

CV and Research Profile

of

KHALED H. SALAH

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Khaled Salah is a full professor at the Department of Electrical and Computer Engineering, Khalifa University, UAE. He received the B.S. degree in Computer Engineering with a minor in Computer Science from Iowa State University, USA, in 1990, the M.S. degree in Computer Systems Engineering from Illinois Institute of Technology, USA, in 1994, and the Ph.D. degree in Computer Science from the same institution in 2000. He joined Khalifa University in August 2010, and is teaching graduate and undergraduate courses in the areas of cloud computing, cyber security, big data, computer networks, operating systems, and performance modeling and analysis.

Prior to joining Khalifa University, Khaled worked for ten years at the department of Information and Computer Science, King Fahd University of Petroleum and Minerals (KFUPM), KSA.

Khaled has over 145 publications. He had given many international keynote speeches, invited talks, tutorials, and seminars on the emerging areas of cloud computing, cybersecurity, and big data.

Khaled was the recipient of Khalifa University Outstanding Research Award 2014/2015, KFUPM University Excellence in Research Award of 2008/09, and KFUPM Best Research Project Award of 2009/10, and also the recipient of the departmental awards for Distinguished Research and Teaching in prior years.

Khaled is a senior member of IEEE, and serves on the Editorial Boards of **seven** WOS-listed journals including IET Communications, IET Networks, Elsevier's JNCA, Wiley's SCN, Wiley's IJNM, J.UCS, and AJSE.

PRESENT POSITION AND ADDRESS

Full Professor
Department of Electrical and Computer Engineering
Khalifa University of Science, Research and Technology

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Google Scholar <https://scholar.google.com/citations?user=s2X97uIAAAAJ&hl=en>
DBLP <http://dblp.uni-trier.de/pers/hd/s/Salah:Khaled>

RESEARCH INTERESTS

- Cloud Computing
- Cybersecurity
- Big Data
- Computer Networks
- Operating Systems
- Modeling, Simulation, and Performance Evaluation of Computing Systems

a) EDUCATION RECORD

Ph.D. Computer Science
Illinois Institute of Technology, Chicago, IL, USA. May 2000
GPA: 3.8/4.0
Thesis: Novel Handoff Schemes for Wireless ATM Networks

M.Sc. Computer Systems and Engineering
Illinois Institute of Technology, Chicago, IL, USA. May 1994
GPA: 3.8/4.0
Topic: Communication and Computer Networks

B.Sc. Computer Engineering with minor in Computer Science
Iowa State University, Ames, IA, USA. May 1990
GPA: 3.5/4.0

b) **EMPLOYMENT RECORD**

1) PROFESSIONAL EXPERIENCE

Aug 2010 - Present Associate Professor
Khalifa University of Science, Technology and Research

Nov 2006 - Aug 2010 Associate Professor
King Fahd University of Petroleum & Minerals, Saudi Arabia.

Aug 2000 - Nov 2006 Assistant Professor
King Fahd University of Petroleum & Minerals, Saudi Arabia.

Sep 1995 - Aug 2000 Senior Engineer
Tellabs Operations, Inc., Bolingbrook, IL, USA

Jun 1990 - Sep 1995 Software Engineer IV
Fermi National Accelerator Laboratory, Batavia, IL, USA

1987-1990 Math Tutor and Computer Lab Administrator
Iowa State University, Ames, IA, USA

2) INDUSTRIAL EXPERIENCE

Sep 1995 - Senior Engineer
Aug 2000 Tellabs Operations, Inc., Bolingbrook, IL, USA

- Real-time software development of network protocol stacks and device drivers for ATM and Ethernet devices. Integration of TCP/IP stack into ATM and Ethernet nodes and switches. Firmware development for ATM modems, T1/E1 trunks, and SONET/SDH transport products. Microprocessors: Intel 80386, Intel 80188, Motorola 68000. Debugging tools: BDM and SuperTap in-circuit emulators, HP logic analyzer, Adtech and Flexicom ATM analyzer. Software tools: PVCS, CMS, ClearCase configuration management and version control, CScope.
- Project leader for the ATM modem project. Project duration was 2.5 years. Used MS Project.
- Management and supervision of medium to small projects. Projects included performance monitoring for ATM unit, evaluation of industry networking products, and IEEE and ETSI standard testing.
- Mentoring and development of new and summer employees.
- Conducted many interviews of new candidates and participated in company job fairs and college recruiting.
- Resolved numerous software development issues between U.S. and Finland branches, including traveling to Finland.
- Given numerous demos and presentations to employees on new technologies and provided hands-on training for company's products.

Jun 1990 - Software Engineer IV
Sep 1995 Fermi National Accelerator Laboratory, Batavia, IL, USA

- Real-time software development of control and data acquisition

systems. Microprocessors: Intel RISC 960CA, Intel 80386, Intel 80186, and Zilog 8000. Bus architecture: VME, VXI, and CAMAC. Tools: Intel ICE386 Emulator and debugger, HP Logic Analyzer.

- Network device driver software development for data pooling based on Ethernet and ARCNET Token Ring.
- GUI Software development of user applications using X Motif.
- Programming and simulation of FPGA and PLD logic devices.

c) **AWARDS RECEIVED**

1. Khalifa University Outstanding Research Award of Academic Year 2013-2014
2. KFUPM Best Research Project Award of Academic Year 2009-2010.
3. KFUPM University Excellence in Research Award of Academic Year 2008-2009.
4. Distinguished Research Award of ICS Department, Academic Year 2007-2008.
5. Distinguished Teaching Award of ICS Department, Academic Year 2005-2006.
6. Best Paper Award of the 2011 AIKindi Workshop on Cryptology, December 11, 2011.
7. Supervised the winner, Mrs. Sanaa AlSalaami, of the first prize of 25,000 AED in the “2016 Innovative Cybersecurity Competition” organized by DESC, Dubai Electronic Security Center, December 15, 2016. The competition was participated by 17 UAE Universities and 72 ideas were submitted.
<http://mediaoffice.ae/en/media-center/news/18/12/2016/dubai-electronic-security.aspx>
8. My SDP students (Mohd Alsharid and Mohd Jassem) were the first prize winners of the 4th United Arab Emirates Undergraduate Student Research Competition, May 9, 2016, Abu Dhabi University, Khalifa City Campus. SDP Project Title: "Sentiment Analysis of UAE Social Media". Involving work related to cloud computing and big data.
9. My undergraduate student Mr. Mohd Alsharid was the recipient of the Rhodes Scholar Award for 2016, for his notable work on his SDP project.
<http://www.kustar.ac.ae/pages/news/news-details/khalifa-university-student-becomes-2nd-emirati-engineering-students-to-win-rhodes-scholarship>
Also at KU ECE Department web site:
<http://www.kustar.ac.ae/pages/department-of-electrical-and-computer-engineering/13692>
Then Click on “Department news”
10. Supervised the 3rd Prize Winner Team at TRISEC Cybersecurity Contest, Organized by AD Polytechnic, March 2015, Abu Dhabi, UAE.
11. Supervised the 1st Winner Team of the 2014 du Cybersecurity Hackathon Competition, du, Dubai, UAE, September 2014. **The same team was awarded another prize by KU on Leadership Day, March 10, 2015.**
12. Supervised 2nd Prize Winner of the SDP Project on Cybersecurity at du Cybersecurity Hackathon, du, Dubai, UAE, September 2014.
13. Best SDP Project in Computer Science, Expo-Science International 2013, Abu Dhabi, September 2013. **This project was also shortlisted among top 10 best projects for presentation at Gitex 2013.**

14. Appreciation Award in “Active Research and External Collaboration”, ECE Dept., Khalifa University, Academic Year 2011-2012.
15. Award in Excellence in Administrative Services in ICS Department, 2003.
16. Tellabs Inc. Team Excellence Award, Tellabs Operations, Inc., Bolingbrook, IL, USA, Jan. 97 and Sep. 97.
17. Tellabs Inc. Thank You Award, Tellabs Operations, Inc., Bolingbrook, IL, USA, (5 times)
18. Iowa State University Dean List, Ames, IA, USA, (3 times)
19. Second Prize Winner Math Contest, 400 participants, Wilbur Wright College, Chicago, IL, USA, 1986.

d) PROFESSIONAL MEMBERSHIPS AND SERVICES

1) Membership

1. *Senior Member*, Institute of Electrical and Electronics Engineers (IEEE), 1992.
2. *Member*, IEEE Computer Society, 1993.
3. *Member*, UAE IEEE Society, 2010.
4. *Member*, Association of Compute Machinery (ACM), 1994.
5. *Member*, British Computer Society (BCS), 2012
6. *Member*, Saudi Council for Engineers, 2008.
7. *Member*, Saudi Computer Society, 2001.
8. *Member*, Gulf Internet Conference Board, Eastern Province, Saudi Arabia, 2001.

2) International Journal Editorial Board Membership

1. *Editorial Board Member*, *Journal of IET Communications*, IET, since 2008.
2. *Editorial Board Member*, *Journal of IET Networks*, IET, since 2011
3. *Editorial Board Member*, *International Journal of Network and Computer Applications*, Elsevier, 2009-2013.
4. *Editorial Board Member*, *International Journal of Network Management*, John Wiley, since 2009.
5. *Associate Editor*, *International Journal of Security and Communication Networks*, John Wiley, since 2009
6. *Editorial Board Member*, *The Journal of Universal Computer Science*, JUCS, since 2008.
7. *Associate Editor of Computer Science and Engineering*, *Arabian Journal of Science and Engineering (AJSE)*, Springer, since 2009
8. *Associate Editor*, *Canadian Journal of Network and Communication Technologies*, Canadian Center of Science and Education, Canada., since 2012.
9. *Associate Editor*, *International Journal of Digital Crime and Forensics*, IGI, since 2009.

10. *Editorial Board Member, International Journal of Internet Protocol Technology*, Inderscience, England, since 2008.

3) International Conference Organization

1. *General and Technical Program Chair* of IEEE CloudNA 2016, the IEEE International Workshop on “Cloud-based Networks and Applications”, Dubai, UAE, November 7, 2016. <http://www.ieee-cloudna.org/>
2. *General and Technical Program Chair* of IEEE CloudNA 2015, the IEEE International Workshop on “Cloud-based Networks and Applications”, Clearwater Beach Florida, USA, October 26, 2015. <http://www.ieee-cloudna.org/>
3. *General and Technical Chair* of the “AlKindi Graduate Student Workshop on Cryptology” held on December 2011, hosted by Khalifa University. The conference was well organized and very successful, with local management by PhD students of Khalifa University. <http://events.kustar.ac.ae/alkindi/Index.html>
4. *Long-standing TPC Member, Organizer, Session Chair, and Reviewer* for several years of many reputable and prestigious IEEE and ACM conferences - more notably: IEEE LCN, IEEE CloudNet, ACM SafeConfig, IEEE Cloud, IEEE TrustCom, ACM SINCONF, IEEE DASC, IEEE ATC, IEEE Globecom, etc.

4) GUEST EDITING AND PROFESSIONAL REVIEWING

1. Guest Editor of the *International Journal of Information Science*, Elsevier Science.
2. Guest Editor of the *International Journal of Internet Protocol Technology*, InderScience Publisher.
3. Guest Editor of the *Journal IET Communications*, IET Publishing.
4. Regular Reviewer of many prestigious WOS publications including ACM and IEEE Transactions.
5. Reviewers of numerous research projects by UAE ICTFund and Saudi KACST.
6. Served as a judge in IEEE Student Day competitions within UAE.
7. Participated in the UAE Scientists Council Workshop, November 14, 2016 at KU, on the subject of Strategic Planning for Big Data Initiatives.

e) LIST OF PUBLICATIONS

1) Refereed Journal Papers

Year 2017

1. **Salah, K.**, Calaym, P., and Rauof, B, “*Analytical Model for Elastic Scaling of Cloud-based Firewalls*,” IEEE Transactions on Network and Service Management, In Press.
2. Firas, S., Trabelsi, Z., and **Salah, K.**, “*Approaches to Analyze Cyber Terrorist Communities: Survey and Challenges*,” Journal of Security and Communication Networks, John Wiley, In Press.
3. Azad, M., Morla, R., Arshad, J., and **Salah, K.**, “*Clustering VoIP Caller for the SPIT Identification*,” Journal of Computers and Security, Elsevier, In Press.

4. **Salah, K.** and Kafhali, S., “*Performance Modeling and Analysis of Hypoexponential Network Servers*,” Journal of Telecommunication Systems, Springer, In Press.
5. Albelooshi, B., **Salah, K.**, Damiani, E., and Martin, T., “*Securing Cryptographic Keys in the Cloud: A Survey*,” IEEE Cloud Computing, Vol. 3, No. 4, July-August 2016, pp. 42-56.
6. Albelooshi, B., **Salah, K.**, Damiani, E., and Martin, T., “*Experimental Proof: Data Remanence in Cloud VMs*,” Services Transactions on Cloud Computing, In Press.
7. Maratha, B. Sheltami, T., and **Salah, K.**, “*Performance Study of MANET Routing Protocols in VANET*,” Arabian Journal of Science and Engineering, Springer, In Press.
8. Sattar, K., **Salah, K.**, Sqalli, M., Rafiq, R., and Rizwan, M., “*A Delay-based Countermeasure against the Discovery of Default Rules in Firewalls*,” Arabian Journal of Science and Engineering, Springer, In Press.

Year 2016

9. **Salah, K.** and Chaudary, A., “*Modelling and analysis of rule-based network security middleboxes*,” IET Information Security, Vol. 9, No. 6, October 2015, pp. 305-312.
10. H. Marzouqi, M. Al-Qutayri, **K. Salah**, D. Schinianakis, and T. Stouraitis, “*A High Speed FPGA Implementation of an RSD Based ECC Processor*,” IEEE Transaction on VLSI, Vol. 24, No. 1, January 2016, pp. 151-164.
11. **Salah, K.**, Elbadawi, K., and Boutaba, R., “*An Analytical Model for Estimating Cloud Resources of Elastic Services*,” Journal of Network and Systems Management, Springer, Vol. 24, No. 2, April 2016, pp. 285-308.
12. **Salah, K.**, Hammoud, M., and Zeadally, S., “*Teaching Cybersecurity using the Cloud*,” IEEE Transactions on Learning Technologies, Vol. 8, No. 4, December 2015, pp. 383-392.
13. Baig, Z., and **Salah, K.**, “*Distributed Hierarchical Pattern-Matching for Network Intrusion Detection*,” International Journal of Internet Technology, Vol. 17, No. 2, March 2016, pp. 167-178.

Year 2015

14. H. Marzouqi, M. Al-Qutayri, and **K. Salah**, “*Review of Elliptic Curve Cryptography Processor Designs*,” Journal of Microprocessors and Microsystems, Elsevier Science, Vol. 39, No. 2, March 2015, pp. 97-112.
15. Haidari, F., Sqalli, M., **Salah, K.**, “*Evaluation of the Impact of EDoS Attacks against Cloud Computing Services*,” Arabian Journal of Science and Engineering, Vol. 40, No. 3, March 2015, pp. 773-785.
16. Siddiqui, F., Zeadally, S., and **Salah, K.**, “*Gigabit Wireless Networking with IEEE 802.11ac: Technical Overview and Challenges*,” Journal of Networks, Vol. 10, No. 3, April 2015, pp. 164-171.

Year 2014

17. Calyam, P., Rajagopalan, S., Seetharam, S., Selvadurai, A., **Salah, K.**, and Ramnath, R., “*VDC-Analyst: Design and Verification of Virtual Desktop Cloud Resource*

Allocations,” International Journal of Computer Networks, Elsevier Science, Vo. 68, August, 2014, pp. 110-122.

18. H. Marzouqi, M. Al-Qutayri, and **K. Salah**, “*Review on Gate Level DPA and FA Countermeasures*,” IET Journal of Information Security, Vol. 8, No. 1, January 2014, pp. 51-66.
19. **Salah, K.**, “*Analysis of Erlangian Network Services*,” International Journal of Electronics and Communications, Elsevier Science, Vol. 68, No. 7, July 2014, pp 623-630.
20. Hamodi, J., Thool, R. **Salah, K.**, Alsagaf, A., Holba, Y., “*Performance Study of Mobile TV over Mobile WiMAX Considering Different Modulation and Coding Techniques*,” International Journal of Communications, Network and System Sciences, Vol. 7, No. 1, January 2014, pp. 10-21.

Year 2013

21. **Salah, K.**, Alcaraz Calero, J., Zeadally, S., Almulla, S., and Alzaabi, M., “*Using Cloud Computing to Implement a Security Overlay Network*,” IEEE Security and Privacy, Vol. 11, No. 1, January 2013, pp. 44-53.
22. **Salah, K.**, J. Calero, J. Bernabe, and J. Perez, “*Analyzing the Security of Windows 7 and Linux for Cloud Computing*,” Journal of Computers & Security, Elsevier Science, Vol. 34, May 2013, pp. 113-122.
23. **Salah, K.**, and M. Hamawi, “*Performance of IP-Forwarding of Linux Hosts with Multiple Network Interfaces*,” International Journal of Network and Computer Applications, Elsevier Science, Vol. 36, No. 1, 2013, pp. 452-465.
24. Sqalli, M., Firdous, S., **Salah, K.**, and AbuAmara, M., “*Classifying Malicious Activities in Honeynets using Entropy and Volume-based Thresholds*,” Journal of Security and Communication Networks, John Wiley, Vol. 6, No. 5, 2013, pp. 567-583.
25. **Salah, K.**, Hamodi, J., Baig, Z., and Al-Haidari, F., “*SIP VoIP Deployment over Hospitality Networks*,” Journal of Internet Technology, Vol. 14, No. 1, January 2013, pp. 31-44.
26. **Salah, K.**, “*A Queueing Model to Achieve Proper Elasticity for Cloud Cluster Jobs*,” Services Transactions on Cloud Computing, ISSN 2326-7550, Vol. 1, No. 1, July-September 2013, pp. 53-64.
27. Hamodi, J., **Salah, K.**, and Thool, R., “*Evaluating the Performance of IPTV over Fixed WiMAX*,” International Journal of Computer Applications, Vol. 84, No. 6, December 2013, pp. 35-43.

Year 2012

28. **Salah, K.**, Badawi, K., Rauof, B., “*Performance Modeling and Analysis of Network Firewalls*,” IEEE Transactions on Network and Service Management, Vol. 9, No. 1, March 2012, pp. 12-21.
29. Mukhtar, H., **Salah, K.**, and Iraqi, Y., “*Mitigation of DHCP Starvation Attack*,” International Journal of Computers and Electrical Engineering, Elsevier Science, Vol. 38, No. 5, September 2012, pp. 1115-1128.
30. **Salah, K.**, Manea, A., Zeadally, S., and J. M. Calero, “*Mitigating Starvation of Linux CPU-bound Processes in the Presence of Network I/O*,” International Journal of

Systems and Software, Elsevier Science, Vol. 85, No. 8, August 2012, pp. 1899-1914.

31. **Salah, K.**, Hamodi, J., Baig, Z., and Alhaidari, "Video-on-Demand (VoD) Deployment over Hospitality Networks," International Journal of Network Management, John Wiley, Vol. 22, No. 1, February 2012, pp. 65-80.

Year 2011

32. **Salah, K.**, "Analysis of a Two-Stage Network Server," International Journal of Applied Mathematics and Computation, Elsevier Science, Vol. 217, No. 23, August 2011, pp. 9635-9645.
33. **Salah, K.**, Sattar, K., Sqalli, M., and Alshaer, E., "A Potential Low-Rate DoS Attack against Network Firewalls," International Journal of Security and Communication Networks, John Wiley, Vol. 4, No. 2, February 2011, pp. 136-146.
34. **Salah, K.**, Manea, A., Zeadally, S., and Calero, J. "On Linux Starvation of CPU-bound Processes in the Presence of Network I/O", Computers and Electrical Engineering, Elsevier Science, Vol. 37, No. 6, November 2011, pp. 1090-1105.
35. **Salah, K.**, Al-Haidari, F., Omar, M.H., and Chaudhry, A., "Statistical Analysis of H.264 Video Frame Size Distribution," International Journal of IET Communications, Vol. 5, No. 14, September 2011, pp. 1978-1986.
36. **Salah, K.**, AlKhiaty, M, Ahmed, R., and Mahdi, A., "Performance Evaluation of Snort under Windows 7 and Windows Server 2008," Journal of Universal Computer Science, Vol. 17, No. 11, July 2011, pp. 1605-1622.

Year 2010

37. **Salah, K.**, "Modeling and analysis of PC-based software routers," International Journal of Computer Communications, Elsevier Science, Vol. 33, No. 12, July 2010, pp. 1462-1470.
38. **Salah, K.**, and Kahtani, A. "Performance Evaluation Comparison of Snort NIDS under Linux and Windows Server," International Journal of Network and Computer Applications, Elsevier Science, Vol. 33, No. 1, January 2010, pp. 6-15.
39. **Salah, K.**, and Haidari, "Performance Evaluation and Comparison of Four Network Rate Estimators," International Journal of Electronics and Communications, Elsevier Science, Vol. 64, No. 11, November 2010, pp 1015-1023.
40. Baig, Z., and **Salah, K.**, "Multi-Agent Pattern Recognition Mechanism for Detecting Distributed Denial of Service Attacks," IET Information Security, Vol. 4, No. 4, December 2010, pp. 333-343.
41. **Salah, K.**, Hamawi, M.; Hassan, Y., "On the Performance of IP-Forwarding for Multicore Multiprocessor Linux Hosts," International Journal of IET Communications, Vol. 4, No. 18, December 2010, pp. 2166-2180.
42. Rashvand, H. F.; **Salah, K.**; Calero, J. M. A.; Harn, L., "Distributed security for multi-agent systems - review and applications," IET Information Security, Vol. 4, No. 4, December 2010, pp. 188-201.
43. **Salah, K.**, and Hamawi, M.; "Impact of CPU-bound Processes on IP Forwarding of Linux and Windows XP," Journal of Universal Computer Science, Vol. 16, No. 21, 2010, pp. 3299-3313.
44. **Salah, K.**, Sattar, K., Baig, Z., Sqalli, M., and P. Calyam, A. "Discovering Last-

Matching Rules in Popular Open-Source and Commercial Firewalls,” International Journal of Internet Protocol, Inderscience, Vol. 5, No. 2, 2010, pp. 23-31.

Year 2009

45. **Salah, K.**, and Hamawi, M. “*Comparative Packet-Forwarding Measurement of Three Popular Operating Systems,*” International Journal of Network and Computer Applications, Elsevier Science, Vol 32, No. 4, September 2009, pp. 1039-1048..
46. **Salah, K.**, Qahtan, A. “*Implementation and Experimental Performance Evaluation of a Hybrid Interrupt-Handling Scheme,*” International Journal of Computer Communications, Elsevier Science, Vol. 32, No. 1, 2009, pp. 179-188.
47. **Salah, K.**, Haidari, F., Bahjat, A., and Manaa, A. “*Implementation and Experimental Evaluation of a Simple Packet Rate Estimator,*” International Journal of Electronics and Communications, Elsevier Science, Vol. 63, No. 11, November 2009, pp. 9770985.
48. **Salah, K.**, Darwish, N., Saleem, M., and Shaaban, Y., “*An Analytical Simulator for Deploying IP Telephony,*” International Journal of Network Management, John Wiley, Vol 19, No. 1, 2009, pp. 25-37.

Year 2008

49. **Salah, K.**, Calyam, P., and Buhari, M. “*Assessing Readiness of IP Networks to Support Videoconferencing using OPNET,*” International Journal of Network and Computer Applications, Elsevier Science, Vol 31, No. 8, 2008, pp. 921-943.

Year 2007

50. **Salah, K.**, El-Badawi, K., and Haidari, F., “*Performance Analysis and Comparison of Interrupt-Handling Schemes in Gigabit Networks,*” International Journal of Computer Communications, Elsevier Science, Vol. 30, No. 17, 2007, pp. 3425-3441.
51. **Salah, K.**, “*To Coalesce or not to Coalesce,*” International Journal of Electronics and Communications, Elsevier Science, Vol. 61, No. 4, 2007, pp. 215-225.
52. **Salah, K.**, and El-Badawi, K., “*Throughput and Delay Analysis of Interrupt-Driven Kernels under Poisson and Bursty Traffic,*” International Journal of Computer Systems, Science and Engineering, CRL Publishing, Vol. 22, No. 2, 2007, pp. 5-14.

Year 2006

53. **Salah, K.**, “*On the Deployment of VoIP in Ethernet Networks: Methodology and Case Study,*” International Journal of Computer Communications, Elsevier Science, Vol. 29, No. 8, 2006, pp. 1039-1054
54. **Salah, K.**, “*Two Analytical Models for Evaluating Performance of Gigabit Ethernet Hosts with Finite Buffer,*” International Journal of Electronics and Communications, Elsevier Science, Vol. 60, No. 7, 2006, pp. 545-556
55. **Salah, K.** “*On the Accuracy of Two Analytical Models for Evaluating the Performance of Gigabit Ethernet Hosts,*” International Journal of Information Sciences, Elsevier Science, Vol. 176, No. 24, 2006, pp. 3735-3756
56. **Salah, K.**, “*An Analytical Approach for Deploying Desktop Videoconferencing,*” IET

Communications, Vol. 153, Vol. 3, No. 2006, pp. 434-444.

57. **Salah, K.**, and Alkhoraidly, A., "An OPNET-based Simulation Approach for Deploying VoIP," International Journal of Network Management, John Wiley, Vol. 16, No. 3, 2006, pp. 149-183.
58. **Salah, K.**, and El-Badawi, K., "Throughput-Delay Analysis of Interrupt-Driven Kernels with DMA Enabled and Disabled in High-Speed Networks," International Journal of High Speed Networks, Vol. 16, No. 2, 2006, pp. 157-172
59. **Salah, K.**, "Two Analytical Models (with Infinite Buffer) for Evaluating Performance of Gigabit Ethernet Hosts," The Arabian Journal of Science and Engineering, Vol. 31, No. 2B, 2006, pp. 245-263
60. **Salah, K.**, and El-Badawi, K., "On Modeling and Analysis of Receive Livelock and CPU Utilization in High-Speed Networks," International Journal of Computers and Applications, ACTA Press, Vol. 28, No. 2, 2006, pp. 162-169
61. Alqahtani, S., and **Salah, K.**, "Performance Evaluation of Various Techniques for Handling Interrupts in Gigabit Networking Environment," Journal of Applied Sciences, Vol. 6, No. 6, 2006, pp. 1396-1403.

Year 2005

62. **Salah, K.**, and El-Badawi, K., "Analysis and Simulation of Interrupt Overhead Impact on OS Throughput in High-Speed Networks," International Journal of Communication Systems, John Wiley, Vol. 18, No. 6, 2005, pp. 501-526.
63. Alqahtani, S., Helmy, T., and **Salah, K.**, "Performance Evaluation of a QoS-Aware Mechanism for Polling-based High Speed Network Interfaces," Journal of Computer Science, Vol. 1, No. 4, 2005, pp. 461-470.
64. **Salah, K.**, "Integrated performance evaluating criterion for selecting between interrupt coalescing and normal interruption," International Journal of High Performance Computing and Networking, Inderscience Publishers, Vol. 3, No. 5-6, 2005, pp. 434-445.
65. **Salah, K.**, "Modeling and Analysis of Application Throughput in Gigabit Networks," International Journal of Computers and Their Applications, International Journal of Computers and Their Applications, ISCA Publication, Vol. 12, No. 1, 2005, pp. 44-55.

Year 2000

66. **Salah, K.**, Drakopoulos, E., and Elrad, T., "A Novel Handoff Scheme for Wireless ATM Networks," Journal of Interoperable Communication Networks, Baltzer Science Publishers, Vol. 2, No. 4, 2000, pp. 215-224.

2) Refereed Conference Papers

Year 2017

67. H. Marzouqi, M. Al-Qutayri, **K. Salah**, and Saleh, H., "A 65nm ASIC Based 256 NIST Prime Field ECC Processor," The IEEE 59th International Midwest Symposium on

Circuits and Systems (MWSCAS), 16-19 October 2016, Abu Dhabi, United Arab Emirates (UAE), October 16-19, 2016.

68. Alqaydi, F., **Salah, K.**, and Zemerly, J., “*Adaptive Cloud Resource Allocation Scheme to Minimize SLO Response Time Violation*,” Proceedings of 13th ACS/IEEE International Conference on Computer Systems and Applications (ACS/IEEE AICCSA 2016), Agadir, Morocco, November 29, 2016.
69. AlSalami, S., Baek, J., Salah, K., and Damiani, E., “*Lightweight Encryption for Smart Home*,” Proceedings of the 11th International Conference on Availability, Reliability, and Security, Austria, September 1-2, 2016.
70. Abubaker, H., **Salah, K.**, AlMuhairi, H., and Bentiba, A., “*Architectural Design of a Cloud-based reCAPTCHA Service*,” Proceedings of the 12th International Conference on Innovations in Information Technology (IIT’16), November 28-30, 2016, Al-Ain, UAE.
71. **Salah, K.** and Kafhali, S., “*Performance Modeling of Cloud Apps Using Message Queueing as a Service (MaaS)*,” Proceedings of the 20th International Conference on Innovations in Clouds, Internet and Networks, ICIN’17, March 2017, Paris, France.
72. **Salah, K.** and Kafhali, S., “*Stochastic Modelling and Analysis of Cloud Computing Data Center*,” Proceedings of the 20th International Conference on Innovations in Clouds, Internet and Networks, ICIN’17, March 2017, Paris, France.

Year 2016

73. AlMansoori, F., Baek, J., and Salah, K., “*Subverting MAC: How authentication in mobile environment can be undermined*,” Proceedings of the 7th IEEE INFOCOM International Workshop on Mobility Management in the Networks of the Future World, San Francisco, April 10-15, 2016.
74. Bazzaza, M., and **Salah, K.**, “*Using the Cloud to Teach Computer Networks*,” Proceedings of the 8th IEEE/ACM International Conference on Utility and Cloud Computing (IEEE/ACM UCC 2015), Limassol, Cyprus, December 7-10, 2015.
75. **Salah, K.**, “*Analytical Model to Achieve Elasticity for Cloud-based Firewalls*,” Proceedings of the 40th IEEE Conference on Local Computer Networks, (IEEE LCN 2015), Clearwater Beach, Florida, October 26-29, 2015.
76. Abubaker, H., **Salah, K.**, AlMuhairi, H., and Bentiba, A., “*Arabic reCAPTCHA Service: Architecture and Design Challenges*,” Proceedings of the UAE Graduate Students Research Conference 2016 (UAEGSRC’16), Al-Ain, UAE, April 17-19, 2016.
77. AlKharoossi, A., Salah, K., and Baek, J., “*Security Health Assessment of Wi-Fi Environment*,” Proceedings of the UAE Graduate Students Research Conference 2016 (UAEGSRC’16), Al-Ain, UAE, April 17-19, 2016.
78. Albelooshi, B., **Salah, K.**, Martin, T., and Damiani, E., “*Securing Cryptographic Keys in the Cloud*,” Proceedings of the UAE Graduate Students Research Conference 2016 (UAEGSRC’16), Al-Ain, UAE, April 17-19, 2016.
79. Albelooshi, B., **Salah, K.**, Martin, T., and Damiani, E., “*Securing Cryptographic Keys*

in the IaaS Cloud Model,” Proceedings of the 8th IEEE/ACM International Conference on Utility and Cloud Computing (IEEE/ACM UCC 2015), Limassol, Cyprus, December 7-10, 2015.

80. Abubaker, H., **Salah, K.**, AlMuhairi, H., and Bentiba, A., “*Cloud-based Arabic reCAPTCHA Service: Design and Architecture*,” Proceedings of 12th ACS/IEEE International Conference on Computer Systems and Applications (ACS/IEEE AICCSA 2015), Marrakech, Morocco, November 17-20, 2015.
81. Albelooshi, B., **Salah, K.**, Martin, T., and Damiani, E., “*Inspection and Deconfliction of Published Virtual Machine Templates’ Remnant Data for Improved Assurance in Public Cloud*,” Proceedings of 12th ACS/IEEE International Conference on Computer Systems and Applications (ACS/IEEE AICCSA 2015), Marrakech, Morocco, November 17-20, 2015.

Year 2015

82. Albelooshi, B., **Salah, K.**, Martin, T., and Damiani, E., “*Experimental Proof: Data Remanence in Cloud VMs*,” Proceedings of the 8th IEEE Cloud Computing (IEEE Cloud 2015), New York, June 27, 2015.
83. **Salah, K.**, “*State of Cloud Adoption in Higher Education*,” Proceedings of the 5th International Conference on Computing and Informatics (ICOCI 2015), Istanbul, Turkey, August 11, 2015.
84. Baig, Z., AlAmoudy, A., and **Salah, K.**, “*Detection of Compromised Smart Meters in the Advanced Metering Infrastructure*,” Proceedings of the 8th IEEE GCC 2015, Oman, February 2015, pp. 1-6.
85. Abubaker, H., **Salah, K.**, AlMuhairi, H., and Bentiba, A., “*Digital Arabic Content: Challenges and Opportunities*,” Proceedings of the International Conference on Information and Communication Technology (ICTRC 2015), Abu Dhabi, May 17, 2015.
86. Alqaydi, F., **Salah, K.**, and Zemerly, J., “*Queuing Algorithm to Find Minimal Number of VMs to Satisfy SLO Response Time*”, Proceedings of the International Conference on Information and Communication Technology (ICTRC 2015), Abu Dhabi, May 17, 2015.
87. Alzaabi, C. Yeun and **K. Salah**, “*Log Analytics for Abnormality Detection in SCADA Networks*”, Proceedings of the 2015 Graduate Student Research Conference (GSRC 2015), Abu Dhabi, UAE, March 22-24, 2015.
88. Alqaydi, F., **Salah, K.**, and Zemerly, J., “*Queuing Algorithm to Estimate SLO Response Time*”, Proceedings of the 2015 Graduate Student Research Conference (GSRC 2015), Abu Dhabi, UAE, March 22-24, 2015.
89. Albelooshi, B., **Salah, K.**, and Martin, T., “*Data Security in Cloud: A Survey of Existing Techniques*,” Proceedings of the 2015 Graduate Student Research Conference (GSRC 2015), Abu Dhabi, UAE, March 22-24, 2015.

Year 2014

90. **Salah, K.**, “*Harnessing the Cloud for Teaching Cybersecurity*,” Proceedings of the

45th ACM Technical Symposium on Computer Science Education (ACM SIGCSE 2014), Atlanta, Georgia, March 5-8, 2014.

91. Al-Dalky, R., **Salah, K.**, Otrok, H., and Al-Qutayri, M., “*Accelerating snort NIDS using NetFPGA-based Bloom filter*,” Proceedings of the 2014 IEEE Wireless Communications and Mobile Computing Conference (IEEE IWCMC 2014), Cyprus, August 2014, pp. 869-874.
92. H. Marzouqi, M. Al-Qutayri, and **K. Salah**, “*A Fault Attack Countermeasure for ECC Processor using One-Hot RSD Encoding*,” IEEE International Conference in Electronics, Circuits and Systems (IEEE ICECS 2014), Marseille, December 2014, pp. 307-310.
93. Al-Dalky, R., **Salah, K.**, Al-Qutayri, M., and Otrok, H., “*Framework for a NetFPGA-based Snort NIDS*,” Proceedings of the 9th IEEE International Symposium on Communication Systems, Networks & Digital Signal Processing (IEEE CSNDSP), July 2014, Manchester, UK, pp. 380-383.
94. Al-Dalky, R., Abduljaleel, O., **Salah, K.**, Otrok, H., and Al-Qutayri, M., “*A Modbus traffic generator for evaluating the security of SCADA systems*,” Proceedings of the 9th IEEE International Symposium on Communication Systems, Networks & Digital Signal Processing (IEEE CSNDSP), July 2014, Manchester, UK, pp. 809-814.

Year 2013

95. **Salah, K.**, and Calero, J., “*Achieving Elasticity for Cloud MapReduce Jobs*,” Proceedings of the 2nd IEEE International Conference on Cloud Networking (IEEE CloudNet 2013), San Francisco, November 11-13, 2013.
96. **Salah, K.**, “*A Queueing Model to Achieve Proper Elasticity for Cloud Cluster Jobs*,” Proceedings of the IEEE International Conference on Cloud Computing (IEEE CLOUD 2013), Santa Clara, June 27-July 2, 2013.
97. AlHaidair, F., Sqalli, M., and **Salah, K.**, “*Impact of CPU Utilization Thresholds and Scaling Size on Autoscaling Cloud Resources*,” Proceedings of the 5th IEEE International Conference on Cloud Computing Technology and Science, (IEEE CloudCom 2013), Bristol, UK, December 2-5, 2013.
98. Al Awadhi, E., **Salah, K.**, and Martin, T., “*Assessing the security of the cloud environment*,” Proceedings of the 7th IEEE GCC Conference and Exhibition (IEEE GCC 2013), 2013, Doha, Qatar, pp. 251-256.
99. Marzouqi, H., AlQutayri, M., and **Salah, K.**, “*RSD Based Karatsuba Multiplier for ECC Processor*”, Proceedings of the 8th IEEE International Design and Test Symposium 2013 (IEEE IDT 2013), December 16-18, 2013, Marrakesh, Morocco.
100. Marzouqi, H., AlQutayri, M., and **Salah, K.**, “*An FPGA Implementation of NIST 256 Prime Field ECC Processor*”, Proceedings of the 2013 IEEE International Conference on Electronics, Circuits, and Systems (IEEE ICECS 2013), December 8-11, 2013, Abu Dhabi, UAE.
101. Alqaydi, F., **Salah, K.**, and J. Zemerly, “*Network-aware Resource Allocation for Cloud Elastic Applications*,” Proceedings of the 2013 IEEE International Conference on Electronics, Circuits, and Systems (IEEE ICECS 2013), December 8-11, 2013, Abu Dhabi, UAE.

102. Alawadhi, E., **Salah, K.**, and Martin, T., “*Assessing the Security of the Cloud Environment*,” Proceedings of the 7th IEEE GCC 2013, Doha, Qatar, November 17-20, 2013.
103. Alhawi, F., Yeun, C., and **Salah, K.**, “*Secure Framework for the Return Routability Procedure in MIPv6*,” Proceedings of the 2013 IEEE Conference on Green Computing and Communication (IEEE GreenCom 2013), Beijing, China, August 20-23, 2013.
104. Alshamasi, **K.**, **Salah, K.**, and Martin, T., “*Visualization and Analysis of Data Collected by Dionaea Honey Pots within UAE*,” Proceedings of the BCS International IT Conference, Abu Dhabi, UAE, March 31-April 1, 2013.

Year 2012

105. **Salah, K.**, and Boutaba, R. “*Estimating Service Response Time for Elastic Cloud Applications*,” Proceedings of 1st IEEE International Conference on Cloud Networking (IEEE CloudNet 2012). Paris, France, November 28-30, 2012.
106. Al-Haidari, F., Sqalli, M., and **Salah, K.**, “*Enhanced EDoS-Shield for Mitigating EDoS Attacks Originating from Spoofed IP Addresses*,” The 2012 IEEE 11th International Conference on Trust, Security and Privacy in Computing and Communications (IEEE Trustcom 2012), Liverpool, UK, June 2012, pp. 1167-1174.
107. Albelooshi, B., **Salah, K.**, Martin, T., and Bentiba, A., “*Assessing Overhead Cost Associated with Encrypted Swap File*,” Proceedings of the 2012 IEEE 11th International Conference on Trust, Security and Privacy in Computing and Communications (IEEE Trustcom 2012), Liverpool, UK, June 2012, pp. 1119-1123.

Year 2011

108. Marzouqi, H., **Salah, K.**, Al-Qutayri, M., Yeun, C., “*A Unified Countermeasure against Side Channel Attacks on Cryptographic RFID*,” Proceedings of the 2011 AIKindi Student Workshop on Cryptology, Abu Dhabi, Dec. 11, 2011, pp. 13-18. [Won the Workshop’s Best Paper Award.](#)
109. Sqalli, M., Al-Haidari, F., and **Salah, K.**, “*EDoS Shield: A Two-Step Mitigation Technique against EDoS Attacks in Cloud Computing*,” Proceedings of the 4th IEEE/ACM International Conference on Utility and Cloud Computing (IEEE UCC 2011), Melbourne, Australia, December 5-7, 2011.
110. Sqalli, M., Firdous, S. N., **Salah, K.**, and Amara, M., “*Identifying Network Traffic Features Suitable for Honeynet Data Analysis*,” Proceedings of the IEEE Canadian Conference on Electrical and Computer Engineering (CCECE 2011), May 8-11, 2011, Niagra Falls, Canada.
111. **Salah, K.**, Al-Shaikh, R., and Sindi, M., “*Towards Green Computing using Diskless High Performance Clusters*,” Proceedings of the 7th International Conference on Network and Service Management (CNSM 2011), Paris, France, October 24-28.
112. Alhamawi, M. K., Al-Hmouz, O, Sqalli, M., and **Salah, K.**, “*A Delay-based Probing Technique for the Discovery of a Firewall’s Accept Rules*,” Proceedings of IEEE GCC (IEEE GCC 2011), Dubai, February 19-22 , 2011, pp. 445-448

113. Almarshada, K., Alsalami, Y., **Salah, K.**, and Martin, T., "*On the Security of Inclusion or Omission of MixColumns in AES Cipher,*" Proceedings of the 2011 AlKindi Student Workshop on Cryptology, Abu Dhabi, UAE, Dec. 11, 2011, pp. 34-39.
114. **Salah, K.**, Alsaba, M., Akhdhor, M., Shaaban, O, and Buhari, M., "*Performance Evaluation of Popular Cloud IaaS Providers,*" Proceedings of the 2011 ICITST Conference, Abu Dhabi, UAE, Dec. 11-14, 2011, pp. 345-349.
115. AlAmeiri, F., and **Salah, K.**, "*Evaluation of Popular Application Sandboxing,*" Proceedings of the 2011 ICITST Conference, Abu Dhabi, UAE, Dec. 11-14, 2011, pp. 358-362.
116. Arshad, M., Khalaf, M., Sqalli, M., and **Salah, K.**, "*Identifying Scanning Activities in HoneyNet Data Using Data Mining*", Proceedings of the 3rd International Conference on Computational Intelligence, Communication Systems and Networks (CICSyN 2011), Bali, Indonesia, July 26-28, 2011.

Year 2010

117. **K. Salah**, "*Queueing Analysis of Network Firewalls,*" Proceedings of the 2010 IEEE Conference on Global Telecommunications, (IEEE GLOBECOM 2010), Miami, Florida, December 6-10, 2010, pp. 1-5.

Year 2009

118. Al-Haidari F., Sqalli M., **Salah, K.**, and Hamodi J., "*An Entropy-based Countermeasure against Intelligent DoS Attacks Targeting Firewalls*", Proceedings of the IEEE International Symposium on Policies for Distributed Systems and Networks (IEEE POLICY 2009), London, UK, July 20-22, 2009, pp. 41-44.
119. **Salah, K.**, Sattar, K., Baig, Z, Sqalli, M, and Calyam, P., "*Resiliency of Open-Source Firewalls against Remote Discovery of Last-Matching Rules*", Proceedings of the 2nd International Conference on Security of Information and Networks (SIN 2009), Gazimagusa, North Cyprus, October 6-10, 2009.

Year 2008

120. **Salah, K.**, and Haidari, F., "*On the Performance of a Simple Packet Rate Estimator ,*" Proceedings of the IEEE 6th ACS/IEEE International Conference on Computer Systems and Applications (IEEE AICCSA-08), Doha, Qatar, March 31-April 4, 2008, pp. 392-395.
121. **Salah, K.**, and Qahtan, A., "*Boosting Throughput of Snort NIDS under Linux,*" Proceedings of the 5th International Conference on Innovations in Information Technology (Innovations'08), December 16-18, 2008, Al-Ain, UAE.
122. **Salah K.**, Sattar, K., Sqalli, M., and Al-Shaer, E. "*A Probing Technique for Discovering Last-Matching Rules of a Network Firewall,*" Proceedings of the 5th International Conference on Innovations in Information Technology (Innovations'08), December 16-18, 2008, Al-Ain, UAE.
123. **Salah, K.**, and Qahtan, A., "*Experimental Performance Evaluation of a Hybrid Packet Reception Scheme for Linux Networking Subsystem,*" Proceedings of the 5th International Conference on Innovations in Information Technology (Innovations'08), December 16-18, 2008, Al-Ain, UAE.

Year 2007

124. **Salah, K.**, and El-Badawi, K., “*Modeling and Analysis of Interrupt Disable-Enable Scheme*,” Proceedings of the IEEE 21st International Conference on Advanced Information Networking and Applications (IEEE AINA-07), Niagara Falls, Canada, May 21-23, 2007, pp. 1000-1005.

Year 2006

125. **Salah, K.**, and Almashari, A., “*An Analytical Tool to Assess Readiness of Existing Networks for Deploying IP Telephony*”, Proceeding of 11th IEEE Symposium on Computers and Communications (IEEE ISCC 2006), Sardinia, Italy, June 27-30, 2006, pp. 302-305.

Year 2005

126. **Salah, K.**, “*An Analytical Model for Evaluating Interrupt-Driven System Performance of Gigabit Ethernet Hosts with Finite Buffer*,” Proceedings of the 10th IEEE Symposium on Computers and Communications (IEEE ISCC’05), Cartagena, Spain, 2005, pp. 983-988.

Year 2004

127. Hussain, S., Hassan, Y., El-Badawi, K., and **Salah, K.**, “*Analysis of the Internet Worm of August 2003*,” Proceedings of the International Conference on Information and Computer Science (ICICS 2004), Dhahran, Saudi Arabia, 2004, pp. 99-112
128. Hassan, Y., Khan, U., Naji, M., and **Salah, K.**, “*Operating System Support for CPU Power Management in Mobile Devices*,” Proceedings of the International Conference on Information and Computer Science (ICICS 2004), Dhahran, Saudi Arabia, 2004, pp. 303-321
129. Muzaffar, Z., Rasheed, A., and **Salah, K.**, “*Methods of Protecting the Stack Overflow Vulnerability*,” Proceedings of the International Conference on Information and Computer Science (ICICS 2004), Dhahran, Saudi Arabia, 2004, pp. 437-454

Year 2003

130. **Salah, K.**, and El-Badawi, K., “*Performance Evaluation of Interrupt-Driven Kernels in Gigabit Networks*,” Proceedings of the 2003 IEEE Conference on Global Telecommunications, (IEEE GLOBECOM 2003), San Francisco, USA, December 1-5, 2003, pp. 3953-3957
131. **Salah, K.**, and El-Badawi, K., “*Evaluating System Performance in Gigabit Networks*,” Proceedings of the 28th IEEE Local Computer Networks (IEEE LCN 2003), Bonn/Königswinter, Germany, 2003, pp. 498-505
132. **Salah, K.**, and El-Badawi, K., “*Modeling and Analysis of Interrupt Overhead in High-Speed Networks*,” Proceedings of the IFIP 2003 International Network Optimization Conference, Evry, Paris, France, 2003, pp. 501-507
133. **Salah, K.**, and El-Badawi, K., “*Modeling and Analysis of OS Performance in High-Speed Networks*,” Proceedings of the 2003 International Conference on Communications in Computing, Las Vegas, Nevada, USA, 2003, pp. 249-255.

Year 2002

134. **Salah, K.**, and Mufti, A., “*Web Operating System*,” Proceedings of the 4th Workshop on Information and Computer Science: Internet Computing (WICS'2002), Dhahran, Saudi Arabia, 2002, pp. 279-287.
135. **Salah, K.**, and Saliu, M., “*Starvation Problem in CPU Scheduling for Multimedia Systems*,” Proceedings of the 4th Workshop on Information and Computer Science: Internet Computing (WICS'2002), Dhahran, Saudi Arabia, 2002, pp. 489-497.

Year 1999

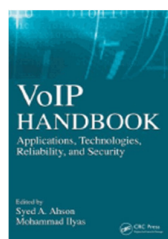
136. **Salah, K.**, Drakopoulos, E., and Elrad, T., “*Periodic Route Optimization for Handed-off Connections in Wireless ATM Networks*,” Proceedings of the 24th IEEE Annual Conference on Local Computer Networks and Services (IEEE LCN'99), Boston, MA, USA, 1999, pp. 205-214.
137. **Salah, K.**, Drakopoulos, E., and Elrad, T. , “*Performance Study of a Two-Phase Handoff Scheme for Wireless ATM Networks*,” Proceedings of the 2nd IEEE International Workshop on Wireless Mobile ATM Implementations (IEEE wmATM'99), San Francisco, USA, 1999, pp. 194-200.

Year 1998

138. **Salah, K.**, and Drakopoulos, E., “*A Two-Phase Handoff Scheme for Mobility Management in Wireless ATM Networks*,” Proceedings of the 2nd IFIP/IEEE International Conference on Management of Multimedia Networks and Services, Versailles, France, 1998, pp. 205-214.
139. **Salah, K.**, and Drakopoulos, E., “*A Two-Phase Inter-Switch Handoff Scheme for Wireless ATM Networks*,” Proceedings of the 7th IEEE International Conference on Computer Communications and Networks (IEEE ICCCN'98), Lafayette, LA, USA, 1988, pp. 708-713.

3) Book Chapters

140. Mortazavi, M., and **Salah, K.**, “*Big Data and Privacy*,” Book Chapter, “Privacy in a Digital, Networked World,” Editors: Zeadally, S., and Badra, M., Springer, 2015.
141. **Salah, K.**, “*Deploying VoIP in Existing IP Networks*”, Book Chapter, "VoIP Handbook: Applications, Technologies, Reliability, and Security," Editors: S. Ashon and M. Ilyas, CRC Press, 1st Edition, December 2008.



[Dr. Salah was invited to write a book chapter on the topic of VoIP. Contributors to chapters include well known figures in the field of VoIP, among those of Columbia University such as Henning Schulzrinne as well as known industry figures from Cisco and Nokia. The book can be purchased from Amazon.com at <http://www.amazon.com/VoIP-Handbook-Applications-Technologies-Reliability/dp/1420070207> Dr. Salah's chapter appears as the first chapter with part of it showing online at Amazon.com]

4) Proceeding Books

142. **Salah, K.**, and Sherali, Z. (Editors), *The Proceedings of the 2015 IEEE International Workshop on Cloud-based Networks and Applications* (IEEE CloudNA 2015), IEEE, October 2015.
143. Faisal, K., Sarfraz, M., and **Salah, K.** (Editors), *The Proceedings of the 2002 International Workshop on Information and Computer Science: Internet Computing*, KFUPM Press, Saudi Arabia, (2002), ISBN: 9960-07-187-1.

5) Edited Journals

144. **Salah, K.**, Sqalli, M., AlShaer, E., and Gouda, M. (Guest Editors), Special Issue on *Recent Advances in Network Security Attacks and Defences*, International Journal of Internet Protocol Technology (IJIPT), InderScience Publishers, to appear in early 2010.
145. Rashvand, H., Harn, L., Park, J., and **Salah, K.** (Guest Editors), Special Issue on *Multi-Agent and Distributed Information Security*, International Journal of IET Information Security, IET Publishing, October 2010.
146. Sarfraz, M., **Salah, K.**, and Ahmed, M. (Guest Editors), Special Issue on *Internet Computing*, International Journal of Information Sciences, Elsevier Science Inc., Vol. 150(3-4), 2003.

6) National Newspapers

147. "Head in the Cloud," *KU Pulse* Research e-Newsletter of Khalifa University, January 2016, page 62-63, Available at:
<http://www.kustar.ac.ae/source/reflections/reflection%20low%20quality1.pdf>
148. "Head in the Cloud," *KU Pulse* Research e-Newsletter of Khalifa University, August 2015. Available at: <http://www.kustar.ac.ae/pages/head-in-the-cloud>
149. Faisal, S., "Interview with Dr. Salah on Preventing Computer Networks from Hacking Attacks," Saudi Daily National Newspaper of "AlYaum", Jan. 30, 2008. Available at:
<http://www.alyaum.com/issue/article.php?IN=12647&I=556663>
150. Faisal, S., "Interview with Dr. Salah on Securing Computer Networks from Botnets", Saudi Daily National Newspaper of "AlYaum", Mar. 5, 2008. Available at:
<http://www.alyaum.com/issue/article.php?IN=12682&I=565939>
151. Salah, K., "The Rise of Botnets and the Fall of Computer Viruses," KFUPM University, Arabic Bi-weekly newspaper, April 12, 2008. Available at:
http://faculty.kfupm.edu.sa/ics/salah/misc/In%20the%20news/Short_382.pdf

f) **KEYNOTE SPEECHES, INVITED TALKS, SEMINARS**

1. Keynote Speech, “The Cloud for Reproducible Research”, 3rd IEEE/IFIP Smart Cloud Networks and Systems Conference, December 20, 2016, Dubai. <http://scns-conference.org/keynote.php>
2. Keynote Speech, “Using Virtualization for Research Reproducibility”, International Conference on Virtualization Application and Technology, ICVAT 2017, November 18, 2016, Dubai.
3. Keynote Speech, 7th Intl Scientific Conference on Applied Sciences and Engineering, Dubai, UAE, “*The Cloud and Research Reproducibility*”, Feb 27-28, 2016, <http://www.scihost.org/?ic=details&id=18&info=speakers>
4. Keynote Speech, 5th ICOCI 2015, Istanbul, Turkey, “*State of Cloud Adoption in Higher Education*,” August 11, 2015, <http://www.icoci.cms.net.my/icoci2015/keynote.asp>
5. Keynote Speech, 2nd ICNGCCT 2015, Dubai, UAE, “*Using the Cloud as a Research and Teaching Platform*”, April 22, 2015, <http://www.icngcct.com/speaker.php>
6. Plenary Lecture, 11th EDUTE 2015, Dubai, UAE, “*The Cloud as a Platform for Teaching and Research*”, February 22, 2015, <http://www.wseas.org/cms.action?id=9185>
7. Invited Talk, Distinguished Lecture Series, “*Harnessing the Power of the Cloud for RR*,” College of Information Technology, UAE University, May 4, 2016.
8. Invited Talk, QS Maple 2016 Conference, “*Cloud-based Laboratories in Higher Education*”, Doha, Qatar, May 10-12, 2016.
9. Invited Talk, UAE Security Day 2016, “*Securing Crypto Keys in the Cloud*”, NYU-AD, Abu Dhabi, May 25, 2016.
10. Panelist, The Annual EMC Academic Alliance. “*Lessons Learned: Cloud Computing in Academia*,” Middlesex University, Dubai, UAE, May 26, 2015.
11. Invited Talk, Ankabut User’s Meeting, “*The Cloud for Reproducible Research*,” NYU-AD, Abu Dhabi, UAE, November 16, 2015.
12. Invited Talk, QS Maple 2015 Conference, “*The Cloud as an Enabler for STEM Education*”, Doha, Qatar, May 5, 2015.
13. Invited Talk, IQPC Conference on Network Security and Defense, “*Cybersecurity Research and Development at KU*,” Abu Dhabi, UAE, December 2014.
14. Research Seminar, “*Info Sec Group Research Profile on Big Data, SCADA, Cloud, and IoT*,” Annual Research Day, KUSTAR, Abu Dhabi, June 16, 2014.
15. Invited Talk, KU-KAIST Research Day, “*Development of Disease Network Simulation Platform for Personalized Medicine Based on Big Data Analysis*”, KUSTAR, Abu Dhabi, December 8, 2013.
16. Research Seminar, “*The Cloud as Enabler for Reproducible Research*,” Khalifa University, Abu Dhabi, Feb 2, 2016.
17. Research Seminar, Saudi Honeynet Research Group, “*Research Directions in Cloud Computing*,” KFUPM, Saudi Arabia, November 2013.
18. Invited Talk, 2013 MENA Interpol Workshop, “*Cyber Persistent Attacks:*

- Challenges and Research,*” American University in the Emirates, Dubai, UAE, May 15, 2013.
19. Invited Talk, The 2013 Secure Abu Dhabi Conference, “*Next Generation Cyber Attacks,*” Abu Dhabi, UAE, March 2013.
<http://www.adpoly.ac.ae/SAD2013/speaker/default.html>
 20. Invited Talk, Ankabut User’s Meeting, “*Using the Cloud for Teaching and Research,*” American University of Sharjah, Sharjah, UAE, October 2013.
 21. Invited Talk, QS Maple 2014 Conference, “*Using the Cloud for Teaching in Higher Education,*” Abu Dhabi, May 2014.
 22. Research Seminar, Khalifa University, “*Using the Cloud as a Platform for Teaching and Research,*” Sharjah Campus, UAE, May 2013.
 23. Invited Talk, Info Security Research Group at KAIST, “*SCADA Security: Stuxnet and Beyond*”, KAIST, South Korea, April 2013,.
 24. Research Seminar, KUSTAR ISRG Group and Graduate Students, “*Manual Malware Cleaning and Analysis,*” Abu Dhabi, March 2012.
 25. Research Seminar, Khalifa University, “*Modeling and Analysis of Network Firewalls,*” Sharjah Campus, UAE, October 2010.
 26. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Cloud Computing: Opportunities and Challenges,*” Saudi Arabia, Nov. 3, 2009.
 27. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Improving the Performance of Linux Networking Subsystem,*” April 24, 2007.
 28. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Saudi HoneyNet Project,*” Mar. 11, 2009.
 29. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Successful Deployment of VoIP,*” Sep. 11, 2007.
 30. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Intelligent Firewall DoS Attacks and Countermeasures,*” Mar. 27, 2007.
 31. Invited Talk, STC Premise at Riyadh (R&D Group), “*Using OPNET to deploy VoIP,*” Mar. 17, 2007.
 32. Invited Talk, STC Premise at Riyadh (Training Center), “*Using OPNET,*” Feb. 24, 2007.
 33. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Effective Techniques against Software Cracking,*” Mar. 2006.
 34. Research Seminar, College of Computer Science and Engineering, KFUPM, “*A Methodology for Successful Voice over IP Deployment,*” Oct. 2005.
 35. Research Seminar, KFUPM, “*Analysis of Internet Worm of August 2003,*” Attended by more than 250 people, broadcasted live on KFUPM TV Channel, and video taped, Sep. 2003.
 36. Research Seminar, College of Computer Science and Engineering, KFUPM, “*Gigabit Ethernet vs. ATM,*” Oct. 2001.

g) **TUTORIALS AND SHORT COURSES**

1. Tutorial Presenter, “*Using the Cloud for Teaching and Research*,” 12th International Conference on Innovations in Information Technology (IIT’16), November 29, 2016, Al Ain, UAE. <http://www.it-innovations.ae/>
2. Tutorial Presenter, “*Using the Cloud for Teaching and Research*,” 8th IEEE/ACM International Conference on Utility and Cloud Computing (IEEE UCC 2015), December 07-10, 2015, Limassol, Cyprus
http://cyprusconferences.org/ucc2015/?page_id=1211
3. Tutorial Presenter, “*Secrets of Software Reverse Engineering*,” 2nd ACM International Conference on Security of Information and Networks (SIN 2009), October 7, 2009, North Cyprus. <http://sinconf.org/default.html>
4. Coordinator and presenter on “*A Short Course on Computer and Network Security*,” KFUPM, Dhahran, April 2009.
5. Presenter on “*A Short Course on TCP/IP, Concepts, Programming and Administration*,” KFUPM, Dhahran, March 23-27, 2002.
6. Presenter on “*A Short Course on TCP/IP: Concepts, Programming and Administration*,” KFUPM, Dhahran, May 12-16, 2001.

h) **SPONSORED RESEARCH GRANTS**

1. “*Realtime, Cloud-based, Intelligent Diabetes Monitoring System*,” Role: **PI**, In partnership with Mentor Graphics Inc., France, To be Funded by ICT Fund, under review, Amount: 2.9 Million AED.
2. “*Securing the Computation of Cloud-based Big Data Analytics*”, Role: **PI**, Northrop Grumman Inc., USA, 2015-2016, Amount: 80,000 USD.
3. “*Arabic reCAPTCHA for Digitizing Arabic Manuscripts*”, Role: **PI**, funded project by UAE ICT Fund, 2014-2016, 1.3 Million AED.
4. “*Achieving Proper Elasticity for Cloud Cluster Jobs*”, Role: **PI**, Amazon Inc., Seattle, USA, 2013-2015, Amount: 20,000 USD.
5. “*Hardware-Assisted Snort IDS for SCADA Systems*”, Role: **PI**, KUIRF Level 1 Internally Funded by KU, January 2013-December 2013, Amount 199,000 AED.
6. “*Modeling and Mitigation of Economic Denial of Sustainability (EDoS) Attacks in Cloud Computing*,” KACST, Saudi Arabia,, 2012-2014, Role: **Consultant**, Completed, Amount 350,000 USD.
7. “*Improving the Performance of Linux Networking Subsystem*,” Role: **PI**, #INT-383, KFUPM University, 2007-2009, Completed successfully in June 2009, Won the “Best Research Project Award” for the academic year 2009-2010, Amount: 250,000 SR.
8. “*Saudi HoneyNet Project*,” KACST, Saudi Arabia, Role: **PI**, 2009-2012, Completed December 2011, Amount: 1.2 Million SR.
9. “*Intelligent Firewall DoS Attacks and Countermeasures*,” Role: **PI**, #INT-361, KFUPM University, 2007-2010, Completed December 2013, Amount: 275,000 SR.
10. “*Analytical, Simulation, and Experimental Investigation of the Performance of Popular Interrupt Handling Schemes for Gigabit-Network Hosts*,” Role: **PI**,

#FT/2005-017, KFUPM / SABIC, Principal Investigator, 2005 - 2007, Completed successfully in October 2007, Amount: 110,000 SR.

11. "A Methodology for Successful Voice over IP Deployment," Role: PI, #INT-304, KFUPM University, 2005-2006, Completed successfully in April 2007. Amount: 60,000 SR

i) **GRADUATE STUDENT SUPERVISION**

1) PHD THESIS SUPERVISION

- 1) Hamad Al-Marzouzi, *Scalable Dual Field ECC Processor with Unified Countermeasure*, PhD in Computer Engineering, KUSTAR, Completed December 2014.
- 2) Fahd Al-Haidari, *Modeling and Mitigation of Economic Denial of Sustainability (EDoS) Attacks in Cloud Computing*, KFUPM, Saudi Arabia, Completed December 2012.
- 3) Bushra AlBelooshi, *Data Security in Cloud Virtualized Environment*, KUSTAR, Completed June 2016.
- 4) Fatima AlQaydi, *Network-Aware Elasticity for Cloud-based Applications*, KUSTAR, In Progress.

2) MS THESIS MAIN SUPERVISOR

- 1) Hanin AbuBaker, *Arabic reCAPTCHA*, KUSTAR, June 2016.
- 2) Ayesha AlKharoossi, *Android-based Honey pots to Assess Security of WiFi Environment*, KUSTAR, June 2016.
- 3) Eman Al-Awadhi, *Assessing the Security Environment in the Cloud*, MSc in Info Sec Program, KUSTAR, June 2013.
- 4) Rami Al-Quraishi, *Snort NIDS Performance under today's Multicore Architecture*, MSc in Info Sec Program, KUSTAR, September 2013.
- 5) Khalifa Al-Shamsi, *Visualization and Auto Report Generation of Honey net Data Collected by Dionaea*, MSc in Info Sec Program, KUSTAR, November 2012.
- 6) Bushra Al-Belooshi, *Assessing Overhead Cost Associated with Encrypting the Swap File*, MSc in Info Sec Program, KUSTAR, January 2011.
- 7) Manaa, A., *Improving Linux Kernel Scheduler of Gigabit Network Hosts*, King Fahd University of Petroleum and Minerals, Saudi Arabia, May 2009.
- 8) Fahd, K., *Performance Modeling and Analysis of Interrupt Handling Schemes under Bursty Traffic*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2007.
- 9) Al-Hamwi, K., *Improving Linux Networking Subsystem*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2008.
- 10) Al-Kahtani, A., *Experimental Evaluation of a Hybrid Interrupt-Handling Scheme*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2007.
- 11) Asif, K., *Intelligent DoS Attacks against Firewalls*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2008.
- 12) Meshari, M., *An Analytic Tool for Deploying VoIP*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2006.
- 13) El-Badawi, K., *Performance of Interrupt Handling in Gigabit Networks*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2003.

3) MS THESIS CO-SUPERVISOR

1. Ayesha Al-Hosani, “*Darknet Traffic Analysis*,” KUSTAR, In progress.
2. Safaa AIDhanhani, “*Analysis of Darknet Encrypted Data*,” KUSTAR, In progress.
3. Safaa AIDhanhani, “*Crime Detection from Social Media Content*,” KUSTAR, In progress.
4. Fatema AlMansoori, *Kleptography Light-Weight Implementation*, KUSTAR, June 2016.
5. Sanaa AlSalami, *IoT Security*, KUSTAR, June 2016.
6. Bader Ali Murad Mohammed, *Big Data Analytics for IDS Security*, In Progress.
7. Abdullah AlZaabi, *Big Data Analytics for SCADA Systems*, MSc in Info Sec Program, KUSTAR, December 2014.
8. Faisal Al-Hawi, *An IBE Framework for Securing the RRP in MIPv6*, MSc in Info Sec Program, KUSTAR, November 2012.
9. Mohammad AlKaff, *Mitigation Technique for EDoS Attack*, King Fahd University of Petroleum and Minerals, Saudi Arabia, December 2013.
10. Saeed Omar Alsowail, *Experimental Evaluation of EDoS Shield Mitigation*, King Fahd University of Petroleum and Minerals, Saudi Arabia, January 2013.
11. Al-Afari, K., *An Efficient Coverage Scheme to Maximize Lifetime of Wireless Sensor Networks*, KFUPM, Saudi Arabia, 2009
12. Hussein, A., *Securing Biometric Data*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2009.
13. Bahjat, A., *Information Fusion in Multibiometric Systems*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2009.
14. Tarouti, F., *A Complain-Based Reputation Model for P2P Systems*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2008.
15. Ridah, A., *Analysis and Classification of Reputation Systems in P2P Networks*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2008.
16. Umar, M., *A Framework for Service-Oriented Architecture Metadata Management*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2008.
17. Al-Issa, K., *Self-Adapting Web Server Architecture*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2009.
18. Alkhoraidly, A., *Serial-Serial Finite Field Multiplication*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2005.
19. Barnawi, A. Y., *Multicast Routing Protocol with Partial Flooding in Ad Hoc Wireless Networks*, King Fahd University of Petroleum and Minerals, Saudi Arabia, 2001.