Kemal Hajdarevic, PhD
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GENERAL

Birth date: December, 11.1974.
Citizenship: Bosnia and Herzegovina

EDUCATION HISTORY

October 2004   - May 2008, Leeds Beckett University (Metropolitan University), School of Computing - PhD project was focused to explore feasibility of detecting network problems (such as performance loss and security attacks) in their early stages by making use of already existing network indicators to reveal symptoms of such problems. During this time together with my supervisor I published scientific papers see below.

September 1999 - October 2000 – M.Sc. degree (with merit), Leeds Metropolitan University, School of Computing, Computer Communications and Networks course. For my final MSc project I've installed free firewall solution on a LINUX box in order to secure LAN of the Faculty of Science and Mathematics at University of Sarajevo and conducted other activities (security policy implementation) to secure network infrastructure. Main subjects of the course were: Network Management, Computer Communications, Communication Software, Network Technologies.

September 1993 - September 1999 – B.Sc. degree, University of Sarajevo, School for Electrical Engineering in Sarajevo, Department for Computers and Information Technologies. Received B.Sc. Main subjects: programming, databases, information systems, math and information science, electrical engineering.

LANGUAGES

Bosnian mother tongue
English fluent in speaking and writing
German passive knowledge

EMPLOYMENT HISTORY

1st December 2000 – Present time (80% of work time), The Central Bank of Bosnia and Herzegovina (CBBH) – Expert Internal auditor for information security and IT security from 2013 in Internal auditor's office. Previous post was Information Security Manager, responsible for managing Information Security Management System (ISMS) for which CBBH received ISO 27001:2005 standard certificate in 2009. First certificate of this kind in central banks in wide region and first in country. Previous positions in the CBBH were: IT security specialist (2006 – 2008), network specialist (2000 -2006).

1st December 2000 – Present time (20% of work time), The Faculty of Electrical Engineering, University of Sarajevo – from 2000 until 2006 Lecturer assistant at the subjects Digital Computers and

Operating Systems. In 2006 started to work as assistant on Computer Communication and Networks module, from 2009 started to work as Associate lecturer on subject Computer Communications for third year, B.Sc, from April 2014 promoted to Associate Professor title and teach Introduction to Computer Networks and Computer Simulations. In April 2020 promoted to full professor position. During my academic carrier I was lecturer at the International Burch University for undergraduate (BSc) and graduate students (MSc and PhD) on following courses: Computer Networks and Communication, Network Management, Information Security Governance, Computer and Network Security, Introduction to Cryptography, Ethical Hacking, IT Governance. And at the Dental School I teach students in Informatics. I was mentor to BSc and MSc students, currently supervising 5 PhD students.

31st October, 2000 – 19th November, 2000 OSCE – support to election process for Bosnia and Herzegovina, Counting Center System Administrator (project contract last for twenty days). I was responsible for disaster recovery and backup scheme for database. Also responsible for staff training (500 trainees) in using Kodak scanners and OCR (Optical Character Recognition – Blue Wing) software and mastering equipment, software and managing and helping staff in using equipment. I was working under pressure to achieve election process goals within short time deadlines.

April, 1998 - October, 1999 Management and Information Technologies (MIT) Center Sarajevo, Faculty of Economics, UNSA - System engineer. I have participated at Distance Learning Project, which was first project of that kind in my country, the main goals were to educate students and professors via Internet, CD's video and audio conferencing sessions. Responsible for software development; installation, administration (Wingate proxy, Apache web server support etc.) and coordination of local area networks (Windows NT), writing documentation, communication and supporting end users. Under this project I was also responsible for design and installation LAN at the Faculty of Philosophy OASIS Center. This project includes connecting LAN to the Internet.

April, 1997 - April, 1998 WUS Interlink Sarajevo, demonstrator and laboratory instructor. My engagement was to demonstrate exploiting Internet resources for students and professors of University in Sarajevo, and I was instructor for MS Office software and using computers for the University employees.

STUDENT PROJECTS

VCDS project - **V**ideo **C**onferencing **D**istance **S**essions project realized with WUS support. Goals were to create audio sessions, produce scripts and accompanied CDs for students from Tuzla.
LAN Design – Design additional network segments on existing main network node for Faculty of Science and Mathematics.

PUBLICATIONS

BOOKS PUBLISHED

1. *Essentials of digital forensics,* Authors: Hajdarević Kemal; Žiga Nermin; Halilović Mirza, , ISBN - 978-9958-834-66-0, COBISS.BH-ID – 27750406, Izdavač: International Burch University, 2019
2. *Cyber security audit in business environments*, Author: Hajdarević Kemal, ISBN - 978-9958-834-64-6, COBISS.BH-ID – 26733830, Izdavač: International Burch University, 2018
3. *Proactive information security metrics for computer network architectures and infrastructures, based on ISO 27001*, Author: Kemal Hajdarevic, ISBN 978-9958-834-28-8, COBISS.BH-ID 20741638, Izdavač: International Burch University, 2013.

SCIENTIFIC AND TECHNICAL PAPERS

1. Improving Learning Skills in Detection of Denial of Service Attacks with Newcombe-Benford's Law using Interactive Data Extraction and Analysis, Kemal Hajdarevic, Colin Pattinson, Ingmar Besic, 2022, TEM Journal, UIKTEN-Association for Information Communication Technology Education and Science
2. SYN Flood Attack Detection in Cloud Computing using Support Vector Machine, Zerina Mašetić, Dino Kečo, Nejdet Doğru, Kemal Hajdarević, 04.11.2017, Izdavač: TEM Journal
3. Cloud computing threats classification model based on the detection feasibility of machine learning algorithms, Z. Masetic ; K. Hajdarevic ; N. Dogru, MIPRO, 22-26.05.2017, Izdavač: IEEE
4. Survey on machine learning algorithms as cloud service for CIDPS, Indira Avdagic ; Kemal Hajdarevic, TELFOR 2017, 21-22.11.2017Izdavač: IEEE
5. Training network managers in ethical hacking techniques to manage resource starvation attacks using GNS3 simulator, Kemal Hajdarevic ; Adna Kozic ; Indira Avdagic ; Zerina Masetic ; Nejdet Dogru, ICAT, 26-28.10.2017, Izdavač: IEEE
6. Proactive security metrics for Bring Your Own Device (BYOD) in ISO 27001 supported environments, Kemal Hajdarevic ; Pat Allen ; Mario Spremic,Telfor 22-23.11.2016
7. Internal penetration testing of Bring Your Own Device (BYOD) for preventing vulnerabilities exploitation, Kemal Hajdarevic ; Vahidin Dzaltur, ICAT, 29-31.10.2015, Izdavač: IEEE
8. An approach to digital evidence collection for successful forensic application: An investigation of blackmail case, Kemal Hajdarevic; Vahidin Dzaltur, (MIPRO), 25-29.05.2015, Izdavač: IEEE
9. A low energy computer infrastructure for radio VOIP supported communication and SDR APRS in education and disaster relief ituations, Kemal Hajdarevic ; Samim Konjicija, MIPRO, 25-29.05.2015, Izdavač: IEEE
10. A low energy APRS-IS client-server infrastructure implementation using Raspberry Pi, Kemal Hajdarevic ; Samim Konjicija ; Abdulhamit Subasi, TELFOR, 25-27.11.2014, Izdavač: IEEE
11. Svxlink VOIP implementation using raspberry Pi in education and disaster relief situations, Kemal Hajdarevic ; Samim Konjicija ; Abdulhamit Subasi, BIHTEL, 27-29.2014 Izdavač: IEEE
12. VPN uz pomoć Hamachi software, RADIO T9lE7 -Broj 60 - Novembar/Decembar 2013., Asocijacija radio amatera BiH, stranice 19-20
13. Open source intrusion detection system using Snort, Ibrahim Kinal, Kemal Hajdarevic, The 4th Internatiotral Symposium on Sustainable Development (ISSD20l3), 24-26 maj 2013
14. Security of Wi-Fi Networks, Durmu Ali Avci, Kemal Hajdarevic, The 4th International Symposium on Sustainable Development (ISSD20l3),24-26 mai 2013
15. Deciding on Appopriate VPN Application for Remote Ham Radio Station Network, Hajdarevic. K.; Smajlagic, H., Celjo, S., Tafro, E., Telfor, IEEE Conference Publications
16. A new method for the identification of proactive information security management
17. system metrics, Hajdarevic" K.; Allen, P. MIPRO 36 Proceedings of the 36th International Convention, Publication Year: 2013, Page(s): 1121 - l126,IEEE Conference Publications
18. ARIS MashZone KPI visualisation of simulated routing protocol operations for smart dust environmentso Hajdarevic. K.; Civa, A., MIPRO 36 Proceedings of the 36th International Convention, Publication Year: 2073, Page(s): 286 - 291, IEEE Conference Publications
19. Architecture and Infrastructure for Governing Information Security in Central
20. Banks, Journal of Central Banking Theory and Practice,Volume 1, Number 2, pp. 5-17,K. Hajdarevic, K. Kozaric, J. Hadzigrahic, Published in October 2012.
21. Information Securify Measurement Infrastructure for KPI Visualization, K.Hajdarevic, C. Pattinson, K. Kozarrc, A.Hadzic, MIPRO 35 Proceedings of the 35th International Convention, Publication Year: 2A12, Page(s): 1543 - 1548, IEEE Conference Publications.

22. Face Recognition Implementation for Client Server Mobile Application using PCA, E. Kremic, A. Subasi, K. Hajdarevic. Information Technology Interfaces (lTI), Proceedings of the ITI 2011 33rd International Conference on Publication Year: 2012, Page(s): 435 * 440, IEEE Conference Publications,

23. New Generation Operations Systems and Software and SOA Improving the Business of Telecom Operator, A. Hadzic , T. Mateljan, K. Hajdarevic, MIPRO 35 Proceedings of the 35th International Convention, Publication Year: 2012,Page(s): 1699 - 1704, IEEE Conference Publications.

24. Simulation application for Sleep-Awake Probabilistic Forwarding Protocol for Smart Dust environments, Hajdarevic. K.; Kurtanovic, MIPRO, 20ll Proceedings of the 34th International Convention, Publication Year: 20II , Page(s): 468 - 471,IEEF. Conference Publications

25. New forensic method for measuring dynamic changes of EMF level limits using smart dust Hajdarevic" K.: Pattinson, C.;Hadzic, A.;Hadzigrahic, J. Information, Communication and Automation Technologies (ICAT), 2011 XXIII International Symposium on Digital Object Identifier: 10.1109/ICAT.2011.6102097 Publication Year:2011 , Page(s): 1 - 5,IEEE Conference Publications Hajdarevic. K.: Pattinson, C., MIPRO, 2011 Proceedings of the 34th International Convention, Publication Year:2011, Page(s): 658 - 663, IEEE Conference Publications

26. The time element in proactive network defense systems, Pattinson, C.; Hajdarevic. K.; Hadzic, A. Information Technology Interfaces (ITI), Proceedings of the ITI 2011 33rd International Conference on Publication Year: 2007 , Page(s): 427 - 432IEEE Conference Publications

27. Trojan detection using MlB-based IDS / IPS system, Pattinson, C.; Hajdarevic. K. Information, Communication and Automation Technologies, 29-31 October 2009. ICAT 2009. XXII International Symposium on, Digital Object Identifier: 10.1109/ICAT.2009.5348410, Publication Year 2009, Page(s): 1 - 5, IEEE Conference Publications

28. Timing considerations in detecting resource starvation attacks using statistical profiles Pattinson, C.; Hajdarevic. K.. International Journal of Electronic Security and Digital Forensics (IJESDF), 2007, Copyright O 2004-2008 lnderscience Enterprises Limited, pages 194 _205.

29. Timing Considerations in Detecting Rgsource Starvation Attackso Pattinson, C.; Hajdarevic. K.International Conference on Global e'-Security University of East London, London , England, l8-20 April2007

30. Disaster Recovery Plan Support for Enterprise's Business Continuity Plan, Pattinson' C'; Hajdarevic. K.conference on Information Systems Security held at the university "Džemal Bijedić", Mosiar Bosnia and Herzegovina l0 - 12, September 2006 tn Mostar, Bosnia and Herzegovina

31. Proactive Detection and Prevention Intrusion Attacks (Poster presentation), Hajdarevic' K.Innovation North Research Conference Leeds Metropolitan University - Leeds, England, 10 12 IulY 2006

32. Timing considerations in the detection of intrusion attacks, Pattinson, C.; Hajdarevic. K' International Conference on Global e-security University of East London, London , England, 20 -22 April 2006

33. Developing tool and simulator for recognizing DoS attacks in early stages' E-Learning Conference, Pattinson, C.; Hajdarevic. K'Mostar 2004

34. Training network managers to recognise intrusion detectiono Pattinson, C; Hajdarevic K. ICETE conference in Setubal, Portugal 25-28 August 2004

35. Network Management using open source Solutions, Hajdarevic K. 2002 BiHTEL'Sarajevo.

36. Firervall Implementation on Linux, Hajdarevic. K. 2001 IKT, Sarajevo

I have attended those courses, conference, forums and seminars:

- Information security and audit – 2014 two seminars for Internal auditors - Presenter
- E-Leadership Programme for west Balkans, 28 June 2010, UNDP conference Sarajevo - presenter.
- Combis BiH Finance Day 8 April 2010, Sarajevo – opening speech - speaker
- BITCB Forum at the National Bank of Serbia, Belgrade 24 – 25 September 2009 – one of the speakers

- IMF Seminar on Financial Sector preparedness for an avian flu pandemic - Basle - July 19, 2006, round table forum participant
- E-Transformation World Bank Conference, held in Taj Palace Hotel, New Delhi, India 16 – 18 March 2005.
- Implementing Netscreen Security Gateways, March 2005, Leuven Belgium - trainee
- Experiences in implementing security measures in CBBH, Oracle day April 2004, entering presentation - sepaker
- Deploying Intrusion Detection Systems: Hands-On 6-10 December 2004 Learning tree, London UK- trainee
- Cisco PIX Firewall Advanced, 9-13 June 2003 Wakefield UK Azlan training Center- trainee
- Interconnecting Cisco Network Devices, 18-22 November 2002 Wakefield UK Azlan training Center - trainee