



## Mohammad KhansariHH.,=

Phone: (9821) 6006399, 6046719,  
(98912) 387 6812

Email: [khansari@aictc.com](mailto:khansari@aictc.com)

URL: <http://mehr.sharif.ac.ir/~khansari/>

Computer Engineering Faculty and  
Advanced Information and  
Communication Technology  
Center-Sharif University of  
Technology, Azadi Avenue,  
Teharan, Iran

### Objective

Research and development of interactive multimedia and IT-Based systems. Specific areas of interest include: digital video processing, compression and transmission of image and video, computer network technologies, design of multimedia systems, and Internet-based services and applications based on Free/Open source software

### Education

**PhD**  
**(By the end of 2005)**

PhD candidate, Computer Engineering,  
Sharif University of Technology, Tehran, Iran  
Dissertation Topic: Object-Based Video Compression and Processing  
Advisor: Prof. Hamid R. Rabiee (<http://www.aictc.com/rabiee>)

**MSCE**  
**(1998)**

Sharif University of Technology,  
Computer Engineering Master's Degree, GPA: 3.21/4.0  
Thesis: Design and Analysis of an ATM switch

**BSCE**  
**(1996)**

Sharif University of Technology  
Computer Engineering (software), GPA: 3.12/4.0  
Thesis: A software platform for performance evaluation of bridging algorithms in Ethernet 802.3

### Experiences

**First International  
Conference on IT-based  
localization in the area of  
script and language, ITRC,  
Tehran (15/05/05)**

Lecturing on "GNU/Linux localization to Persian language" as invited speaker

**FOSS2005 Conference,  
Damascus, Syria  
(03/03/05)**

Lecturing on "Linux localization to Middle East languages: Iran's Experience" as invited speaker

**UNCTAD FOSS Meeting,  
Geneva (Switzerland)  
(24/09/04)**

Lecturing on "Building a National Operating System: Iran's Experience in GNU/Linux" as representative of Iran in UNCTAD Free/Open Source Software meeting

**Elecit 2004, Mashhad  
(20/09/04)**

Lecturing on Free/Open source Software and Linux localization

**High Council of Informatics  
(08/04 -now)**

Authorship of two books on Linux and Open Source with Iran government and IT companies audience

**IT and Developemnt of West  
Azarbayejan Province  
(10/07/04)**

Lecturing on the role of Linux and Open source in the IT development

**Advanced Information and  
Communication Technology  
Center of Sharif  
(01/03 -now)**

*Project Director*, member of steering committee, and head of technical committee of the GNU/Linux localization to persian language national project ([www.farsilinux.org](http://www.farsilinux.org)) funded by High Council of Informatics and supreme council of ICT.

**9th Annual CSI Computer  
Conference ( 26/01/03)**

*Vice Executive Chairman* of the conference

- IPSI-Fraunhofer Institute (Germany)** (09/03 –01/04) *Researcher* at DELITE division, working on object-based multimedia coding for a four month-research period granted by German Academic Exchange Service (DAAD) and AICTC
- Technical University of Darmstadt (Germany)** 17/09/03 Lecturing at the Informatics seminar entitled “Object-based Video Processing”
- 8th Annual CSI Computer Conference** (26/01/03) Presenting two half a day joint workshops on E-Government and E-learning with Dr. H. R. Rabiee at Ferdowsi University of Mashhad.
- Sharif University of Technology** (09/02 -01/03) Department of Computer Engineering  
As *teaching assistant* with the faculty in teaching Digital Video Systems and Advanced Computer Networks courses.
- Kish University** (10/01 –08/02) Department of Computer Engineering  
*Lecturer*-Multimedia Systems Design course in a joint distance-learning project with Sharif University of Technology ([www.shairfvu.com](http://www.shairfvu.com)).
- Iran Telecommunication Research Center** (06/02- 08/03) *Researcher and deputy of Signal Processing and Multimedia Group* (from 04/03) doing research in object-based video processing and related topics.
- Sharif's First FPGA Design Contest** (03/02) *Referee* and member of scientific committee
- ACM International Collegiate Programming Contest** (09/01- 11/01) *System committee chair* managing over 30 student staffs for setting up and supporting network, hardware and software of Asia regional site with around 140 PC at Sharif University before and during the contest.
- Advanced Information and Communication Technology Center of Sharif** (09/01 –now) *Director-Digital Media research Lab* ([www.aictc.com/DML](http://www.aictc.com/DML)), doing research in multimedia applications regarding new standards such as MPEG-4, Image and video store and retrieval for Internet applications and MPEG-7, video compression and transmission over Internet and wireless channels and M-Commerce Applications.
- Sharif University of Technology** (02/99 – now) Department of Computer Engineering  
*lecturer*-Computer programming courses: Advanced Programming, Pascal programming and Computer Workshop and supervising BS thesis.
- Sharif University of Technology** (09/00 – 09/01) Department of Computer Engineering  
*Head of technical support team of Informatics Committee* of Computer department, giving hardware and software solutions and support to the computer site, professors and staffs of the faculty.
- Sharif University of Technology** (08/00 – 06/01) Department of Computer Engineering  
*Research assistant* in National Project of Scalable Parallel Computer, configuration and administration of Linux on a Beowulf system for parallel application.
- PortNet Multimedia** (09/00 – 03/01) *Technical assistant*, developing Internet-based applications and offering web hosting, server co-location, e-commerce solutions, consulting on multimedia applications, software design, and networking.
- Technology Cooperation Office** (02/99 – 10/00) Informatics Committee  
*Consultant and analyst* for Information Technology related Projects and policies, Analysis and design of a Scientific Internet-Based Workplace for distant cooperation between scientists in a joint research work with Software Institute of Technical University of Vienna

<b>Hoda Software Development Company</b> (01/00 – 09/00)	<i>Director of Software Department</i> , Design and Implementation of Web-based applications with state-of-the-art technologies such as UML, ASP, PHP and database application with Visual C++, Visual Basic, Delphi and SQLServer
<b>Kerman University</b> (06/99 - 03/00)	Department of Mathematics and Computer Science <i>Research assistant</i> , Analysis and design of two National Projects on Intelligent medicines Prescription Systems and Intelligent Translators.
<b>Presidency Computer Site</b> (08/96 –08/99)	<i>Solaris system administrator and Informix database administrator</i> , Developing Client/Server database applications on Xwindow with embedded C, System Programming with Visual C++ and web-based applications with ASP.
<b>Sharif University of Technology</b> (08/95 -08/98)	Department of Computer Engineering <i>Teaching assistant</i> , help professors in teaching Database Systems, Compiler Design, Programming Languages, Data Structures and Algorithms, Theory of Machines and Languages, Computer Architecture and Logical Circuits.

## Courses & Projects

<b>Communication and Computer Hardware</b>	Digital Video Systems, Switching systems, Digital Signal Processing, Advanced Communication Networks, Modeling and Analysis Of Computer Networks, Programmable Circuits Design, Stochastic Processes and applied probability, Linear Programming, Testability of Integrated Circuits, Advanced Computer Architecture, Advanced Microprocessor, Fault Tolerant Systems, Advanced Computer Networks
<b>Software and Artificial Intelligence Projects</b>	Advanced Database Systems, Expert Systems, Advanced Operating System, Software engineering, Pattern Recognition Housing agency software using Pascal, Warehouse Automation using COBAL on VMS, Multi-tasking game using C++, A variety of LZW compression algorithm using Patricia tree, VAX machine language assembler, Simulation of contention resolution algorithms in Medium Access Control sub-layer, Scheduling courses, professors, places time in a semester with Prolog, A front-end for Pascal compiler, A database system for tourist information with B++ Tree and C++, An animation program with Smalltalk, A mail Client for Windows, Simulation of a multi-server queuing system with GPSS, A frame-based expert system for choosing courses with Kappa, Distributed Matrix Inversion over TCP/IP network, A research on Congestion control mechanisms in ATM network, A technical report on TMS32040C60 features and architecture, Weather forecasting with Neural Networks, Implementing a image encoding system with Matlab, Motion Estimation Motion Compensation methods comparison with Matlab, An Intranet web-based Messaging System with ASP.

## Skills

<b>Computer Programming</b>	C/C++, Delphi, Pascal, ASP, Prolog, Smalltalk, Verilog, AHDL Familiar with Java, Java Script, HTML, Visual Basic, PHP, and Assembly.
<b>Operating Systems.</b>	Linux, Sun OS/ Solaris, VAX/VMS, Macintosh, Windows 2000/9x, DOS
<b>Databases</b>	Informix, SQLServer, Interbase, PostgreSQL, Access, FoxPro, familiar with Oracle and MySQL
<b>CAD Tools</b>	Rational Rose, MAXPLUS + II, StateCad, MATLAB, Maple.
<b>Standards Languages</b>	JPEG, H.261, H.263, MPEG series, ISDN, ATM. English (very good), German (around Zertifikat Deutsch)

## Publications

- [1] M. H. Khansari, "A software platform for performance evaluation of bridging algorithms in Ethernet 802.3," BSCE thesis, Sharif University, Sept. 1996
- [2] M. H. Khansari, "Design and Analysis of an ATM switch," MSCE thesis, Sharif University, Dec. 1998
- [3] M. H. Khansari, A. Movaghar, and S. Hessabi, "Design and Simulation of a Tandem ATM Switch based on FPGA," International Symposium on Telecommunication, Iran, September 2-4. 2001
- [4] M. Amiri, H. R. Rabiee, F. Behazin, M. Khansari, "A New Wavelet Domain Block Matching Algorithm for Real-time Object Tracking," IEEE ICIP 2003, September 14-17, Barcelona, Spain
- [5] M. Khansari, H. R. Rabiee, M. Asadi, M. Ghanbari, M. Nosrati, M. Amiri, "A Shape Tracking Algorithm Based on Generated Pixel Features by Undecimated Wavelet Packet," CSICC, 10th Annual Computer Society of Iran Computer Conference, Tehran, Iran, 2005.
- [6] M. Khansari, H. R. Rabiee, M. Asadi, M. Ghanbari, M. Nosrati, M. Amiri, "A Quantization Noise Robust Object's Shape Prediction Algorithm," EUSIPCO, European Signal Processing Conference, Antalya, Turkey, September 4-8, 2005 .
- [7] M. Khansari, H. R. Rabiee, M. Asadi, M. Ghanbari, M. Nosrati, M. Amiri, "A Semi-Automatic Video Object Extraction Algorithm Based on Joint Transform And Spatial Domain Features," CBMI, International Workshop on Content-Based Multimedia Indexing, Riga, Latvia, June 21-23, 2005.
- [8] M. Khansari, H. R. Rabiee, M. Nosrati, M. Asadi, M. Amiri, , M. Ghanbari "Object Shape Prediction Based on Pixel Features in the Wavelet Domain," IEEE International Symposium on Multimedia (ISM2005). December 12-14, Irvine, California, USA., 2005 [submitted].
- [9] M. Khansari, H. R. Rabiee, M. Asadi, M. Ghanbari, "Object Shape Prediction in Noisy Video Based on Undecimated Wavelet Packet Features," [MMM 2006](#), the 12<sup>th</sup> International Multimedia Modeling Conference, Jan. 2-4, Beijing, China, 2006.
- [10] M. Khansari, H. R. Rabiee, M. Asadi, M. Ghanbari, "An Adaptive Semi-Automatic Video Object Extraction Algorithm Based on Joint Transform and Spatial Domains Features", submitted to [Computer and Electrical Engineering Journal](#) at 10.07.2005