NODIR KODIROV

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WORK EXPERIENCE

Huawei Technologies Canada — November 2021 - Present
Senior Researcher — *Vancouver, BC, Canada*

Working on cloud resource scheduling in Distributed Scheduling and Data Engine Lab.

ZeroStack Inc. — May 2015 - November 2016
MTS Intern, MTS Consulting Engineer — *Mountain View, CA, USA*

At ZeroStack, I did internships and consulting. I contributed to making OpenStack-based clouds more stable and improving enterprise cloud application performance. I mostly focused on networking, without shying away from compute and storage.

Electronics and Telecommunications Research Institute — September 2010 - July 2013
Member of Engineering Staff — *Daejeon, Republic of Korea*

I worked on virtual machine networking. I helped implementing Edge Control Protocol and Virtual Station Interface Discovery and Configuration Protocol, which are based on IEEE 801.1Qbg standard. I also evaluated cloud management frameworks, such as OpenStack, OpenNebula, and Eucalyptus.

EDUCATION

University of British Columbia — September 2013 - October 2021
Ph.D. in Computer Science — *Vancouver, BC, Canada*

Dissertation: Datacenter Resource Scheduling for Networked Cloud Applications
Advisors: Ivan Beschastnikh and Alan Hu

Konkuk University — September 2008 - August 2010
M.Sc. in Computer Science & Engineering — *Seoul, Republic of Korea*

Dissertation: Enhancing eCos with EDF Scheduling and Lock-Free Buffer
Advisor: Doo-Hyun Kim

Tashkent University of Information Technologies — September 2004 - June 2008
Bachelor in Information & Communication — *Tashkent, Uzbekistan*

Dissertation: Organization of Working with Confidential Information in Electronic Document Exchange
Advisor: Rustam Khamdamov

RESEARCH EXPERIENCE

Graduate Teaching and Research Assistant — September 2013 - October 2021
Systopia Lab — *University of British Columbia*

At UBC, I was a teaching assistant for CPSC 210: Software Construction, CPSC 317: Internet Computing, and CPSC 416: Distributed Systems courses. I was also a research assistant for many projects, some of which got published.

Research Assistant — September 2008 - August 2010
Embedded Computing Lab — *Konkuk University*

I developed a resource scheduling algorithm for the Real-time Operating System (Embedded Configurable OS) kernel, which was used at the unmanned helicopter. This work later became part of my masters thesis, and got published in a conference and a journal (the extended version).

Research Assistant March 2008 - May 2008
Department of Applied Mathematics and Informatics *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 January 2007 - February 2008
Department of Information Technologies *Tashkent University of Information Technologies*

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

AWARDS & HONOURS

Four Year Doctoral Fellowship September 2014 - September 2019
for International PhD students *by University of British Columbia, Canada*

Korean Government IT Scholarship September 2008 - August 2010
for International Graduate Students *by Institute for Information Technology Advancement, Korea*

Beruni Scholarship for Outstanding Student in Information Tech. Nov. 2007 - June 2008
in Science & Technology *by Ministry of Higher & Secondary Education, Uzbekistan*

Runner-up for the Presidential Award November 2007
in Information Technologies *by Ministry of Higher & Secondary Education, Uzbekistan*

Scholarship for Fully-funded Undergraduate Study September 2004 - June 2008
merit-based; uses ranking in the national entrance examination *by Uzbekistan government*

SELECTED PUBLICATIONS

See longer version in my Google Scholar profile and even longer in knodir.github.io/publications.

- Parking Packet Payload with P4, Swati Goswami, **Nodir Kodirov**, Craig Mustard, Ivan Beschastnikh, Margo Seltzer, The 16th International Conference on emerging Networking EXperiments and Technologies (CoNEXT), 2020.
- VNF Chain Allocation and Management at Data Center Scale, **Nodir Kodirov**, Sam Bayless, Fabian Ruffy, Ivan Beschastnikh, Holger H. Hoos, Alan J. Hu. The 14th ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS), 2018.
- Scalable Constraint-Based Virtual Data Center Allocation, Sam Bayless, **Nodir Kodirov**, Ivan Beschastnikh, Holger H. Hoos, Alan J. Hu. International Joint Conference on Artificial Intelligence (IJCAI'17), 2017.

PRESENTATIONS AND TALKS

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**.