

May 2020

Yarmouk University

Master of Computer and Information Sciences

- Thesis title: "Light-stemming and Classification of Arabic Text"
- Advisor: Prof. Riyadh Al-Shalabi

Irbid, Jordan

May 2005

Jordan University of Science and Technology

B.S. in Computer Science

Irbid, Jordan

June 2002

WORK EXPERIENCE

Princess Sumaya University for Technology (PSUT)

Assistant Professor

Al-Jubaiha - Amman, Jordan

Fall 2020 - Present

Colorado State University

Teaching Assistant for CS560 (Foundations of Fine-Grain Parallelism)

Fort Collins, CO, USA

Spring 2012

Teaching Assistant for CS545 (Advanced Machine Learning)

Fall 2010

Yarmouk University

Full-time Lecturer

- Taught and coordinated undergraduate courses including: Introduction to Programming, Object Oriented Programming, Data Structures in C++, Operating System Concepts, and Computer Graphics.

Irbid, Jordan

Fall 2005 - Summer 2009

Jordan University of Science and Technology

Lecturer

- Introduction to Programming

Irbid, Jordan

Summer 2005

RESEARCH EXPERIENCE

Colorado State University

Graduate Research Assistant

NetSec Group/Computer Science
Department

Spring 2013 - Fall 2020

- Helped researchers at the University of Southern California with testing a semantic framework tool
- Developed a module to provide the functionality to connect to a live BGPmon stream for BGP routing information
- Analyzed the "DARPA 2009 Intrusion Detection Dataset" and presented a report to help other researchers
- Analyzed large-scale, amplified reflective DDoS attacks that use UDP protocols such as NTP and SSDP
- Implemented a method to detect scanning activities of ports of interest
- Identified Mirai scanning activities observed at a regional ISP and prepared a public dataset of those activities
- Collaborated in work for detecting Domain Generation Algorithms (DGA) -based botnets using DNS traffic
- Designed and implemented a delay-based method to estimate IP addresses co-locality
- Evaluated the reliability of router geolocation in several widely-used geolocation services
- Designed and implemented a method to identify cellular networks from latency patterns
- Developed an efficient delay-based method to identify Internet block movement

PUBLICATIONS

Conference Proceedings

A Look at Router Geolocation in Public and Commercial Databases

Manaf Gharaibeh, Anant Shah, Bradley Huffaker, Han Zhang, Roya Ensafi, Christos Papadopoulos

Proceedings of the 2017 Internet Measurement Conference, London, United Kingdom, 2017

A Functional Approach to Scanner Detection

Robert McAndrew, Manaf Gharaibeh, Haonan Wang, Stephen Hayne, Christos Papadopoulos

Proceedings of the Asian Internet Engineering Conference, Bangkok, Thailand, 2017

Assessing Co-locality of IP Blocks

Manaf Gharaibeh, Han Zhang, Christos Papadopoulos, John Heidemann

Proceedings of 19th IEEE Global Internet Symposium, San Francisco, CA, USA, 2016

BotDigger: Detecting DGA Bots in a Single Network

Han Zhang, Manaf Gharaibeh, Spiros Thanasoulas, Christos Papadopoulos

Proceedings of the 2016 Network Traffic Measurement and Analysis Conference (TMA), Louvain La Neuve, Belgium, 2016

Taming the 800 Pound Gorilla: The Rise and Decline of NTP DDoS Attacks

Jakub Cxyz, Michael Kallitsis, Manaf Gharaibeh, Christos Papadopoulos, Michael Bailey, Manish Karir

Proceedings of the 2014 Conference on Internet Measurement Conference, Vancouver, BC, Canada, 2014

Arabic Text Categorization Using kNN Algorithm

Riyad Al-Shalabi, Ghassan Kanaan, Manaf Gharaibeh

Proceedings of the International Multi Conference on Computer Science and Information Technology (CSIT06), 2006

In Preparation/Under Submission

Delay-based Identification of Cellular Internet Blocks

Manaf Gharaibeh, Christos Papadopoulos, John Heidemann

Under preparation, 2020

Delay-based Identification of Internet Block Movement

Manaf Gharaibeh, Christos Papadopoulos, John Heidemann, Craig Partridge

Under preparation, 2020

Technical Reports

DARPA-2009 Intrusion Detection Dataset

Manaf Gharaibeh, Christos Papadopoulos

Tech. rep., Colorado State University, 2014

TALKS / PRESENTATIONS

Reliability of Router Geolocation in Public and Commercial Databases)

DHS Site Visit

For Collins, CO, USA

November 2017

Assessing co-locality of IP blocks

19th IEEE Global Internet Symposium

San Francisco, CA, USA

April. 2016

A Delay-based Approach to Assess Co-locality of IP Blocks

ANT Meetings at the University of Southern California

Los Angeles, CA, USA

March. 2016

TECHNICAL SKILLS

Languages: C/C++, Perl, R, Python, Java

Miscellaneous: Argus, Weka, Alloy, Shell Scripting, gnuplot, Git, SAS

SERVICES

Conference and Journal Reviewer

IEEE Journal on Selected Areas in Communications (JSAC), IEEE Transactions on Cloud Computing (TCCSI) journal, Transactions on Internet Technology journal (TOIT), IFIP Networking 2017, IEEE INFOCOM conference 2017, and the IEEE ICNP conference 2017.

LANGUAGES

English (near native), and Arabic (native)

REFERENCES

Christos Papadopoulos - Professor

Computer Science Department

Colorado State University

✉ christos@colostate.edu

Craig Partridge - Professor & Department Chair

Computer Science Department

Colorado State University

✉ craig.partridge@colostate.edu

John Heidemann - Professor

Computer Science Department

University of Southern California / ISI

✉ johnh@isi.edu

More references available upon request.