

NODIR KODIROV

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EDUCATION

University of British Columbia

Ph.D. in Computer Science

September 2013 - Present

Vancouver, BC, Canada

I am broadly interested in Systems research. Recently, I have been focusing on datacenter resource scheduling challenges, in particular for networked cloud applications. I have also done some work on Virtual Network Functions.

Konkuk University

M.Sc. in Computer Science & Engineering

September 2008 - August 2010

Seoul, Republic of Korea

Thesis: Enhancing eCos with EDF Scheduling and Lock-Free buffer

Thesis advisor: Doo-Hyun Kim

Tashkent University of Information Technologies

Bachelor in Information & Communication

September 2004 - June 2008

Tashkent, Uzbekistan

Thesis: Organization of working with confidential information in electronic document exchange

Thesis advisor: Rustam Khamdamov

WORK EXPERIENCE

ZeroStack Inc.

MTS Consulting Engineer

September 2016 - November 2016

Mountain View, CA, USA

Continued to work on enterprise applications performance in parallel with my graduate study.

ZeroStack Inc.

MTS Intern; Enterprise Application QoS in OpenStack

May 2016 - September 2016

Mountain View, CA, USA

Extended my work from previous internship to focus on enterprise workloads. Evaluated and improved performance of several applications, such as Hadoop, Memcache, Redis, MySQL and Jenkins, using more advanced VM volume placement. I also developed Cinder scheduler(s) to provide better locality.

ZeroStack Inc.

MTS Consulting Engineer

January 2016 - April 2016

Mountain View, CA, USA

Continued to work on network, storage QoS of private clouds in parallel with my graduate study.

ZeroStack Inc.

MTS Intern; OpenStack Networking

May 2015 - December 2015

Mountain View, CA, USA

Mainly worked with Neutron. Evaluated different network configuration and fine-tuned OpenStack networking for performance and scalability. Also developed OpenStack network benchmark framework.

Electronics and Telecommunications Research Institute

Member of Engineering Staff

September 2010 - July 2013

Daejeon, Republic of Korea

Cloud Data Center Networking project (March 2012 - July 2013)

The project aimed to automate/optimize virtual machine networking. I developed Edge Control Protocol (ECP), and Virtual Station Interface Discovery and Configuration Protocol (VDP) on [ZebOS Network Platform](#). Both of these protocols are based on [IEEE 801.1Qbg](#) standard.

Cloud Computing Management project (September 2010 - March 2012)

The scope of this project was to build a framework to manage compute, storage, and network resources of the Virtual Machines in the Cloud.

RESEARCH EXPERIENCE

Graduate Teaching and Research Assistant

Networks, Systems, and Security Lab

September 2013 - Present

University of British Columbia

I was a TA for following courses at UBC, CPSC 210: Software Construction, CPSC 317: Internet Computing, and CPSC 416: Distributed Systems. I also did research assistantship for several projects that you can see in my publication record at the end of the CV.

Research Assistant

Embedded Computing Lab

September 2008 - August 2010

Konkuk University

I developed a resource scheduling algorithm for the Real-time Operating System ([Embedded Configurable OS](#)) kernel, which was used at the *Unmanned Aerial Vehicle Software* project (supported by the Ministry of Knowledge Economy, Korea). This work later became part of my masters thesis, which also became a conference paper and extended to a journal paper.

Research Assistant

Department of Applied Mathematics and Informatics

March 2008 - May 2008

Moscow State University, Tashkent branch

I designed and implemented secure document exchange system using custom cryptographic algorithm (Private Box Algorithm). This work became part of my undergraduate thesis.

Research Assistant

Department of Information Technologies

January 2007 - February 2008

Tashkent University of Information Technologies

I designed and implemented new encryption algorithm: Private Box Algorithm. I also deployed various security tools on department LAN, including public/private key infrastructure, and firewall.

PRESENTATIONS

VNF Chain Allocation and Management at Data Center Scale

August 23, 2019 at **MSRA** (Microsoft Research Asia), August 22, 2018 at **UWaterloo**; July 25, 2018 at **CMU**; July 23, 2018 at **ANCS'18**.

AWARDS & HONOURS

Four Year Doctoral Fellowship

for International PhD students

September 2014 - September 2019

by University of British Columbia, Canada

Guaranteed financial support of at least CAD \$26,000/year plus tuition for four years of PhD study.

Korean Government IT Scholarship

for International Graduate Students

September 2008 - August 2010

by Institute for Information Technology Advancement, Korea

Fully-funded master degree education at Konkuk University (USD \$32,000/year).

Beruni Scholarship for Outstanding Student in Information Tech.

in Science & Technology

Nov. 2007 - June 2008

by Ministry of Higher & Secondary Education, Uzbekistan

The most prestigious merit-based national science scholarship named after *Biruni*. Award provides a fully-funded, unconditional graduate admission at any postgraduate university of Uzbekistan.

Runner-up for the Presidential Award

in Information Technologies

November 2007

by Ministry of Higher & Secondary Education, Uzbekistan

I was one of three finalists to compete for the Presidential Award between undergraduate students in information technology major. Only one student is awarded each year.

Merit-based Scholarship for Fully-funded Undergraduate Study Sep. 2004 - June 2008
based on national entrance examination *by Uzbekistan government*

A fully-funded bachelors degree education in Tashkent University of Information Technologies.

COLLABORATION & SERVICE

I had an opportunity to work with these amazing students: Haley Li, Syed Mubashir Iqbal, Marlon Ou, Lise Savard, Omar Sabry, Alex Crooks, and Vincent Hui.

I also subreviewed paper(s) for following conferences: [NSDI 2019](#), [ICDCS 2018](#), and [ISSRE 2017](#).

PUBLICATIONS

See knodir.github.io.