NODIR KODIROV

nodir@nodir.me ◇ http://nodir.me

WORK EXPERIENCE

Huawei, Canadian Research Institute — 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

- [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.

See a longer list at [knodir.github.io/publications]() or an extra longer one in my [Google Scholar profile]().

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**.