

# Rinat Tagirov

RESEARCH ASSOCIATE

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## Education

### ETH Zürich (Swiss Federal Institute of Technology Zürich)

Zürich, Switzerland

DOCTOR OF SCIENCES

Sep. 2011 - Oct. 2016

- Thesis Title: Physical Understanding of Solar Irradiance in UV and Radio Wavelengths.
- Scientific Advisors: Dr. Alexander Shapiro, Prof. Dr. Werner Schmutz

### Saint-Petersburg State University

Saint-Petersburg, Russia

SPECIALIST DIPLOMA IN ASTRONOMY

Sep. 2006 - Jun. 2011

- Thesis Title: Physical Conditions in Molecular Clouds at High Redshifts.
- Scientific Advisor: Dr. Alexandre Ivanchik

## Skills

**Science** NLTE Radiative Transfer, Solar Irradiance Modeling

**Programming** Fortran, Python, Bash, LaTeX, IDL

**Languages** Russian (native), English (fluent), German (basic)

## Experience

### Imperial College London

London, UK

RESEARCH ASSOCIATE

Oct. 2016 — PRESENT

- Developed NESSY for its implementation in 1.5D solar irradiance calculations, which included:
  - merging the ATLAS9 code with the NLTE block of NESSY;
  - implementation of mixed NLTE/LTE calculations in NESSY.

### Physical Meteorological Observatory Davos

Davos, Switzerland

PHD STUDENT

Sep. 2011 — Sep. 2016

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### Ioffe Physical-Technical Institute

Saint-Petersburg, Russia

RESEARCH ASSISTANT

Sep. 2010 - Jun. 2011

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## Extracurricular Activity

### B10S (B1t On the Security, Underground hacker team)

S.Korea

CORE MEMBER

Nov. 2011 - PRESENT

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

### WiseGuys (Hacking & Security research group)

S.Korea

MEMBER

Jun. 2012 - PRESENT

- Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.
- Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

### PoApper (Developers' Network of POSTECH)

Pohang, S.Korea

CORE MEMBER & PRESIDENT AT 2013

Jun. 2010 - Jun. 2017

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

## PLUS (Laboratory for UNIX Security in POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2010 - Oct. 2011

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.

## MSSA (Management Strategy Club of POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2013 - Jun. 2017

- Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.
- Gained expertise in business strategy areas and insight for various industry from weekly industry analysis session.

## Honors & Awards

### INTERNATIONAL

2017	<b>Finalist</b> , DEFCON 25th CTF Hacking Competition World Final	Las Vegas, U.S.A
2014	<b>Finalist</b> , DEFCON 22nd CTF Hacking Competition World Final	Las Vegas, U.S.A
2013	<b>Finalist</b> , DEFCON 21st CTF Hacking Competition World Final	Las Vegas, U.S.A
2011	<b>Finalist</b> , DEFCON 19th CTF Hacking Competition World Final	Las Vegas, U.S.A
2012	<b>6th Place</b> , SECUINSIDE Hacking Competition World Final	Seoul, S.Korea

### DOMESTIC

2015	<b>3rd Place</b> , WITHCON Hacking Competition Final	Seoul, S.Korea
2013	<b>Silver Prize</b> , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	<b>2nd Award</b> , HUST Hacking Festival	S.Korea
2010	<b>3rd Award</b> , HUST Hacking Festival	S.Korea
2012	<b>3rd Award</b> , Holyshield 3rd Hacking Festival	S.Korea
2011	<b>2nd Award</b> , Holyshield 3rd Hacking Festival	S.Korea
2011	<b>5th Place</b> , PADOCON Hacking Competition Final	Seoul, S.Korea

## Presentation

### 6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

### 6th Hacking Camp - S.Korea

S.Korea

PRESENTER FOR <METASPLOIT 101>

Sep. 2012

- Introduced basic procedure for penetration testing and how to use Metasploit

## Publications

### A Guide for Developers in Start-up

Facebook Page

FOUNDER & WRITER

Jan. 2015 - PRESENT

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

### AhnLab

S.Korea

UNDERGRADUATE STUDENT REPORTER

Oct. 2012 - Jul. 2013

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

## Program Committees

2016	<b>Problem Writer</b> , 2016 CODEGATE Hacking Competition World Final	S.Korea
2013	<b>Organizer &amp; Co-director</b> , 1st POSTECH Hackathon	S.Korea
2012	<b>Staff</b> , 7th Hacking Camp	S.Korea
2012	<b>Problem Writer</b> , 1st Hoseo University Teenager Hacking Competition	S.Korea
2012	<b>Staff &amp; Problem Writer</b> , JFF(Just for Fun) Hacking Competition	S.Korea