Ziyad S. AL-Salloum

CONTACTS

Ziyad AL-Salloum, Ph.D.
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Speaks: English and Arabic
Hometown: Riyadh, KSA

SUMMARY

Received his M.Sc. (2006) and Ph.D. (2012) degrees in information security from the Information Security Group (ISG) at Royal Holloway, University of London in United Kingdom. His research and publications covers different areas of cyber security including, computer worms and authentication. Ziyad, who holds a British patent in information security, worked in both academia and industry participating in different training and consultation projects in the field of cyber security.

Roles & Responsibilities

- Cybersecurity Researcher
- Cybersecurity Training and Awareness
- Penetration Testing
- Risk Assessment

EDUCATION

Royal Holloway, University of London.
Egham, Surrey TW20 0EX, United Kingdom

Doctor of Philosophy, Information Security, Jan. 2012

- **Thesis Topic:** Topology-Aware Vulnerability Mitigation Worms
  - **Supervisor:** Stephen D. Wolthusen, Ph.D.

Master of Science, Information Security, Sept. 2006

- **Dissertation Topic:** Beneficial Computer Worms
- **Modules Covered:** Computer Security, Network Security, Cryptography, Security Management, Computer Crime and Database Security.

University of South Alabama.
Mobile, AL, United States

Bachelor of Science, Computer Science, Aug. 2003

- Minor in Mathematics.

TECHNICAL SKILLS

Programming Languages and Tools
Posses familiarity and experience in wide range of programming languages and tools, including: Java, Visual C++, Perl, PHP, Pascal, Visual Basic, Prolog, LISP, x86 Assembly, mySQL, Microsoft SQL server, ASP.NET, and C#.

Hardware Platforms/OS
Has worked and programmed on various hardware platforms and operating systems, including: Sun Solaris, Linux, MS DOS, and MS Windows.

Information Security Tools

Posses familiarity and experience in several tools that provides vulnerability assessment and penetration testing, including: Core Impact, AppDetective, ISS Internet Scanner, Nessus, Metasploit, and WebInspect.

Professional Certifications

GIAC: GIAC Certified Penetration Tester (GPEN)	01/2013

Sun Microsystems

• Sun Certified System Administrator for Solaris 9	01/2003
• Sun Certified Network Administrator for Solaris 9	08/2003
• Sun Certified Programmer for the Java 2 Platform 1.4	09/2003

CISCO: Cisco Certified Network Associate	09/2003
British Standards Institution: Certified BS 7799 Lead Auditor	08/2004
EC-Council: Certified Ethical Hacker	12/2004
(ISC)^2: Security Principles Certification	12/2004

Training and Self-Development

SANS Institute

• Mobile Device Security and Ethical Hacking	Aug. 20 − 25 (2012)
• Network Penetration Testing and Ethical Hacking	Aug. 26 − 31 (2012)
• Offensive Countermeasures: The Art of Active Defenses	Mar. 8 − 9 (2013)
• Advanced Pen Testing, Exploits, and Ethical Hacking	Mar. 10 − 15 (2013)

British Standards Institution

• BS 7799 Lead Auditor	Aug. 14 − 18 (2004)
• BS 7799 Lead Implementer	Aug. 21 − 25 (2004)

NIXU Ltd.: Penetration Testing	Nov. 13 − 17 (2004)
EC-Council: Ethical Hacker	Dec. 04 − 08 (2004)
(ISC)^2: Security Principles	Dec. 20 − 24 (2004)

PATENTS **Geographical Passwords,** GB2509314, United Kingdom (sole inventor and assignee). **Status:** Granted on 26 Nov. 2014 (Filled on 27 Dec. 2012).

EXPERIENCE

Cyber Security Startup Founder − passwhere.com 12/2013 − 04/2020
Based on published research and a UK Patent, introduced the concept of Geographical Passwords, which has generated global media attention on Feb 2014. Exercising critical thinking, problem solving, leadership, and management skills, founded passwhere.com to launch the worlds first geographical password solution. However, in the unforeseen and unfortunate occasion of COVID-19, the innovative cyber security startup had to suspend its operations due to the major recession caused by the global pandemic.

Assistant Professor at Princess Noura Univ. – Part Time   2012 – 2013

Ongoing supervision of – mainly information security related – graduation projects at Princess Noura University to prepare the students to join the ICT industry.

Information Security Consultant   01/2013 - 06/2013

International Systems Engineering (ISE), Riyadh , Saudi Arabia.

In a short-term contract, I have provided consultations and training to build and equip an ICT security team for a prominent ISE client to tackle different cyber security issues and further protect their information assets.

Information Protection Officer   04/2012 – 10/2012

King Abdullah Petroleum Studies and Research Center (KAPSARC).

Worked at – the under establishment – KAPSARC performing the following:

- Advised on proper configurations and best practices to ensure the confidentiality, integrity, and availability of KAPSARC information assets.
- Reviewed KAPSARC's proposed IT infrastructure from an InfoSec prospective and provided suggestions to further enhance its protective measures.
- Conducted risk assessment and penetration testing activities to identify and mitigate present vulnerabilities and threats within current deployed systems.
- Reviewed, drafted, and edited different security policies and general guidelines to proper handle KAPSARC's information assets according to best practices.

Makaney Code Project   2011

In a non information security related project, I have proposed Makaney Code, which is a human-friendly alphanumeric representation (like postal or zip codes) of the geographic latitude and longitude coordinates. Using Makaney code helps easily identify places on earth with an easy to remember code.

EDP System Analyst (Contractor)   04/2004 – 06/2005

Information Protection Division (IPD), Saudi Arabian Oil Company (ARAMCO).

Worked with IPD in the Compliance Assessment Group performing the following:

- Penetration Testing of Saudi Aramco systems and network.
- Risk Assessment and Hacking Incidents handling.
- Giving presentations to raise security awareness.
- Worked with a team to develop an Information Security Management System (ISMS) in order to get Aramco certified against the British Standard BS 7799.
- Had the opportunity to introduce the first penetration testing methodology and process for Saudi Aramco in an attempt to support the company's efforts to insource the penetration testing service.
- Had the opportunity to lead the first in-house penetration testing project along with my colleagues.

Received Letter of Appreciation and Certificate of Recognition from ARAMCO during my work period – left ARAMCO to pursue my higher education.

MEDIA   As part of raising ICT security awareness, I have been interviewed by the media to comment on some information security aspects; interviews, include:

- Al-Watan Newspaper (Kuwait). Phone interview regarding Wikileaks.
- BBC Arabic – London. Comment on some issues regarding Internet privacy to BBC Arabic technology program - 4 Tech. Glimpse of the talk have appeared on a short report covering that issue.

- KSA 2 (English) – Riyadh. Have been interviewed in KSA channel 2 program *Up to Date* to cover different information security issues.
- Dubai Eye 103.8 radio (English) – Dubai, UAE. Following the overwhelming news coverage of Geographical Passwords paper, I have been interviewed on Drive Live radio show to discuss the new topic.

REFEREED PUBLICATIONS

1 Al-Salloum, Z & Wolthusen, SD 2009, Semi-autonomous Link Layer Vulnerability Discovery and Mitigation Dissemination. In Proceedings of the Fifth International Conference on IT Security Incident Management and IT Forensics (Stuttgart, Germany, 2009). IEEE Computer Society Press, pp. 41-53.

2 Al-Salloum, Z & Wolthusen, SD 2010, A link-layer-based self-replicating vulnerability discovery agent. In Proceedings of the Fifteenth IEEE Symposium on Computer and Communications (ISCC – Riccione, Italy). IEEE Computer Society Press, pp. 704-707.

3 Al-Salloum, Z & Wolthusen, SD 2010, Agent-based host enumeration and vulnerability scanning using dynamic topology information. In the 9th Conference of Information Security for South Africa 2010 (ISSA – Johannesburg, South Africa). IEEE Computer Society Press.

4 Al-Salloum, Z & Wolthusen, SD 2010, Security and Performance Aspects of an Agent-Based Link-Layer Vulnerability Discovery Mechanism. In ARES 10 International Conference on Availability, Reliability, and Security – SecSe (Krakow, Poland, 2010), IEEE Computer Society Press pp. 549 – 554

5 Al-Salloum, Z & Wolthusen, SD 2011, Threat analysis model of an agent-based vulnerability mitigation mechanism using Bayesian Belief Networks. In Proceedings of the First IEEE Network Science Workshop (NSW 2011 – New York, USA). IEEE Computer Society Press, pp. 144-151.

6 Al-Salloum, Z & Wolthusen, SD 2011, A propagation model of a vulnerability mitigation computer worm - Seawave. In the Proceedings of the 5th International Network and System Security Conference (NSS 2011 – Milan, Italy). IEEE Computer Society Press, pp. 347-352.

7 Al-Salloum, Z. (2012) Defensive computer worms: an overview, *Int. J. Security and Networks*, Vol. 7, No. 1, pp.59-70.

8 Al-Salloum, Z.S. (2014) GeoGraphical Passwords, *Int. J. Security and Networks*, Vol. 9, No. 1, pp.56-62.

REFERENCES

Prof. Stephen D. Wolthusen (Supervisor)
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