Alejandro R. **Burga**

JCC POSTDOCTORAL FELLOW

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Education

Ph.D. in Biomedical Research, Advisor: Dr. Ben Lehner
Barcelona, Spain

CENTRE FOR GENOMIC REGULATION, CRG/EMBL SYSTEMS BIOLOGY UNIT
2008–2012

- Graduated with honors, *summa cum laude*

Master in Biomedical Research, Advisor: Dr. Ben Lehner
Barcelona, Spain

CENTRE FOR GENOMIC REGULATION, CRG/EMBL SYSTEMS BIOLOGY UNIT
2007-2008

B.S. in Biochemistry
Santiago, Chile

PONTIFICAL CATHOLIC UNIVERSITY OF CHILE
2003-2007

- Graduated with honors, *summa cum laude*

High School Degree
Lima, Peru

SAINT AUGUSTINE HIGH SCHOOL
1997-2002

- Graduated with honors, Second place out of 165 students during five years of High School

Research experience

R.O.K Cyber Command, MND
Seoul, S.Korea

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)
Aug. 2014 - Exp. Apr. 2016

- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.
- Improved functionality on military command and control system for incident response with Java Servlet.
- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.

NEXON
Seoul, S.Korea & LA, U.S.A

GAME DEVELOPER INTERN AT GLOBAL INTERNSHIP PROGRAM
Jan. 2013 - Feb. 2013

- Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market. Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic, designed game graphics.
- Won the 2nd prize in final evaluation.

Undergraduate Research, Computer Vision Lab(Prof. Bohyung Han)
Pohang, S.Korea

RESEARCHER FOR <DETECTING VIDEO'S TORRENTS USING IMAGE SIMILARITY ALGORITHMS>
Sep. 2012 - Feb. 2013

- Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.
- Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

Software Maestro (funded by Korea Ministry of Knowledge and Economy)
Seoul, S.Korea

SOFTWARE ENGINEER TRAINEE
Jul. 2012 - Jun. 2013

- Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

ShitOne Corp. (Start-up company)
Seoul, S.Korea

SOFTWARE ENGINEER
Dec. 2011 - Feb. 2012

- Developed a proxy drive smartphone application which connects proxy driver and customer. Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

SAMSUNG Electronics
S.Korea

FREELANCE PENETRATION TESTER
Sep. 2013, Mar. 2011 - Oct. 2011

- Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.
- Conducted penetration testing on SAMSUNG Smart TV.

Extracurricular Activity

PoApper (Developers' Network of POSTECH)
CORE MEMBER & PRESIDENT AT 2013

Pohang, S.Korea

Jun. 2010 - PRESENT

- 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)
MEMBER

Pohang, S.Korea

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)
MEMBER

Pohang, S.Korea

Sep. 2013 - PRESENT

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

Honors & Awards

2013	**Jane Coffin Childs Foundation Postdoctoral fellowship**, Three year research fellowship awarded by the Jane Coffin Childs Memorial Fund for Medical Research.	*U.S.A*
2012	**"La Vanguardia" Research prize**, Ph.D. publication (Burga et al., 2011) selected Top 8 of all scientific studies conducted in Spain during 2011	*Spain*
2011	**Extraordinary Thesis Prize - Universitat Pompeu Fabra**, Prize given by the Pompeu Fabra University to the best thesis submitted during the year 2011	*Spain*
2012	**Travel fellowship to the Weizmann Institute for Science, Rehovot, Israel**, Travel expenses to present and interview at the Weizmann Institute for Science for a postdoctoral position.	*Israel*
2009	**Best Talk Prize – Institute for Research in Biomedicine (IRB)**, Prize given to the best talk at the IRB PhD Student Symposium.	*Spain*
2009	**Best Talk Prize – Center for Genomic Regulation (CRG)**, Prize given to the best talk at the CRG PhD Student Symposium.	*Spain*
2008	**FPI Doctoral Studies Fellowship**, Fellowship sponsored by the Spanish Government to carry doctoral studies.	*Spain*
2007	**Deutscher Akademischer Austausch Dienst (DAAD) travel fellowship**, Fellowship awarded by DAAD to travel to Berlin and study German for 1 month.	*Germany*
2007	**Biochemistry Honor Scholarship – Pontificia Universidad Católica de Chile**, Scholarship given to the student with the highest GPA during the academic year.	*Chile*
2006	**Biochemistry Honor Scholarship – Pontificia Universidad Católica de Chile**, Scholarship given to the student with the highest GPA during the academic year.	*Chile*
2005	**Biochemistry Honor Scholarship – Pontificia Universidad Católica de Chile**, Scholarship given to the student with the highest GPA during the academic year.	*Chile*
2002	**Graduated with Honors from Saint Augustine High School**, Second place out of 165 students during five years of High School.	*Peru*

Presentation

6th CodeEngn (Reverse Engineering Conference)
PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Seoul, S.Korea

Jul. 2012

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

Writing

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

| 2013 | **Organizer & Co-director**, 1st POSTECH Hackathon | *S.Korea* |
| 2012 | **Staff & Problem Writer**, JFF(Just for Fun) Hacking Competition | *S.Korea* |