Behzad Akbari

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Research Interest	Cloud Computing and Networking, Software Defined Networking, Network Function Virtualization, Multimedia Networking, Overlay and Peer-to-Peer Networking, Peer-to-Peer Video Streaming, Network QOS, Network Performance Analysis, Network Security, Network Security Events Analysis and Correlation, Network Management.

Education

PhD (2008)	Sharif University of Technology, Tehran, Iran Computer Engineering, *Thesis:* Optimization of Overlay Video Multicasting
MSCE (2002)	Sharif University of Technology, Computer Engineering, *Thesis:* Design and Implementation of an TCP/IP Traffic Manager
BSCE (1999)	Sharif University of Technology Computer Engineering (Hardware), *Thesis:* : Design and implementation an alarming system via telephone line by using Intel 8051 microcontroller

Teaching Experiences

Tarbiat Modares University, Department of Com. and Elec. Eng. *(09/2008-now)*	*As a lecturer teaching* <u>*Advanced Computer Networks*</u> *and* <u>*Performance Evaluation of Computer Systems*</u>*, Network and Systems Management, Secure Computer Systems courses*

Qazvin Islamic Azad University, Department of Com. And Elec. Eng. *(02/2009-2011)*	*As a lecturer teaching <u>Advanced Computer Networks</u> , <u>Network Management</u> and <u>Network Security</u> courses*
Sharif University of Technology, Kish Island Campus *(09/2008 -2014)*	*As a lecturer teaching <u>Advanced Computer Networks</u> and <u>Computer Network Management</u> courses.*
Sharif University of Technology, Kish Island Campus *(02/2008 -06/2008)*	*As a lecturer teaching <u>Multimedia Systems</u> and <u>Internet Engineering</u> courses.*
Sharif University of Technology *(09/2003 -03/2006)*	*Department of Computer Engineering* *As a lecturer teaching <u>Computer Networks</u> course.*
Sharif University of Technology *(07/2001 -06/2003)*	*Department of Computer Engineering* *As instructor of <u>Computer Networking Lab</u>.*
Sharif University of Technology *(02/2002 -06/2005)*	*Department of Computer Engineering* *As a teacher assistant of <u>Advanced Computer Networking</u> course.*
Sharif University of Technology *(09/2002 -06/2003)*	*Department of Computer Engineering* *As a teacher assistant of <u>Computer Networks</u> course.*
Sharif University of Technology, Kish Island Campus *(10/2007 - 01/2008)*	*As a teacher assistant of <u>Advanced Computer Networking</u> course*
Roozbehan University *Summer 2007*	*Cisco CCNA*

Professional Experiences

Mobile Communication of Iran (MCI) *(05/2008 –2010)*	*As a consultant of data communication networks and data center design.* *Analysis and design of IP/MPLS network for MCCI*
Iran Telecommunication Research Center *(06/2007 –09/2007)*	*Analysis and design of national IP/MPLS network.* *Preparing RFP for national IP/MPLS project.*
Iran Telecommunication Research Center *(09/2005 –04/2007)*	*As a consultant of data communication networks, Designing the national IP Core&Edge network. National IP network analysis and simulation, National science network, Metro Ethernet and ITRC IDC.*
Information Technology Company *(01/2006-03/2007)*	*As a consultant of National Core & Edge project, Metro Ethernet and Access networks projects,*
National Iranian oil refining and distribution Co. *(11/2005-03/2007)*	*As a consultant of data communication networks and network security.*
National Iranian oil refining and distribution Co. *(06/2004-10/2005)*	*As a consultant of national fuel smart card project.*
Shegarf Co. *(06/2006-12/2006)*	*As a consultant of VOD project.*
Bank Parsian (09/2004-05/2005)	*As a consultant of data communication networks and WAN project.* *Preparing RFP for WAN network.*
Iran Telecommunication Research Center *(09/2002- 06/04)*	*Signal Processing and Multimedia Group* *As a researcher doing research on video transmission over the Internet.*

Mehrnews News Agengency *(07/2004-01/2005)*	*Design and Implementation of IDC.*
Iran National Linux project *(09/2004-07/2006)*	*As a consultant.*
Advanced Information and Communication Technology Center of Sharif *(09/2003 –2008)*	*Digital Media Lab (DML)* *As a researcher doing research on Overlay Networks and Overlay Video Multicasting.*
Advanced Information and Communication Technology Center of Sharif *(06/2003-02/2004)*	*As a consultant of Iran national school network project.*
Advanced Information and Communication Technology Center of Sharif *(06/2004-01/2005)*	*As a consultant of Iran national petrol smart card project.*
Packshoo Co. *(09/1999-04/2000)*	*As a manager of computer systems.*
DPI(Data Processing of Iran) Co. *(03/2000-02/2006)*	*Data Communication Networks Group* *As a technical support staff administrating network and servers, and offering network solutions, web hosting and web services solutions.*
DPI(Data Processing of Iran) Co. *(07/1997-03/1999)*	*Information Systems(IS) Group* *As a developer developing software systems.*

Courses & Projects

Courses	Digital Video Systems, Switching systems, Digital Signal Processing, Advanced Digital Signal Processing, Advanced Computer Networks, Modeling and Analysis Of Computer Networks, Stochastic Processes and applied probability, Linear Programming, Queuing Systems, Testability of Integrated Circuits, Advanced Computer Architecture, Advanced Microprocessor, Fault Tolerant Systems, Advanced Fault Tolerant Systems, VLSI, Advanced VLSI, Speech Processing, Advanced Image Processing.
Projects	A research on traffic modeling in wavelet domain, Simulation motion estimation and motion compensation algorithms with Matlab, A research on TCP/IP over ATM network, A research on Audio traffic modeling, A research on Fault Tolerant Networks, A research on AMD Athlon processor architecture, Design and Simulation and synthesis of a multi-port DRAM, Developing a Simulator for PODEM algorithm(A automatic test generation algorithm for Integrated Circuits), A survey on image compression by wavelet transform, A Z80-based minimum system, Design and implementation a 4-bit microprocessor, A mail client for Linux with C++.

Technical Skills

Computer Programming	C/C++, Delphi, Pascal, ASP, Verilog, VHDL, Java Script,VB Script, HTML, XML, Visual Basic, Linux Kernel Programming.
Operating Systems.	Linux, VAX/VMS, Windows server, Cisco IOS
Applications	Apache Web Server, IIS Web Server, Bind DNS, Microsoft DNS, Linux Mail Server, Microsoft Index Server.
Networking	Triple Play IP Networks Analysis and Design, LAN and WAN Design and Analysis, Linux Networking, Windows Networking, Linux Firewall, Linux Traffic Shaping, Network Traffic Analysis, Network Monitoring with SNMP/MRTG and Sniffing, Cisco Routers, Cisco Layer 3 Switches, NOC and SOC design, Open Source Network Management Tools.
Simulators	MATLAB, NS2, OMNET++, OPNET, MiniNet.
Databases	Microsoft SQL Server, Access, FoxPro.
CAD Tools	Modelsim, Leonardo, MATLAB.
Standards	TCP/IP, ATM, MPLS, SDN, OpenFlow, NFV, WLAN, xDSL, Ethernet, Wireless Networks, JPEG, H.261, H.263, H.264, MPEG series, Security Standards, Cryptography Standards,

Publications

1. A Izadipour, B Akbari, B Mojaradi, "A Feature Selection Approach for Segmentation of Very High-Resolution Satellite Images", Photogrammetric Engineering & Remote Sensing 82 (3), 213-222, 2016.

2. MK Bideh, B Akbari, AG Sheshjavani, " Adaptive content-and-deadline aware chunk scheduling in mesh-based P2P video streaming," Peer-to-Peer Networking and Applications 9 (2), 436-448, 2016.

3. AG Sheshjavani, B Akbari, " An adaptive buffer-map exchange mechanism for pull-based peer-to-peer video-on-demand streaming systems," Multimedia Tools and Applications, 1-27, 2016.

4. MS Seyfabad, B Akbari, "Virtual Machine Allocation in P2P-cloud Live Video Straming," 2015 10th International Conference on P2P, Parallel, Grid, Cloud and Internet, 2015.

5. V Marza, M Dehghan, B Akbari, "A Novel Live Streaming Strategy in Peer-to-Peer Topologies Based on Complex Network Theory," International Information Institute (Tokyo). Information 18 (8), 3627, 2015.

6. M Gholami, B Akbari, "Congestion control in software defined data center networks through flow rerouting," 2015 23rd Iranian Conference on Electrical Engineering, 654-657, 2015.

7. AH Mandegar, B Akbari, "A video streaming quality assessment scheme based on packet level measurement," Communications, Signal Processing, and their Applications (ICCSPA), 2015.

8. A Izadipour, B Akbari, B Mojaradi, "A new feature selection method for segmentation of VHR satellite image," Communications, Signal Processing, and their Applications (ICCSPA), 2015.

9. V Marza, M Dehghan, B Akbari, "A new Peer-to-Peer topology for video streaming based on complex network theory," Journal of Systems Science and Complexity 28 (1), 16-29, 2015.

10. HR Ghaeini, B Akbari, B Barekatain, A Trivino-Cabrera, "Adaptive video protection in large scale peer-to-peer video streaming over mobile wireless mesh networks," International Journal of Communication Systems, 2015.

11. R Khodadadi, B Akbari, "Ichnaea: Effective P2P botnet detection approach based on analysis of network flows," Telecommunications (IST), 2014 7th International Symposium on, 934-940, 2014.

12. AG Sheshjavani, B Akbari, "A novel buffer-map exchange mechanism for pull-based P2P VoD streaming systems," Telecommunications (IST), 2014 7th International Symposium on, 295-300, 2014.

13. HR Ghaeini, B Akbari, "Peer-to-peer adaptive forward error correction in live video streaming over wireless mesh network," International Conference on Wired/Wireless Internet Communications, 109-121, 2014.

14. AG Sheshjavani, B Akbari, "A study on repeat-request chunks in pull-based peer-to-peer video-on-demand streaming," 2014 22nd Iranian Conference on Electrical Engineering (ICEE), 891-896, 2014.

15. MS Seyfabad, B Akbari, "CAC-live: Centralized assisted cloud P2P live streaming," 2014 22nd Iranian Conference on Electrical Engineering (ICEE), 908-913, 2014.

16. F Kavousi, B Akbari, " A Bayesian network-based approach for learning attack strategies from intrusion alerts," Security and Communication Networks 7 (5), 833-853, 2014.

17. HR Ghaeini, B Akbari, B Barekatain, "An Adaptive Packet Loss Recovery Method for Peer-to-Peer Video Streaming Over Wireless Mesh Network," LECTURE NOTES IN ELECTRICAL ENGINEERING 2 (1), 713-722, 2014.

18. B Akbari, HR Rabiee, M Ghanbari, "Performance analysis of packet loss recovery policies in P2P video streaming," International Journal of Internet Protocol Technology 8 (1), 44-53, 2014.

19. E Karimi, B Akbari, "Priority scheduling for multipath video transmission in WMSNS," International Journal of Computer Networks & Communications 5 (6), 167, 2013.

20. Behrang Barekatain, Behzad Akbari et al., " MATIN: A Random Network Coding Based Framework for High Quality Peer-to-Peer Live Video Streaming", Journal of PLOS ONE, Vol. 8, No. 8, 2013.

21. A. Mandegar, B. Akbari, " A New Method for Evaluating Video Quality of Experience on Content-Aware Packet Loss Effect Analysis," International Journal of Information and Communication Technology Research, Vol. 5, No. 4, 2013.

22. E. Karimi, B. Akbari, " PRIORITY SCHEDULING FOR MULTIPATH VIDEO TRANSMISSION IN WMSNS," International Journal of Computer Networks & Communications (IJCNC) Vol.5, No.6, 2013.

23. A. Montazeri, B. Akbari, Mohammed Ghanbari " An incentive scheduling mechanism for peer-to-peer video streaming," Journal of Peer-to-Peer Networking and Applications, Vol. 5, No. 3, pp. 257-278, 2012

24. F. Kavousi, B. Akbari , "Automatic Learning of Attack Behavior Patterns Using Bayesian Networks," 6'th International Symposium on Telecommunications (IST'2012), 2012.

25. A. Mandegar, B. Akbari, "Video Quality of Experience Evaluation based on Content-Aware Packet Loss Effect Analysis," 6'th International Symposium on Telecommunications (IST'2012), 2012.

26. F. Moayyeri, B. Akbari et al., "A Distributed Locality-aware Neighbor Selection Algorithm for P2P Video Streaming over Wireless Mesh Networks," International Symposium on Telecommunications (IST'2012), 2012.

27. H.R. Ghaeeni, B. Akbari et al. " A Comprehensive Evaluation of Different Loss Recovery Schemes in Peer-to-Peer Live Video Streaming over WMNsloss recovery method for peer to peer video streaming over WMN," The International Conference on Connected Vehicles Expo (ICCVE 2012), 2012.

28. E. Karimi, B. Akbari," Improving Video Delivery over Wireless Multimedia Sensor Networks based on Queue Priority Scheduling," In proceedings of 7th International Conference on Wireless Communications, Networking and Mobile Computing, September 2011.

29. E. Karimi, B. Akbari, " Priority Scheduling for Improving Video Delivery over Wireless Multimedia Sensor Networks," In Proceedings of Fifth International Conference on Next generation Mobile Applications and Services, September 2011.

30. S.M.Y Seyyedi, B. Akbari, "Hybrid CDN-P2P Architectures for Video Streaming: Comparative Study of Connected and Unconnected Meshes," In Proceedings of CNDS 2011, Tehran, February 2011.

31. A.R. Montazeri, B. Akbari, "Providing Incentives for Video Streaming in Mesh Based P2P Networks," In Proceedings of CNDS 2011, Tehran, February 2011.

32. M. Kargar, B. Akbari, "A Novel Frame-Type Aware Scheduling Algorithm in Mesh-based P2P Video Streaming ," In Proceedings of CNDS 2011, Tehran, February 2011.

33. A.R. Montazeri, B. Akbari, "Mesh Based P2P video Streaming with a Distributed Incentive Mechanism," In proceeding of 25th of the International Conference on Information Networking (ICOIN 2011), Kuala Lumpur, January 2011.

34. A.R. Montazeri, B. Akbari, "An Incentive Mechanism for Peer-to-Peer Video Streaming," In proceeding of 5th International Symposium On Telecommunications (IST2010), Tehran, December 2010.

35. H. Farhadi, B. Akbari, S. Rajaee, M. Farahani, " Turning P2P networks into DDOS Engines: A Survey,", Journal of Computer and Robotics, Vol.1 , No. 3, pp. 83-93, 2010.

36. M. Kargar, B. Akbari, "CANC: A Content-and-Network Aware Chunk Scheduling Algorithm for Pee-to-Peer Video Streaming," In Proceeding of IEEE ANTS 2010, India, 2010.

37. N. T. Jahromi, B. Akbari, A. Movaghar," A hybrid mesh-tree peer-to-peer overlay structure for layered video streaming ," In proceeding of 5th International Symposium On Telecommunications (IST2010), Tehran, December 2010.

38. A.R. Montazeri, B. Akbari, "An Incentive Scheduling Mechanism for Video Streaming Over Mesh-Based Peer-to-Peer Networks," submitted to Journal of Peer-to-Peer networks and applications, 2011.

39. A. Rastegar Lari, B. Akbari, "Network-Adaptive Multipath Video Delivery over Wireless Multimedia Sensor Networks Based on Packet and Path Priority Scheduling," In proceeding of 2010 International Conference on Broadband, Wireless Computing, Communication and Applications, Japan, 2010.

40. B. Akbari, H.R. Rabiee, M. Ghanbari, "Performance Evaluation of Packet Loss Recovery Techniques for P2P Video Streaming," Submitted to Journal of Peer-to-Peer networks and applications, 2011.

41. B. Akbari, H.R. Rabiee, M. Ghanbari, "An optimal discrete rate allocation for overlay video multicasting ", Elsevier Journal of Computer Communications, Vol. 31/3 , pp. 551-562, February 2008.

42. B. Akbari, H.R. Rabiee, M. Ghanbari, "Packet Loss in Peer-to-Peer Video Streaming over the Internet," Springer Journal of Multimedia Systems, Vol. 13, No. 5-6, pp. 345-361, February 2008.

43. A. Lari, B. Akbari, "Path Priority Based Packet Scheduling in Multi-Path Video Delivery over Wireless Multimedia Sensor Networks," Proceeding of ASTSA 2010.

44. B. Akbari, H.R. Rabiee, M. Ghanbari, "An Optimum Rate Allocation Scheme for Video Multicasting using Overlay Network," International Symposium on Telecommunication, Shiraz, Iran , September 2005.

45. B. Akbari, H.R. Rabiee, M. Ghanbari, "DPOCS: A Dynamic Proxy Architecture for Video Streaming Based on Overlay Networks," IEEE International Conference on Networking, Kualalumpur, Malaysia, November 2005.

46. B. Akbari, H.R. Rabiee, M. Ghanbari, "A Rate-Efficient Peer-to-Peer Architecture for Video Multicasting over the Internet," IEEE International Symposium on Multimedia, Irvine, CA, USA, December 2005.

47. B. Akbari, H.R. Rabiee, M.Ghanbari, "Packet loss recovery schemes for peer-to-peer video streaming" , International Conference on Network Services (ICNS2007), Athens, Greece, June 2007.

48. B. Akbari, "Video traffic modeling with wavelet", Technical report, Iran Telecommunication Research Center, 2003.

49.B. Akbari, "Video streaming over the Internet", Technical report, Iran Telecommunication Research Center, 2002.

50.B. Akbari, "Survey on Overlay Multicasting", Technical report, Iran Telecommunication Research Center, 2003.

51.B. Akbari, "Survey on Video congestion control schemes", Technical report, Iran Telecommunication Research Center, 2003.

52.B. Akbari, "Survey on Peer-to-Peer video streaming systems", Technical report, Sharif University of Technology, 2007.

53.B. Akbari," Design and implementation an TCP/IP traffic controller" MSCE thesis, Sharif University of Technology, Feb. 2002.

54.B. Akbari," Design and implementation an alarming system via telephone line by using Intel 8051 microcontroller," BSCE thesis, Sharif University of Technology, Aug. 1999