

Muhammad Ishaq

5.19 Informatics Forum, University of Edinburgh, EH8 9AB, Edinburgh, UK

m.ishaq@ed.ac.uk

+44-7552-952250

Education

- 2018 - ... ◇ **Ph.D. in Computer Science** at The University of Edinburgh, Edinburgh, UK.
Advisors: Dr. Vassilis Zikas, Dr. Aggelos Kiayias

- 2016 - 2018 ◇ **M.Sc. in Computer Science** at Rensselaer Polytechnic Institute (RPI), New York, USA.
Courses: Cryptography & Network Security I, Cryptography & Network Security II, Security Topics, Design & Analysis of Algorithms, Program Analysis, Software Verification

- 2003 - 2007 ◇ **B.S. (Hons) in Computer Science & Engineering** at the University of Engineering & Technology (UET), Lahore, Pakistan.
Courses: Object Oriented Programming, Data Structures & Algorithms, Discrete Mathematics, Numerical Methods, Operating Systems, Software Engineering, Database Management Systems, Graphics and Image Processing, System Programming

Publications

1. Ishaq, M., Milanova A., Zikas V. (2019). **Efficient MPC via Program Analysis: A Framework for Efficient Optimal Mixing** in *ACM Conference on Computer and Communications Security, CCS 2019*

2. Tsikhanovich, M., Magdon-Ismail, M., Ishaq, M., Zikas, V. (2019). **PD-ML-Lite: Private Distributed Machine Learning from Lightweight Cryptography** in *Information Security Conference, ISC 2019*

Conference Talks

1. **PD-ML-Lite: Private Distributed Machine Learning from Lightweight Cryptography** at *ISC 2019*

Teaching Experience

- Spring 2019 ◇ **Teaching Assistant.** School of Informatics, University of Edinburgh, Edinburgh, UK. **Course:** Introduction to Modern Cryptography

- Spring 2017 -
Spring 2018 ◇ **Teaching Assistant.** Rensselaer Polytechnic Institute (RPI), Troy, New York. **Course:** Computer Organization.

- Fall 2016 ◇ **Teaching Assistant.** Rensselaer Polytechnic Institute (RPI), Troy, New York. **Course:** Cryptography & Network Security I.

Scientific Service

- External Reviewer ◇ **2019:** ISC, CCSW. **2018:** Eurocrypt, Indocrypt.

- LFCS Student Representative ◇ **Fall 2018 - Present.** School of Informatics, University of Edinburgh, Edinburgh, UK.

Work Experience

- 2019 - ... ◇ **Simons Institute for the Theory of Computing, UC Berkeley.** Visiting Scholar
- 2019 - ... ◇ **Stealth Software Technologies Inc., USA.** Independant Consultant
- 2016 ◇ **Gigster, USA.** Freelance Engineer
- 2013 - 2016 ◇ **Involution, Pakistan.** Cofounder/Programmer
- 2010 - 2013 ◇ **Demibooks, USA.** Lead Developer
- 2010 ◇ **Gameview Studios, Pakistan.** Lead Engineer
- 2008 - 2010 ◇ **Tintash, Pakistan.** Lead Engineer
- 2006 - 2007 ◇ **Techlogix, Pakistan.** Software Engineer

Achievements

- 2016 ◇ Developer of the Quarter for Q3 at Gigster
- 2013 ◇ Rescued Demibooks Printshop from development hell
- 2012 ◇ Coauthor of patent goo.gl/FlwH4S
- 2011 ◇ Conducted iOS training program (2 months) with Institute of Emerging Technologies (IET)
- 2010 ◇ Invited Talk in CodeWeek on Objective C memory management
- 2010 ◇ Tech. Lead (backend+frontend) for Titans vs. Olympians, million+ users
- 2008 ◇ Tech. Lead for Fishing Frenzy, million+ downloads
- 2007 ◇ UET Medal for overall best performance in B.S. Computer Science & Engineering
- 2006 ◇ Overall Best Project prize for senior year project, Information Technology Exhibition and Competition (ITEC) 2006

Skills

Programming: Python, C++, Swift, Objective C. **Version Control:** Git, Subversion. **Build Tools:** Cmake.
Spoken Languages: Urdu, English, Saraiki