



Behzad Akbari

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Research Interest

Computer Networks, Multimedia Streaming over the Internet, Overlay and Peer-to-Peer Networking, Peer-to-Peer Video Streaming, Wireless Ad-hoc Networks, Wireless Sensor Networks, Network QOS, Network Performance Analysis.

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

Sharif University of Technology, Kish

Island Campus

(02/2008 -now)

As a lecturer teaching Multimedia Systems and Internet Engineering courses.

Sharif University of Technology

(09/2003 -03/2006)

Department of Computer Engineering

As a lecturer teaching Computer Networks course.

Sharif University of Technology

(07/2001 -06/2003)

Department of Computer Engineering

As instructor of Computer Networking Lab.

Sharif University of Technology

(02/2002 -06/2005)

Department of Computer Engineering

As a teacher assistant of Advanced Computer Networking course.

Sharif University of Technology

(09/2002 -06/2003)

Department of Computer Engineering

As a teacher assistant of Computer Networks course.

Sharif University of Technology, Kish

Island Campus

(10/2007 - 01/2008)

As a teacher assistant of Advanced Computer Networking course

Roozbehan University

Summer 2007

Cisco CCNA

Professional Experiences

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 Agency

(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 –now)

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 2000/9x and Windows 2000/2003 server, DOS ,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 NT/2000 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, BOSON.

Databases

Microsoft SQL Server, Access, FoxPro.

CAD Tools

Modelsim, Leonardo, MATLAB.

Standards

TCP/IP, ATM, MPLS, ISDN, WLAN, xDSL, Ethernet, Wireless Networks, JPEG, H.261, H.263, H.264, MPEG series, Security Standards, Cryptography Standards,

Publications

1. 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.
2. 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.
3. 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.

4. B. Akbari, H.R. Rabiee, M. Ghanbari, "DPOCS: A Dynamic Proxy Architecture for Video Streaming Based on Overlay Networks," IEEE International Conference on Networking, Kuala Lumpur, Malaysia, November 2005.
5. 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.
6. 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.
7. B. Akbari, "Video traffic modeling with wavelet", Technical report, Iran Telecommunication Research Center, 2003.
8. B. Akbari, "Video streaming over the Internet", Technical report, Iran Telecommunication Research Center, 2002.
9. B. Akbari, "Survey on Overlay Multicasting", Technical report, Iran Telecommunication Research Center, 2003.
- 10.B. Akbari, "Survey on Video congestion control schemes", Technical report, Iran Telecommunication Research Center, 2003.
- 11.B. Akbari, "Survey on Peer-to-Peer video streaming systems", Technical report, Sharif University of Technology, 2007.
- 12.B. Akbari," Design and implementation an TCP/IP traffic controller" MSCE thesis, Sharif University of Technology, Feb. 2002.
- 13.B. Akbari," Design and implementation an alarming system via telephone line by using Intel 8051 microcontroller," BSCE thesis, Sharif University of Technology, Aug. 1999