Ahmed MOHAMED ABDELMONIEM SAYED

Curriculum Vitae

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Education

2013-2017	**Ph.D., Computer Science and Engineering (GGA 4.0/4.2)**, *Computer Science and Engineering Department, School of Technology, Hong Kong University of Science and Engineering*, Hong Kong.

PhD Thesis

Title	*On Improving The Performance of TCP Applications in Public Cloud Networks*
Supervisor	Assoc. Prof. Brahim Bensaou (CSE, HKUST)
Committee	Prof. Gary Chan (CSE, HKUST), Prof. Danny Tsang (ECE, HKUST), Assoc. Prof. Kai Chen (CSE, HKUST), Assoc. Prof. Chun Tung Chou (UNSW, Australia)
Description	Proposing efficient schemes that have demonstrated to achieve considerable performance gains for cloud applications via mathematical modeling, empirical analysis, simulation, hardware prototyping and real-testbed implementation and experiments on various network scenarios and topologies.
2008–2012	**M.Sc., Computer Science (Distinction, ranked 1st)**, *Computer Science Department, Faculty of Computers and Information, Assiut University*, Egypt.

Masters Thesis

Title	*Routing Optimization of Mobile AD-HOC Networks Based on Ant Colony Algorithms*
supervisor	Prof. Hosni Ibrahim, Prof. Marghany H. Mohamed, Asst. Prof. Abdel-Rahman Hedar
Description	Proposing efficient routing optimizations based on Ant Colony Algorithms (ACO) that have demonstrated to achieve considerable performance gains for Mobile Ad-Hoc Networks (MANET) routing protocols via mathematical modeling, simulation analysis and implementation on various network scenarios and topologies.
2003–2007	**B.Sc., Computer Science (Distinction with Honors, ranked 2nd)**, *Computer Science Department, Faculty of Computers and Information, Assiut University*, Egypt.

Bachelors Thesis

Title	*Enabling Video Calls over Internet and Bluetooth* - Ministry of Telecommunications, Egypt
Supervisor	Prof. Yousef B. Mahdi
Description	Full system implementation and delivery of a fully functional system for enabling video calls over bluetooth and Internet using C# as back-end server and J2ME as the front and back-end on various camera-ready mobile devices.
2000–2003	**Egyptian General Secondary Examination (98.2%, ranked in the top 200 out of 400K+ student)**, *Almoshir Ahmed Esmail Secondary School*, Assiut, Egypt.

Work Experience

2018–Now	**Tenured Assistant Professor**, *Faculty of Computers and Information, Assiut University*, Egypt.
Duties	Conducting scientific research in computer science and publishing high quality papers. Teaching Computer Science courses at both the undergraduate and postgraduate levels such as ***Software Engineering***, ***Project Management*** and ***Software Development and Technical Practice***. Performance assessment of students in weekly self-practice tasks. Interacting with students within office hours. Preparing and mentoring written examination and course projects
2017-2018	**Senior Researcher**, *Future Network Theory Lab. Huawei Technologies Investing Co. Ltd.*.
Duties	Conducting advanced research in network control, traffic engineering and resource management. Leading the system research directions. Research proposals preparation. Research publications. Patent development. Collaboration work management. Recruitment.
Contributions	I have contributed with our team in the redefinition and formulation of the ADN vision and its system implementation and evaluation both in simulation and real-testbed environment. ADN (and specifically fast-slow control) is a major long-term project in the lab which we are continuously working on and so far resulted in few paper and patent submissions. Have participated and taken lead on several projects, few of the projects are direct collaboration with renowned professors in Stanford, CalTech, Cornell, CUHK, CityU, HKUST, Nanjing, and Tsinghua Universities. Moreover, finished a stalled project in a record time. Other projects involved working closely with 4 interns to bring them to completion. Been actively responsible for the recruitment process for new hires and interns to our lab during different venues (e.g., NSDI & INFOCOM, etc). Successfully recruited for the Lab 3 new full-time hires and 1 intern.
2012–2018	**Assistant Lecturer**, *Faculty of Computers and Information, Assiut University*, Egypt.
Duties	Conducting scientific research in computer science and publishing high quality papers. Pursuing my Doctorate degree. Teaching in classes and laboratories ***computer networking***, ***Network Programming*** and ***Network Analysis and Design*** to undergraduate students. Performance assessment of students in weekly self-practice tasks. Interacting with students within office hours. Mentoring and grading written examination and course projects
2018-Now	**Technical Advisor**, *DeepCloud - a Decentralized AI-Driven Cloud Computing Infrastructure.*
Duties	Advising throughout the development of CloudMind project, including but not limited to, advising the development of white paper and technical paper, advising the development of the prototype. Consultation on the technical questions and technical problem solutions. Advising on the technical-related activities that is required for the completion of the Initial Coin Offering campaign.
Fall 2017	**Teaching Assistant**, *Department of Computer Science and Engineering, The Hong Kong University of Science and Engineering.*.
Duties	Assist in teaching ***Computer Networks: An Internet-Perspective - CSIT5610*** MSCIT course to post-graduate students. Grading examination papers. Students' consultation. Examination proctoring.
Spring 2017	**Linux Kernel Network Programming Assignment/Quiz Preparer**, *Department of Computer Science and Engineering, The Hong Kong University of Science and Engineering.*.
Fall 2016	**Teaching Assistant**, *Department of Computer Science and Engineering, The Hong Kong University of Science and Engineering.*.
Duties	Assist in teaching ***Computer Networks - COMP 5621*** PG Core and ***Computer Networks: An Internet-Perspective - CSIT5610*** MSCIT course to post-graduate students. Grading examination papers. Students' consultation. Examination proctoring.

2007–2012	**Teaching Assistant**, *Faculty of Computers and Information, Assiut University*, Egypt.
Duties	Conducting scientific research in computer science and publishing high quality papers. Pursuing my Masters degree. Teaching in classes and laboratories **computer networking**, **Network Programming**, **Object-Oriented Programming using C++**, **Introduction to JAVA Programming**, **Introduction To Computers**, **Software Testing**, **Data Structure**, **Algorithms**, **Artificial Intelligence**, **Operating Systems**, **Distributed Database** and **IT Project Management** to undergraduate students. Performance assessment of students in weekly lab tasks. Interacting with students within office hours. Mentoring and grading written examination and course projects

Research Interests

- Computer Networking, Distributed Systems and Cloud Computing.
- Congestion Control and Traffic Engineering.
- Software Defined Networking and Network Function Virtualization.
- Feedback Control, Hybrid and Switched systems and Stability Analysis.
- Mobile Ad-hoc Networks and Wireless Sensors Network.
- Artificial Intelligence, Optimization and Genetic algorithms.

FYP & Research Student Supervision

2017-Now	**M.Sc. Student Intern**, *Implementation of an SDN-based Fast-Slow Control system to realise an operational prototype of the Application-Driven Networking Framework.*
2007-2013	**FYPs Undergraduate Students**, *Management System for controlling Wireless Access Points, HoneyPot Server Application, WiiMote Body Tracking & Robot Control System, Steganography Application to hide data in images and videos, Remote Desktop Control using Mobile Phones, Mobile Application in Traffic Service, Tourist Heaven - a tourist social networking application and Egyptian tourism company web system.*

Honors, Awards and Scholarships

2013–2017	**Hong Kong PhD Fellowship (HKPFS) award**, *HK Research Grants Council.*
2013–2017	**HKPFS research travel grant award**.
2017	**Student Participation Grant**, *Local Computer Networks (IEEE LCN)*, IEEE CompSoc.
2015	**Travel Grant award**, *Global Communications (GlobeCom) conference*, IEEE ComSoc.
2007	**FYP sponsorship award**, *Ministry of Telecommunications*, Egypt.
2003-2007	**Undergraduate Distinction award**, *for TGA of 85%-above*, Assiut University.
2003–2007	**Dean's Honors**, *for TGA of 85%+*, Faculty of Computers and Information, Assiut University.

Programming, Presentation, Modeling and System Skills

Presentation	Power Point, Beamer	Typography	LaTeX, MicroSoft office
Modeling	Mathematical, queueing theory, MatLab, Simulink		
Info. Extraction	Awk, Gnuplot, Perl, Excel, SPSS		
Simulation	NS-2, NS-3, OPNET Modeler, Mininet		
Programming, Web & DB	C, C++, C#, Java, Python, Git, Network Programming, SDN Applications, Ryu SDN Controller, P4/Tofino, Verilog, Tcl, shell scripting, HTML, PHP, SQL Server, Oracle DB		

System Prototyping	Linux Kernel Modules, NetFilters, TCP/IP Stack, RDMA/RoCE/PFC, NetFPGA, Kubernetes, Kprobes, Open vSwitch, OVN, OpenFlow, OpenStack, DPDK, JUJU, Ubuntu MASS, Broadcom OpenNSL & OFDPA API, Amazon EC2, Microsoft Azure
Virtualization	KVM, Qemu, Xen Hypervisor, Virtual Box
OS	Linux (Desktop/Server), Windows (Pro/Server), MacOS, Open Network Linux, SONiC

Projects Accomplished

- Implementation, Evaluation and Analysis of Efficient, Scalable and Easily-Deployable Congestion Control and Traffic Management Schemes in Data Center Networks and Cloud Computing Environments, 2013–2017
- Design, Implementation and Analysis of various routing protocols optimized for Mobile Ad-Hoc Networks (MANET) via leveraging Artificial Intelligence algorithms inspired from Ant Colonies, 2008–2012
- Implementation of a complete system for enabling video calls over bluetooth and Internet using C# as back-end server and J2ME as the mobile front-end, 2007

Personal Strengths

- Resilience, Eager to learn, Critical thinking, Objective-oriented, Good team player, Good listener and speaker, Sense of humor, and Work ethics compliant.

Language Proficiencies

Arabic	Native	*Listening, Reading, Speaking and Writing*
English	Fluent	*Listening, Reading, Speaking and Writing*
Chinese	Basic	*Listening, Reading, Speaking and Writing*
Japanese	Basic	*Listening, Reading, Speaking and Writing*

Professional Membership

IEEE	IEEE and IEEE ComSoc Society Graduate Student Member
Cisco	Cisco Networking Academy Certified Instructor and FCI Assiut Uni Academy Leader.
Comp Soc	Hong Kong Computer Society Graduate Student Member.

Professional Courses and Certification

Cisco	Cisco Certified Networking Associate (CCNA)
Oracle	Oracle Database Administration (Oracle DBA)

Surplus Courses

HKUST	ELEC4320 - FPGA-based Design	ELEC4010G - Control System Design
	COMP4511 - System and Kernel Programming in Linux	
	COMP6611A - Data Center Networks and Cloud Computing	
	COMP6611B - Cloud Computing and Data Analysis Systems	
	FINA6900N - Startup Financing and Operations	
	IELM5570 - Network Optimization in Transport Systems	
Stanford	CVX101 - Convex Optimization	
MIT	6.00.1x - Introduction to Computer Science and Programming Using Python	
UPValencia	DC201x - Dynamics and Control	
Microsoft	DAT202.1x - Processing Big Data with Hadoop in Azure HDInsight	

Professional Development Courses

HKUST
Effective Teaching Skills	Marking & Grading
High-Tech Entrepreneurship	Understand the World of Work
What Takes to be a Good Researcher	Conducting Labs
Effective Presentation for Teaching	How to Write a Journal Paper
How to Write CS Papers	How to Get Published
Research ethics: Communities, choices, and values	
Balancing Time between TA Duties and Research	
Presenting Myself Through a Winning Profile	

Assiut Uni
Effective and Efficient Presentation	Academic Work and Research Ethics
Scientific Publishing	Teaching Methodologies and Skills
Credit Hour System	Time and Meeting Management
Quality Assurance of Education Process	
Communication Skills for Different Educational Approaches	

Voluntary Services

Reviewer
- ACM SIGCOMM 2018
- IEEE Conference on Network Protocols 2018 (IEEE ICNP)
- IEEE Transactions on Mobile Computing (IEEE TMC)
- The Computer Journal by Oxford Academic
- The Arabian Journal for Science and Engineering (AJSE)
- International Journal of Systems, Control and Communications (IJSCC)
- 36th IEEE International Performance Computing and Communications Conference (IPCCC'2017)
- 41st IEEE Conference on Local Computer Networks (LCN'2016)
- 18th ACM International Conference on Modeling and Simulation of Wireless and Mobile System (MSWiM'2015)
- International Conference on Advances in Computing, Communications and Informatics (ICACCI'2014)

TPC
- 87th IEEE International Vehicular Technology Conference (VTC'2018)
- International Conference on Computer Applications and Information Security (ICCAIS'2018)
- Saudi Computer Society - National Computer Conference (SCS-NCC'2018)
- International Conference on Computer Intelligent Systems and Networking (ICCISN'2018)
- IEEE World Symposium on Computer Applications and Research (WSCAR'2017)
- International Conference on Computers, Data Management and Technology Applications (ICCDMTA'2017)
- International Conference on High Performance Compilation, Computing and Communications (HP3C'2015)
- International Conference on Signal Processing and Data Mining (ICSPDM'2015)
- International Bio-Metrics and Smart Government Summit (IBMSGS'2014)
- IEEE World Symposium on Computer Applications and Research (WSCAR'2014)

References - available upon request

Assoc. Prof.   Brahim Bensaou   *CSE Dept., HKUST, brahim@cse.ust.hk*

Assoc. Prof.	Kai Chen	*CSE Dept., HKUST, kaichen@cse.ust.hk*
Dr.	Bai Bo	*Huawei's Future Network Theory Lab, baibo8@huawei.com*
Dr.	Hengky Susanto	*Huawei's Future Network Theory Lab, hengky.susanto@huawei.com*
Dr.	James Amuda Abu	*Huawei's Future Network Theory Lab, amuda.james@huawei.com*
Dr.	Wang Min	*Lenovo Center of Cloud Computing and Big Data, mwang14@lenovo.com*
Asst. Prof.	Pan Hui	*CSE Dept., HKUST, panhui@cse.ust.hk*
Prof.	Marghny H. Mohamed	*CS. Dept., Assiut Uni, marghny@aun.edu.eg*
Assoc. Prof.	Abdel-Rahman Hedar	*CS. Dept., Assiut Uni, hedar@aun.edu.eg*

Research Accomplishments-see [Google Scholar Citations](#)

International Refereed Journal Publication

- **Ahmed M. Abdelmoniem**, Hengky Susanto, Sophie Jiang, David Hui, Bai Bo and Zhang Gong **"An Efficient and Scalable Network Control FrameWork: From Theory to Practice"**. *Under Preparation.*

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"A Cross-Layer Approach to Alleviate The Inadequacy of TCP Retransmission Timeout in Data Centers"**. *Pending Submission.*

- **Ahmed M. Abdelmoniem**, Brahim Bensaou and David Hui. **"Analysis, Design and Synthesis of a Hysteresis TCP-AQM for Data Center Networks"**. *Pending Submission.*

- **Ahmed M. Abdelmoniem**, Brahim Bensaou. **"An Efficient Network State Probing for Keeping Data-Center Network Latencies Under Control Using Commodity Switches"**. *Pending Submission.*

- Jiaqing Dong, Chen Tian, **Ahmed M. Abdelmoniem**, Huaping Zhou, Bo Bai, Hao Yin, Gong Zhang. **"Uranus: Congestion-proportionality among Slices based on Weighted Virtual Congestion Control"**. *Submitted - Under Review.*

- Amuda James Abu, Brahim Bensaou and **Ahmed M Abdelmoniem**. **" Performance of the Pending Interest Table in Content-Centric Networks in the presence of Interest Blocking and Retries"**. *Submitted - Under Review.*

- **Ahmed M. Abdelmoniem**, Brahim Bensaou, and Amuda James Abu. **"Mitigating Incast-TCP Congestion in Data Centers with SDN"**. *Annals of Telecommunications - Springer. Special issue on Cloud Communications and Networking.*

- **Ahmed M. Abdelmoniem**, Hosny M. Ibrahim, Marghny H. Mohamed, and Abdel-Rahman Hedar. **"Ant Colony and Load Balancing Optimizations for AODV Routing Protocol"**. *International Journal of Sensor Networks and Data Communications*, volume 1, 2011. doi:10.4303/ijsndc/X110203

International Refereed Conference Publications

- **Ahmed M. Abdelmoniem**, Hengky Susanto and Bai bo **"FastControl: Achieving Bandwidth-Guarantee and Bounded Delay via an End-Host TCP-based Rate Control"**. *Under Preparation.*

- Sophie Jiang, **Ahmed M. Abdelmoniem**, Hengky Susanto and Bai Bo, **"Theoretical Analysis of the Slow-Fast Network Control System"**. *Pending Submmission.*

- Chen Ge, Kai Chen, Lei Chen, **Ahmed M. Abdelmoniem**, Zhang Gong, Hongtao Bei, **"P4COM: Leverage Programmable Data Plane to Fuel Distributed Applications"**. *Submitted - Under Review.*

- **Ahmed M. Abdelmoniem**, Hengky Susanto, Sophie Jiang, Bai bo and Zhang Gong **"Sphinx: Multi-Scale Decoupling of Network Control"**. *Submitted - Under Review.*

- **Ahmed M. Abdelmoniem**, Brahim Bensaou and Hengky Susanto. **"Controlling Latency in Data Center Networks via Active Congestion-Probing"**. *Submitted - Under Review.*

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Hysteresis-based Active Queue Management for TCP Traffic in Data Centers"**. *Submitted - Under Review.*

- **Ahmed M. Abdelmoniem**, Brahim Bensaou, Victor Barsoum **"IncastGuard: An Efficient TCP-Incast Congestion Effects Mitigation Scheme for Data Center Network"**. Accepted In *Proceedings of IEEE Global Communications Conference (IEEE GlobeCom)*, UAE, Dec 2018.

- Wenwen Fu, Tao Li, Hengky Susanto, **Ahmed M. Abdelmoniem**, Bo Bai, and Zhigang Sun, **"STRIDE: Single-Trip-time based Reliable Data Transport Protocol for the Reconfigurable Cloud"**. Accepted In *Proceedings of IEEE Global Communications Conference (IEEE GlobeCom)*, UAE, Dec 2018.

- **Ahmed M. Abdelmoniem**, Brahim Bensaou and Hengky Susanto. **"Starting on the Right Foot: Congestion-Probing on Connection Setup to Control Latency in Data Center"**. Accepted In *IEEE Conference on Local Computer Networks (IEEE LCN)*, Chicago, Oct 2018.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Curbing Timeouts for TCP-Incast in Data Centers via A Cross-Layer Faster Recovery Mechanism"**. *Accepted - IEEE Conference on Computer Communications (IEEE INFOCOM)*, Honolulu, HI, April 2018.

- Abadhan S. Sabyasachi, H M Dipu Kabir, **Ahmed M. Abdelmoniem**, Subrota K. Mondal. **"A Resilient Auction Framework for Deadline-Aware Jobs in Cloud Spot Market"**. *IEEE 36th Symposium on Reliable Distributed Systems (SRDS)*, Hong Kong, Sept 2017.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Enforcing Transport-Agnostic Congestion Control via SDN in Data Centers"**, In *IEEE Conference on Local Computer Networks (IEEE LCN)*, Singapore, Oct 2017.

- **Ahmed M Abdelmoniem**, Brahim Bensaou and Amuda James Abu. **"SICC: SDN-based Incast Congestion Control for Data Centers"**. *Proceedings of IEEE International Conference on Communications (IEEE ICC)*, Paris, France, May 2017.

- Amuda James Abu, Brahim Bensaou, **Ahmed M Abdelmoniem**. **"Inferring and Controlling Congestion in CCN Via the Pending Interest Table Occupancy"**. Proceedings of the 40th IEEE Conference on Local Computer Networks (IEEE LCN), Dubai, UAE, Oct. 2016

- **Ahmed M Abdelmoniem**, Brahim Bensaou, Amuda James Abu. **"HyGenICC: Hypervisor-based generic IP congestion control for virtualized data centers"**. In *Proceedings of IEEE International Conference on Communications (IEEE ICC)*, Kuala Lumpur, Malaysia, May 2016.

- Amuda James Abu, Brahim Bensaou, **Ahmed M Abdelmoniem**. **"A Markov Model of CCN Pending Interest Table Occupancy with Interest Timeout and Retries"**. In *Proceedings of IEEE International Conference on Communications (ICC)*, Kuala Lumpur, Malaysia, May 2016.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Efficient Switch-Assisted Congestion Control for Data Centers: an Implementation and Evaluation"**. In *Proceedings of the IEEE International Performance Computing and Communications Conference (IPCCC) 2015*, Nanjing, China, Dec 2015.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Incast-Aware Switch-Assisted TCP Congestion Control for Data Centers"**. In *Proceedings of IEEE Global Communications Conference (IEEE GlobeCom)*, San Diego, USA, Dec 2015.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Reconciling Mice and Elephants in Data Center Networks"**. In *Proceedings of IEEE International Conference on Cloud Networking (IEEE CloudNet)*, Niagara Falls, Canada, Aug. 2015

- **Ahmed M. Abdelmoniem**, Hosny M. Ibrahim, Marghny H. Mohamed, and Abdel-Rahman Hedar. **"An ant colony optimization algorithm for the mobile ad hoc network routing problem based on AODV protocol"**. In *Proceedings of the 10th IEEE International Conference on Intelligent Systems Design and Applications (IEEE ISDA)*, Cairo, Egypt, Nov. 2010.

Patents

- Hengky Susanto and **Ahmed M. Abdelmoniem "MX-ECN: Multi-Level Queue Congestion Notification Scheme"**. In *Under review.*

Oral Presentations and Posters

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Curbing Timeouts for TCP-Incast in Data Centers via A Cross-Layer Faster Recovery Mechanism"**. *Accepted - IEEE Conference on Computer Communications (IEEE INFOCOM)*, Honolulu, HI, April 2018.

- Abadhan S. Sabyasachi, H M Dipu Kabir, **Ahmed M. Abdelmoniem**, Subrota K. Mondal. **"A Resilient Auction Framework for Deadline-Aware Jobs in Cloud Spot Market"**. *IEEE 36th Symposium on Reliable Distributed Systems (SRDS)*, Hong Kong, Sept 2017.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Enforcing Transport-Agnostic Congestion Control via SDN in Data Centers"**, In *IEEE Conference on Local Computer Networks (IEEE LCN)*, Singapore, Oct 2017.

- **Ahmed M Abdelmoniem**, Brahim Bensaou and Amuda James Abu. **"SICC: SDN-based Incast Congestion Control for Data Centers"**. *Interactive Sessions of IEEE International Conference on Communications (IEEE ICC)*, Paris, France, May 2017.

- **Ahmed M Abdelmoniem**, Brahim Bensaou, Amuda James Abu. **"HyGenICC: Hypervisor-based generic IP congestion control for virtualized data centers"**. *Regular Presentation Sessions in IEEE International Conference on Communications (IEEE ICC)*, Kuala Lumpur, Malaysia, May 2016.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou. **"Incast-Aware Switch-Assisted TCP Congestion Control for Data Centers"**. *Regular Presentation Sessions of IEEE Global Communications Conference (IEEE GlobeCom)*, San Diego, USA, Dec 2015.

Invited Abstracts/Keynotes/Talks

- **Ahmed M. Abdelmoniem**. **"VRC: Fast and Slow Control for Bandwidth Guarantee and Bounded-Delay in Data Centers"**. *Joint Workshop among Huawei's Research Labs and Advisors*, Beijing, Mar. 2018.

- **Ahmed M. Abdelmoniem**. **"Improving ApplicationsâĂŹ Performance in the Cloud and the Road toward Application Driven Networking"**. *Invited Talk, School of Science and Technology, Singapore University of Social Sciences (SUSS)*, Singapore, Nov. 2017.

- **Ahmed M. Abdelmoniem**. **"Cloud Networking: Current Trends, Problems and Some Solutions"**. *Keynote Speech 7th IEEE International Conference on Intelligent Computing and Information Systems (IEEE ICICIS)*, Cairo, Egypt, Jan. 2016.

Technical Reports

- **Ahmed M. Abdelmoniem** and Brahim Bensaou, **"Switch-based Schemes for TCP Performance Enhancement in Data Centers: Design, Synthesis and Evaluation"**. Tech. Report. HKUST-CS17-03.

- **Ahmed M. Abdelmoniem** and Brahim Bensaou, **"End-host Timely TCP Loss Recovery via ACK Retransmission in Data Centres"**. Tech. Report. HKUST-CS17-02.
- **Ahmed M. Abdelmoniem** and Brahim Bensaou, **"Control Theory Based Hysteresis Switch for Congestion Control in Data Centers"**. Tech. Report. HKUST-CS17-01.
- **Ahmed M. Abdelmoniem** and Brahim Bensaou, **"SDN-based Generic Congestion Control Mechanism for Data Centers: Implementation and Evaluation"**. Tech. Report. HKUST-CS16-02
- **Ahmed M. Abdelmoniem** and Brahim Bensaou, **"SICC: SDN-based Incast Congestion Control Framework for Data Centers: Implementation and Evaluation"**. Tech. Report. HKUST-CS16-01.
- **Ahmed M. Abdelmoniem** and Brahim Bensaou, Generic **"Hypervisor-based congestion control for data centers: Implementation and evaluation"**. Tech. Report. HKUST-CS15-03.

Thesis

- **Ahmed M. Abdelmoniem**, **"On improving the performance of TCP applications in public cloud networks"**. Ph.D. Thesis, HKUST, Hong Kong, `https://lbezone.ust.hk/bib/991012554564103412`, 2017.
- **Ahmed M. Abdelmoniem**, **"Routing Optimization of Mobile AD-HOC Networks Based on Ant Colony Algorithms"**. M.Sc. Thesis, Assuit University, Egypt, `http://www.aun.edu.eg/thesis_files/4341.pdf`, 2012.