

Ibrahim Kamel

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Current Position:

- **Associate Professor**, Department of Electrical and Computer Engineering, University of Sharjah; Chair Teaching and Learning in the College of Engineering
- **Adjunct Associate Professor**, Concordia University, Montreal, Canada. June 2007 – May 2010

Research Interests: Scholar index (*h-index*) = 17

Multidimensional Indexing, Multimedia Systems, Data Security, Peer-to-Peer architecture, Mobile Data Management, Database Management Systems, Sensor networking, Distributed Databases.

Teaching Experience:

- 2005 – now Associate Professor, Dept. of Electrical and Computer Engineering, University of Sharjah
- 2002 – 2005 Associate Professor, College of Information Systems, Zayed University
- 1999-2002 Adjunct Professor: Department of Management Science and Information Science, Business School, **Rutgers University**, New Jersey, USA. Teaching both Master of Business Administration (MBA) and undergraduate classes
- 1998-1999 Adjunct Professor: Department of Computer Engineering, **Polytechnic University**, Brooklyn, New York
- 1996 - 1997 **Assistant Professor**, Department of Environmental Studies, University of Alexandria – Egypt
- 1991 - 1994 **Instructor** (part-time): Department Computer and Information Systems, Strayer University, Arlington, Virginia USA
- 1989 – 1991 **Teaching Assistant**, Dept. Computer Science, University of Maryland, College Park, USA
- 1985 – 1989 **Instructor** Institute of Graduate Studies and Research, University of Alexandria, Egypt

Research Experience:

- 1999-2002 **Lead Research Scientist**: *Panasonic Information and Networking Tech. Laboratory, Princeton, NJ, USA*, leading two groups (Smart Appliances research group and VoIP research group)

Responsibility included:

- Prepare research proposals that are aligned with the company businesses and market.
- Seek research fund by writing internal grants to development and business divisions inside the company. Group leader are supposed to secure at least 50% of the group budget from grant from factories and business divisions. I succeeded to attract more \$750,000 in research grant per year for my group
- Staff hiring, evaluation, and management
- Prepare budget for the group (one-year, three-year and five-year)
- 1997 – 1999 **Senior Research Scientist**, *Panasonic Information and Networking Tech. Laboratory, Princeton, NJ, USA*
 - Led the design and the implementation of the distributed file system project
 - Member of the architecture team who designed Panasonic video server which later turned into non-linear editor product
 - Two of my patents are included in this design
- 1994 – 1996 **Research Scientist** at Matsushita Information Technology Lab, Princeton, NJ, USA
 - Member of the “Storage and retrieval of multidimensional objects” project

Education:

- **Ph.D.** (Dec. 1994), Computer Science Dept., University of Maryland, College Park (*one of the top 10* in computer science departments in USA), Advisor: Prof. Christos Faloutsos
- **M.Sc.** (1988), Department of Environmental Studies, University of Alexandria, Egypt, Dec. 1988, Thesis title: Data Compression of Environmental Satellite Images
- **B.Sc.** (1984) with degree of honor, the Department of Computer Science and Automatic Control, College of Engineering, University of Alexandria, Egypt, June 1984

Student Supervision:

- Prosenjit Sinha, “Memory and Network Forensic”, Concordia Institute of Information Systems Engineering, Concordia University, Canada, co-supervision with Mourad Debbabi.
- Hakim Katouni, “Software Security Hardening and Watermarking”, Concordia Institute of Information Systems Engineering, Concordia University, Canada, co-supervision with Mourad Debbabi.
- Nadia Essa, (M.Sc.), “Database Security”, Dept. Electrical and Computer Engineering, University of Sharjah, UAE.
- Alaa ElTalmas (Ph.D. Student); “Arabic Retrieval System for Bibliographic and Authority Records in Library Automation Systems”; Information System Institute, The University of Salford, UK, 2005.
- Sayed Hejazi, (M.Sc.); Graduated April 2009; “Forensic Analysis of Windows Physical Memory”, Concordia Institute of Information Systems Engineering, Concordia University, Canada (graduated April 2009), co-supervision with Mourad Debbabi

- Hussam Gumma; M.Sc. Graduated Dec 2008; “Providing Data Integrity in Sensor Network”; Department of computer science, University of Sharjah, UAE, co-supervision with Zaher Al-Aghbari.
- Ahmed Ghulam Mustafa; Graduated Dec 2008; M.Sc.; “Supporting Range Queries in Peer-to-Peer Networks”; Department of computer science, University of Sharjah, UAE.
- Thuraya Awad; M.Sc. Graduated May 2008; “Detecting Similar and Correlated Behaviors in Multiple Data Streams”; Department of computer science, University of Sharjah, UAE.

Recent Funded Projects:

Coordinator of the Computer System and Internet Security Research Group (PI and research group **coordinator**; yearly administrative budget: 108,000 Dhs; University of Sharjah). Research groups are created on competitive basis are hosted by the college of Graduate studies and Research to promote research in the university of Sharjah. Research groups can span multiple colleges and has priority in receiving research funds from the university and outside sources. As the coordinator of the Computer System and Internet Security Research group, I’m responsible for:

- Developing one-year and three-year research plan and oversee its execution
- Prepare research budget for the group
- Approve research proposals, budget, software/hardware purchases, research visits, hiring temporary research assistants, etc.

In this research group we carry research data integrity confidentiality of sensor network and peer-to-peer networks. We are also studying how to provide copyright protection of objects, e.g., lists, databases, data structures, programs using watermarking techniques.

Efficient Indexing of Distributed GIS Data on a P2P Structure. (co-PI, 100,000 Dhs, University of Sharjah) Geographical Information Systems (GIS) are data repositories that store both geographical data, like, maps and scalar data, like, population information and environmental measures. Because of the large amount of data involved, GIS data are usually stored on multiple servers connected with each other through a network. Recently, Peer-to-Peer (P2P) networks have opened new possibilities for efficient GIS data sharing. One of the popular applications of GIS is providing services to mobile clients e.g., car navigational system. The real-time nature of the applications makes the performance critical to the success of the GIS. In this project we will propose new architecture for deploying GIS databases on p2p networks. One of our design goals is to improve the performance of the distributed GIS data that is deployed on P2P networks. More specifically, we focus on improving the execution time of complex spatial queries, such as range queries and KNN queries, and the overall system throughput.

Interactive Anatomical Model: (Co-PI, 53,000 Dhs, University of Sharjah). This is a multidisciplinary project with the medical College at University of Sharjah. This is an educational project in which we will equip human plastinated model with interactive

multimedia information system. We will build the system to guide students through their practical anatomy laboratory without the need for tutor or instructor. The project will enable the students to be self-dependent on gaining anatomy knowledge without being helped by tutor or textbook nearby.

Development of an ultrasonic meter for pork meat identification using ultrasound: (Co-PI, 100,000 Dhs, University of Sharjah). This is a multidisciplinary project to design an ultrasonic based device to identify the source of meat, e.g., pork versus lamb or cow or slaughtered versus un-slaughtered animals. The parameters are used to characterize the type of meat under consideration and build a computer-based classifier. Data collected from the training (control) set will be transformed to an appropriate space then will be used to tune the system to recognize an unknown sample of meat. We will use a training set that represents the different types of meats under consideration.

The same parameters are collected, from an unknown meat sample, using the proposed device. The measured data are subjected to the same pre-processing steps as above then the classifier is used to determine the type of the meat.

Secured Smart Sensor (Principal Investigator; Seed Fund 13,000 Dhs University of Sharjah): Wireless sensors typically operate in uncontrolled and possibly hostile environment. Thus, sensors have a high risk of being captured and compromised by an adversary. In this research we investigate the use of watermarking techniques in providing integrity and confidentiality to sensor data. We study techniques for embedding watermark signatures in the sensor data. The challenge is to design watermark signatures that are robust to the channel noises; at the same time, the watermark signatures should be fragile enough so that altering data would destroy them.

Indexing Bibliography and Authority Records: (Principal Investigator; 138,000 Dhs, Zayed University, Dubai). This is a multidisciplinary project that consisted of 6 faculty and staff members from 3 different colleges and three undergraduate students. The project was in collaboration between the:

- College of Information Systems
- College of A&S, Department of Arabic and Islamic Studies
- Zayed University Library

The goal of the project was to enhance the multilingual search in library databases. We are especially interested in the Arabic and English languages. Our goal was to develop an efficient search engine that accepts keyword in Arabic, English or both and retrieves all the records that are relevant to (and not necessarily matching) these words in both languages using synonyms of the query keywords. (This is known as Authority Control in Library Science.)

Security Center Initiative: (Principal Investigator, 100,000 Dhs + equipments and furniture, Zayed University) to establish a CSIRT (Computer Security Incident Response Team) center. The center was established in the Fall 2004. The center was to seek external funds and include a government agency partner, e.g., Dubai Police HQ. The mission of UAECISIRT is to promote security awareness by educating users about the latest computer threats and vulnerabilities and by assisting organizations with incident

response and cyber crime threat mitigation. The UAECSIRT team also provides organizations with security awareness and incident response training. UAECSIRT is the first regional security operation center equipped with a state of the art security lab for advanced security research to serve organizations and users in the Gulf area of the Middle East.

Real-time Local File System: led the design and implementation team of a real-time file system (RT-LFS) for video-on-demand and non-linear editing applications. The RT-LFS files system is build on top of Windows NT. It uses Win32 API and supports simultaneous read and write streaming required for broadcast applications. The system provides soft real-time guarantee for streaming audio and video data for LFS aware-applications and best effort for Windows applications. Application programs use device IO control commands to negotiate the **QoS** level with the admission control. Panasonic turned our RT-LFS file system into a product as a part of NewsByte25 non-linear editing system

Distributed File System for Multimedia Streaming: Design and implementation of a prototype for real-time distributed file system (RT-DFS) based on the idea of network attached disks **NASD** or smart disks. The smart disks are implemented on the **Linux** platform using PC-based hardware. The file system kernel is distributed among the clients and the autonomous disks. The system is **scalable** because there is no centralized entity that can cause congestion at high load. Smart disks and clients are connected through a Gigabit Ethernet switch. Both data and queries are transmitted over a reliable transmission protocol on top of **UDP**. RT-DFS provides soft real-time guarantee and uses the standard Win32 API.

Home Networking and Internet Portal: Leading the Home network and Internet portal project at Panasonic laboratory. Build an end-to-end prototype for a network of smart home appliances, which are connected, to the Internet. Home appliances, such as digital TV, can communicate with the owner, at office or with the manufacturer Internet **portal** to report faults or send performance measurements. Smart appliances can communicate with each other over wired local home network, such as **IEEE1394**, Ethernet or wireless connection, e.g., **Bluetooth**. A middleware layer, like **Jini** and provides simple mechanisms, which enable devices to plug together to form an impromptu community. The middleware offers simple API for devices to talk to each other and share services. At the other end of the network, service portal should provide the capability to access smart devices at home and offer basic services such as, device configuration and setup, driver update and sending diagnostic applets.

Video on Demand Server (PISA): designing and implementing a prototype video on demand server. It is a software solution on top of PCs and open protocol architecture using IP that can be applied to Fast Ethernet, Fibre Channel. This include designing and implementing novel algorithms for data layout, disk scheduling, over RAID, to handle multi-stream real time data e.g., MPEG1, MPEG2, DVCPro, as well as audio, and still images. We also used simulation to test our new ideas and fine tune the algorithms.

Indexing of large Database of non-traditional objects: designed and implemented indexing algorithms for handwritten text. These techniques are useful for data retrieval in PDA. Handwritten text is retrieved by content. Each word is treated as images and a set of features is extracted to characterize the text. This technique is different from OCR techniques.

Teaching Profile

Undergraduate courses

Principle of databases	Polytechnic University, NY, USA
Database management systems	New Jersey Institute of Tech. (NJIT), NJ, USA
Computer programming	Strayer University, Virginia, USA
Operating systems	Strayer University, Virginia, USA
Digital image processing	University of Sharjah, UAE
Multimedia databases	University of Sharjah, UAE
Computer and network security	University of Sharjah, UAE
Information security	Zayed University, UAE
Computer organization	Zayed University, UAE
Database management systems	Academy for Sci. & Tech. and Maritime Trans., Egypt
Operating systems	Academy for Sci. & Tech. and Maritime Trans., Egypt
Computer programming	University of Alexandria, Egypt
Engineering economics	University of Sharjah, UAE
Industrial Info Sys & DB	Industrial and Management Eng., UoS, UAE
Database indexing (seminar course)	University of Sharjah, UAE
Digital watermarking (seminar course)	University of Sharjah, UAE
Discrete Mathematics	University of Sharjah, UAE
Multimedia technology Lab	University of Sharjah, UAE
Engineering Ethics	University of Sharjah, UAE

Graduate Courses

Management of Information System	Rutgers University, NJ, USA
Database systems	Rutgers University, NJ, USA
Advanced computer architectures	University of Sharjah, UAE
Programming languages	University of Alexandria, Egypt

Professional Activities:

International Journal Editorial Board:

- ❑ The Journal of Information Processing Systems, <http://jips.kips.or.kr/eb.html>
- ❑ Editorial board and publication director SERSC <http://www.sersc.org/>
- ❑ Journal of Computer Science and Information Technology, www.jcsit.org
- ❑ International Journal of Multimedia and Ubiquitous Engineering (IJMUE), SERSC, <http://www.sersc.org/journals/IJMUE/EB.php>
- ❑ International Journal of Smart Home (IJSH) <http://www.sersc.org/journals/IJSH/EB.php>

- ❑ ACTA Press International Journal of Computers and Applications
<http://www.actapress.com/Editors.aspx?JournalID=59>
- ❑ International Journal of Virtual Technology and Multimedia (IJVTM),
<http://www.inderscience.com/browse/index.php?journalID=66>
- ❑ The Journal of Future Generation Information Technology (FGIT), <http://www.ftrg.org/>
- ❑ Scientific Journals International http://www.scientificjournals.org/editorial_board.htm

Program Chair:

- ❑ EM-Com 2009 workshops chair, The 5th International Conference on Embedded and Multimedia Computing (EM-Com), Cebu, Philippine, August 11-13, 2010.
- ❑ Track co-chair “Information System Security”, The 15th IEEE International Conference on Electronics, Circuits, and Systems, ICECS August 2008, Malta.
- ❑ Track chair, ACS/IEEE International Conference on Computer Systems and Applications, AICCSA-07 (May 13-16, 2007, Amman, Jordan); track on Database and Data Mining, <http://www.philadelphia.edu.jo/aiccsa2007>
- ❑ Track chair, eBusiness Applications, ACM Symposium on Applied Computing (SIGAPP), 2008
- ❑ Technical program **co-chair** for the International Workshop on Mining Spatio-temporal data as a part of PAKDD 2001, Hong Kong, China
- ❑ Technical program **co-chair** 6th International Workshop on Multimedia Information Systems 2000
- ❑ Technical program **co-chair** New Trends on Multimedia Systems mini-track in the 33rd Hawaii International Conference on System Sciences, 2000.

Advisory Board:

- ❑ Founding member of the ACM SIGSpatial (Association for Computing Machinery – Special Interest Group for spatial and geographic information),
<http://www.sigspatial.org/ACMSIG-Spatial-Proposal.pdf>
- ❑ Served in the **Advisory Board** for the Department of Electrical and Computer Engineering, University of Miami 2000-2002
- ❑ Served in the **Advisory Board** of Center for Advanced Information Processing (CAIP), Rutgers University 1999 – 2002

Program Committee member:

- PC member the 8th CS/IEEE International Conference on Computer Systems and Applications (AICCSA), Hammamet, Tunisia, 2010,
<http://www2.lifl.fr/AICCSA2010/>
- PC member of the Fifth International Symposium on Smart Homes, May 2010, Busan, Korea, <http://www.ftrg.org/sh2010/index.php>
- PC member of the International Conference on Multimedia Computing and Information Technology (MCIT-2010), University of Sharjah, UAE
- PC member of the 17th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems ACM SIGSPATIAL GIS 2009

- PC member of the 2009 IEEE International Conference on Information Reuse and Integration, 10-12 August 2009, <http://iri2009.cpsc.ucalgary.ca/>
- PC member of the International workshop on Web Security, Integrity, Privacy, and Trust (WSIPT'2009)
- PC member of the International Conference on Advances in Social Networks Analysis and Mining 2009 (ASONAM09, URL is <http://www.asonam.org/>)
- PC member of the 7th ACM/IEEE International Conference on Computer Systems and Applications (AICCSA-2009), <http://www.congreso.us.es/aiccsa2009/>
- PC member of the 16th ACM International Symposium on Advances in Geographic Information Systems (ACM GIS) 2008
- PC member of the IEEE International Conference on Information Reuser and Integration 2008 (IRI08), <http://iri2008.cpsc.ucalgary.ca/>
- PC member of the Workshop on Knowledge Discovery and Data Mining from Multimedia Data and Multimedia Applications in conjunction with ICDM 2007; http://www.cse.fau.edu/~xqzhu/kdm/ICDM07_kdm.html
- PC member of the 15th ACM International Symposium on Advances in Geographic Information Systems (ACM GIS 2007), <http://www.cise.ufl.edu/dept/acmgis2007/pc.html>
- PC member of the 2nd International Conference on Multimedia and Ubiquitous Engineering, Seoul (Korea) on April 2008, <http://www.sersc.org/MUE2008/>
- PC member of the 2007 International Conference on Intelligent Pervasive Computing (IPC-07) October 12th -13th, 2007, in Jeju-do, Korea www.sersc.org/IPC2007/
- PC member of the 13th International conference on Database Systems for Advanced Applications (DASFAA08) New Delhi, India, March 2008; <http://www.cse.iitb.ac.in/~dasfaa08/>
- PC member of the 3rd International Conference on Embedded Software and Systems (ICESS2007) is to be held in Daegu, South Korea, May 14-16, 2007, <http://www.icess2007.org/>
- PC member of the Eight International Conference on Mobile Data Management, MDM'07, Mannheim, Germany, May 7-11, 2007. <http://mdm2007.uni-mannheim.de>
- PC member of the International Conference on Internet and Multimedia Systems and Applications (EuroIMSA) Chamonix, France from March 14-16, 2007. <http://www.iasted.org/conferences/home-558.html>
- PC member of the 12th International Conference on Database Systems for Advanced Applications (DASFAA 2007) 9-12 April, 2007, Ambassador Hotel, Bangkok, Thailand <http://www.dasfaa07.ait.ac.th/>
- PC member of the International Conference on Multimedia and Ubiquitous Engineering (MUE'07), Seoul, Korea, April 2007, <http://www.sersc.org/MUE2007/contents/page/06.html>
- The International MultiMedia Modeling Conference, Special session on Ubiquitous Multimedia Service (UMS '07), Nanyang Technological University (NTU) campus in Singapore, January 2007, <http://cemnet.ntu.edu.sg/mmm2007/ss-ums07.htm>
- PC member of the 4th International Workshop on Frontiers of Information Technology, Islamabad, Pakistan, December 20-21, 2006 <http://www.ciit-afd.edu.pk/fit06/>

- PC member of the 1st International Workshop on Smart Home, November 10th ~ 11th, 2006, Cheju Island, Korea, <http://www.secureworld.or.kr/IWSH.htm>
- PC member of the International Conference on Intelligent Systems And Computing: Theory And Applications, Cyprus, July 5-7, 2006, <http://www.cs.ucy.ac.cy/ISYC06/>
- PC member of the 7th IEEE International Conference on Mobile Data Management, Nara, Japan in May 9-12 2006, <http://www.mdm2006.kddilabs.jp/>
- PC member of the 11th International Conference on Database Systems for Advanced Applications (DASFAA), Singapore 2006, <http://www.comp.nus.edu.sg/~dasfaa06/>
- PC member of the International Conference on Applied Computing 2006, San Sebastian, Spain, 25-28 February 2006, <http://www.iadis.org/ac2006/committees.asp>
- PC member International Conference on Internet and Multimedia Systems and Applications (EuroIMSA 2006), Innsbruck, Austria from February 13-15, 2006
- PC member of the 13th ACM International Symposium on Advances in Geographic Information Systems, November 12-13th, 2005, Bremen, Germany <http://infolab.usc.edu/acmgis05/index.html>
- PC member of the International IEEE Symposium on Mobile Computing (WirelessCom), June 13-16, 2005, Maui, USA http://www.csee.umbc.edu/~younis/WC_MobCom05.htm
- PC member of the 6th International Conference on Mobile Data Management (MDM), Ayia Napa, Cyprus, May 9-13, 2005, <http://www2.cs.ucy.ac.cy/mdm05/>
- The IEEE Sarnoff Symposium, 18-19 April 2005, http://ewh.ieee.org/r1/princeton-centraljersey/2005_Sarnoff_Symposium/index.html
- Program committee member, The 9th IASTED International Conference on Internet & Multimedia Systems & Applications, August 15-17, 2005, Honolulu, Hawaii, USA, <http://www.iasted.org/conferences/2005/hawaii/c477.htm>
- Program committee member, 2nd International Workshop on Frontiers of Information Tech. Islamabad, Pakistan – Dec 20-21, 2004, <http://multimedia.ece.uic.edu/FIT04/>
- EuroIMSA 2005, International Conference on Internet and Multimedia Systems and Applications, Grindelwald, Switzerland from February 21-23, 2005, <http://www.iasted.org/conferences/2005/switzerland/c462.htm>
- Program committee member IRMA, The International Conference on Information Resources Management Association, San Diego, California, USA during May 15-18, 2005, http://www.irma-international.org/downloads/pdf/Track_05/security.pdf
- Program committee member of the 2004 IEEE International Workshop on Multimedia Content-based Analysis and Retrieval Miami, Florida, USA December 15, 2004, <http://rvc.eng.miami.edu/meetings/mcbar.html>
- Program committee member of the 2004 International Conference on Information and Knowledge Engineering IKE'04: June 21-24, 2004, Las Vegas, Nevada, USA
- Program committee member of the 8th International conference of Internet and Multimedia Systems & Applications, August 16-18, 2004, USA. <http://www.iasted.com/conferences/2004/hawaii/c427.htm>
- Program committee member of the 2004 International Conference on Embedded Systems and Applications ESA'04: June 21-24, 2004, Las Vegas, Nevada, USA.

- Program committee member of Technical Committee in the International Association of Science and Technology for Development for the term 2003-2006 on The Web, Internet & Multimedia <http://www.iasted.org/>
- Program committee member of The ACM International Symposium on Geographic Information Systems; Nov 2003, <http://www.esri.com/events/acm/index.htm>
- Program committee member of the 2nd International conference on Human.Society @ Internet, Seoul, Korea June 2003
- Program committee member of the 8th International Workshop on Multimedia Information Systems (MIS 2002), Chicago, USA
- Program committee member of the 5th IEEE International Workshop on Networked Appliances, IWNA 2002, <http://www.cms.livjm.ac.uk/iwna5/>
- Program committee member of The 9th ACM International Symposium on Advances in Geographic Information Systems November 2001
- Program Committee member 3rd International Workshop of the Multimedia Information Retrieval (MIR), ACM Multimedia Conf 2001, Ottawa, Canada <http://database.cs.ualberta.ca/mir2001/>
- Program committee member The Second International Workshop on Software Engineering and Multimedia Applications (SEMA2000)
- Program committee member of the 2nd Workshop of the Multimedia Information Retrieval (MIR), ACM Multimedia Conf 2000, CA, USA
- Program committee member of the 5th International Workshop on Multimedia Information Systems (MIS'99)
- Program committee member International Conference on Foundations of Data Organization and Algorithms (FODO'98)
- Program committee member of the 13th International IEEE Conference on Data Engineering 1997 (ICDE)
- Program committee member of the 4th International Conference on Information Systems, Analysis and Synthesis 1998
- Program committee member the 4th International Conference on Object-oriented & Entity Relationship Modeling 1995

National Science Foundation (NSF) Committees and Panels:

- Panelist for NSF (National Science Foundation) for Database and Expert Systems Program, 1995
- NSF committee member for Research Infrastructure Program, National Science Foundation (NSF), 1996
- NSF (National Science Foundation) committee member for Database and Expert Systems Program, 1999
- NSF (National Science Foundation) committee member for Database and Expert Systems Program, 2000

Research Panels:

- Cyber Space Security panel, the Knowledge and ICT4D Conference 2005 (KICT4D 2005), June 14-16, 2005; <http://kict4d.org.my/?p=programme>

- Panelist in a panel titled “New Horizons in IT Research”, International Workshop on Frontiers of Information Technology, Islamabad, Pakistan, December 2003
- Panelist in a panel titled "Research in Internet Time: How Can We Meet the Challenge" at the Center for Advanced Information Processing, Computer Science Department, Rutgers University, November 15, 2000

Technical Session:

- ❑ Organized a session on Multimedia Systems as a part of the 4th International Conference on Information Systems, Analysis and Synthesis 1998.
- ❑ Invited to organize a session in **WAC 2002** (World Automation Congress) Orlando, Florida, USA June 9-13, 2002 <http://wacong.com>

Tutorial and Consultancies:

- ❑ Visiting Scientist, Concordia University, summer 2006
- ❑ Time Management, Arab Software Consultant, Saudi Arabia, 2005
- ❑ Home Networking and Java technologies at Matsushita Workshop on Digital Networking, New Jersey, July 1999

Others:

- ❑ **Chair**, local arrangement, International Symposium on Signal Processing and its Applications (ISSPA), Sharjah, UAE, February 12-15, 2007
- ❑ **Session chair** in several International conferences and workshops
- ❑ **Reviewer** for numerous international journals and conferences in database and multimedia systems areas
- ❑ Wrote several **project proposals** to the overseas research and development at Matsushita headquarters in Japan. As a part of my responsibility as a project leader, I have to submit a proposal for funding or continuation of funding every year
- ❑ Student member, Graduate Admission Committee, University of Maryland, 1991-1994
- ❑ **Invited talks:**
 - University of California, San Diego, 1995,
 - Polytechnic University, Brooklyn, NY, 1995;
 - University of Miami, Miami, 1995
 - The University of Texas at Arlington
 - Michigan State University, 1997
 - Virginia Tech, Virginia, 1998
 - Mitsubishi Research Laboratory, Homedale, NJ, USA, 2000
 - Purdue University, 2001
 - University of Sharjah, UAE, Nov 2004
 - 2nd International Workshop on Frontiers of Information Technology, Islamabad, Pakistan, December 2004
 - Saudi Society for Technology Development & Transfer, February 2005
 - Concordia Institute for Information Engineering, Concordia University, July 2006

Patents:

1. W. Aref, D. Barbara, Ibrahim Mostafa Kamel, P. Vallabhaneni, *Methods and Apparatus for Indexing a plurality of Handwritten Objects*, **allowed**, Pat 5,649,023
2. Ibrahim Mostafa Kamel, D. Barbara, *Method and apparatus for similarity matching of handwritten data objects*, Patent **allowed**, PAT. NO. 5,710,916
3. Ibrahim Mostafa Kamel, W. Aref, *A Video Server Disk Scheduling Algorithm for Simultaneous Read/Write Requests*, Patent **allowed**, PAT. NO.6,263,411
4. Ibrahim Kamel, *Cell Loss Reduction in a Video Server with ATM Backbone Network*, **allowed**, PAT. NO. 5,875,300
5. Ibrahim Mostafa Kamel, N. Niranjana, and S. Ghandeharizadeh, *Real-Time Scheduling of Prioritized Disk Requests*, **allowed**, Feb 2000
6. Ibrahim Mostafa Kamel, W. Aref, S. Mukherjee, *Seamless Scalable Design for Distributed Media Server*, **allowed**, US Patent Issued on May 9, 2000, US Patent Serial No. 6,061,720
7. S. M., Ibrahim Mostafa Kamel, D. Bushmitch, W. Aref; *Inexpensive, Scalable and Open-Architecture Media Server*, **allowed**, US Patent No. 6,101,547
8. W. Aref, Ibrahim Mostafa Kamel, T. Niranjana, S.Ghandeharizadeh, *Simultaneous Processing of Read and Write Requests Using Optimized Storage Partition for Read and Write Request*, **allowed**, Pat 6,023,720
9. S. Mukherjee, Ibrahim Kamel, P. Mohapatra, *Multimedia file systems using file managers located on clients for managing network attached storage devices*, **allowed**, US Patent Issued on October 15, 2002, United States Patent 6466978
10. Aref, Ibrahim Mostafa Kamel, Mukherjee, *Algorithm for Fast Forward and Fast rewind of MPEG streams*, **allowed**, US Patent Issued on August 1, 2000, US Patent No. 6,097,422
11. M. Rahman, Ibrahim Kamel, *Providing quality of service for disks I/O sub-system with simultaneous deadlines and priority*, **allowed**, US Patent Issued on March 22, 2005, United States Patent 6871011
12. Ibrahim Mostafa Kamel, S. Mukherjee, Zongming Fei, *Providing VCR Functionality for Data-centered Video Multicast*, **allowed**, US Patent Issued on January 31, 2006, United States Patent 6993787
13. S. Mukherjee W. Aref, Ibrahim Mostafa Kamel, *Scheduling method and apparatus for network-attached storage devices and other systems*, **allowed**, US Patent Issued on October 29, 2002, US Patent No. 6473809
14. Ibrahim Mostafa Kamel and Li Zou, *Dynamic Multicast Grouping for Vehicles and Other Mobile Objects*, **allowed**, issued on June 20, 2006, US Patent No. 7065576
15. Ibrahim Mostafa Kamel, K. Elbassioni, B. Chen, *Efficient Service Management in Home Gateway*, **allowed**, US Patent Issued on March 7, 2006, United States Patent 7010661

16. Ibrahim Kamel, *Scheme for Implementing FTP Protocol in a Residential Networking Architecture*, Filing Date: 8/24/2001, Publication date: 05/01/2003
<http://www.freepatentsonline.com/20030084123.html>
17. Chieh-Chung Chang and Ibrahim Mostafa Kamel *Server-Based Programming of Appliances Via an Information Network*, Application Number:102925, Filing Date: 03/21/2002,<http://www.freepatentsonline.com/20030190149.html>
18. C. Akinlar, K. Elbassioni, Ibrahim Mostafa Kamel *QoS management in Home Gateway*, Application Number: EP20030784828, Filing Date: 07/29/2003;
<http://www.freepatentsonline.com/EP1535130.html>
19. S. Mukherjee, W G. Aref, Ibrahim M. Kamel, David A. Braun, *Real-time distributed file system*, **allowed**, US Patent Issued on April 29, 2003, United States Patent 6556998
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Journal Publications:

1. Z. Alaghbari, Ibrahim Kamel, A. Mostafa, "Dynamic Storage and Access Load Balancing for Spatial Peer-to-Peer Networks", **submitted** to Data & Knowledge Engineering Journal, Elsevier.
2. Ibrahim Kamel, H. Guma, "Simplified Watermarking Scheme for Sensor Networks", International Journal of Internet Protocol Technology, Inderscience, **accepted**, in press.
3. Ibrahim Kamel, Cuneyt Akinlar, H. El-Sayed, "QoS Guarantee for Multimedia Traffic in Smart Homes", Special Issue on Advanced Intelligent Multimedia Applications for Next Generation Environments International Journal of Multimedia Tools and Applications (MTAP), Springer, 2010, DOI: 10.1007/s11042-009-0408-3.

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5. Ibrahim Kamel, Z. Alaghbari, A. Mostafa, "Efficient Range Queries Execution in Spatial Peer-to-Peer Networks", International Journal of Internet Protocol Technology (IJIPT), Inderscience, vol. 4, no. 2 - 2009.
6. Ibrahim Kamel and Q. Albluwi, "Watermarking R-trees for Copyright Protection", International Journal of Computers & Security, Elsevier, 10.1016/j.cose.2009.01.007, 2009.
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8. K. Elbassioni, A. Elmasry, Ibrahim Kamel: Indexing Schemes for Multi-dimensional Moving Objects. Encyclopedia of GIS 2008, ISBN: 978-0-387-30858-6 Edited by S. Shekhar and H. Xiong, Springer : page 523-529.
9. Ibrahim Kamel and Beizhong Chen, "A Novel Memory Management Scheme for Residential Gateways", Special issue on Intelligent Systems and Smart Homes, International Journal Information System Frontiers, Springer, June 2008
10. K. Shaalan, H. Talhami, Ibrahim Kamel "Automatic Morphological Generation for the Indexing of Arabic Speech Recordings" International Journal of Computer Processing of Languages, 20(1): 1-14, 2007.
11. "An Active Buffer Management Technique for Providing Interactive Function in Broadcast Video-on-Demand Systems", The international Journal of **IEEE Transaction on Multimedia**, vol.7, no.5, pp.942-950, October 2005, (with Zongming, M. Ammar, S. Mukherjee)
12. "On Searching Arabic Records in Electronic Libraries", **International Cataloguing and Bibliographic Control**, Volume 34, No2, April/June 2005 (with Alaa Eltalmas, and Muneer Abubaker)
13. "An Indexing Method for Answering Queries on Moving Objects", The **Journal of Distributed and Parallel Databases**, Springer, Vol 17, Issue 3, March 2005, page 215-249, ISSN:0926-8782, (with K. Elbassioni, A. Elmasry)
14. "Analysis of Multi-Dimensional Space-Filling Curves", **The Int. Journal of GeoInformatica**, Kluwer Press, 7(3), 179-209, Sep. 2003, (with M. Mokbel, W.

Aref)

15. "A Novel Cost Driven Scheduling Algorithm for Multi-Priority Multimedia Objects", The international Journal of **IEEE Transactions on Multimedia**; Volume 5, Number 2, 186-197, June 2003, (with S. Ghandeharizadeh, L. Haung)
16. W. Aref, Ibrahim Kamel, S. Ghandeharizadeh "Disk scheduling in Video Editing Systems", The international Journal of **IEEE Transaction On Knowledge and Data Engineering**, Vol 13, No 6, Pages 933-950, November/December 2001.
17. "Relaxing the Uniformity and Independence Assumptions, Using the Concept of Fractal Dimension", The International Journal of **Computer and System Sciences (JCSS)**, Elsevier; 55, 2, October 1997, pp. 229-240, (with Christos Faloutsos)
18. W. Aref, Ibrahim Kamel, D. Lopresti "On Handling Handwritten Electronic Ink", The international Journal of **ACM Computing Survey**, Symposium on Multimedia Systems, December 1995, Vol 27, No 4, Pages 564 – 567.
19. C. Faloutsos and Ibrahim Kamel, "High Performance R-trees", the international Journal of **IEEE Data Engineering**, Special Issue on Geographical Information Systems, 16(3):28-33, Sept. 1993.

Top International Conferences:

(Strongly refereed international conferences with acceptance rate 15%-20%; these conferences are prestigious and their publications are considered as journal publications by many top universities in USA)

20. M Ali, W. Aref, S. Helal, Ibrahim Kamel, "NILE-PDT: A Phenomenon Detection and Tracking Framework for Data Stream Management Systems", 31st International Conference on **Very Large Data bases VLDB 2005**, Norway September 2005
21. M. F. Mokbel, W. G. Aref, K. El-Bassiouni, and Ibrahim Kamel "Scalable Multimedia Disk Scheduling". In Proceedings of the **20th International Conference of IEEE Data Engineering, ICDE** , Boston, MA, Mar 2004
22. K. Elbassioni, A. Elmasry, Ibrahim Kamel, *An Efficient Indexing Scheme for Multi-dimensional Moving Objects*, The **9th International Conference on Database Theory ICDT 2003**, Siena, Italy, January 2003
23. Ibrahim Kamel, T. Niranjana, S. Ghandharizedah, "A Novel Deadline Driven Disk Scheduling Algorithm for Multi-Priority Multimedia Objects", **16th International Conference on Data Engineering (ICDE)**, San Diego, CA, February 2000
24. N. Koudas, C. Faloutsos and Ibrahim Kamel, *Declustering Spatial Databases on a Multi-Computer Architecture*, **International Conference on Extending Database Technology EDBT 96**, pages 592-614, 1996.

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27. Ibrahim Kamel and Christos Faloutsos, *Parallel R-trees*, **Proceeding International conference ACM SIGMOD 92**, International Conference on Management of Data, pages 195-204, San Diego, CA, June '92.

International Conferences and Workshops:

28. Ibrahim Kamel and H. Yahayoui, "Identifying Malicious Peers in MANETs", the 15th IEEE International Conference on Electronics, Circuits, and Systems, ICECS , Special Session on Information System Security, August 2008, Malta.
29. H. Gomaa, Ibrahim Kamel, and L. Kaya, "On Protecting the Integrity of Sensor Data", The 15th IEEE International Conference on Electronics, Circuits, and Systems, ICECS Session on Information System Security, August 2008, Malta.
30. T. Salem, Ibrahim Kamel, Z. Al Aghbari, "*An Efficient Scheme for Detecting Phenomena in Multiple Data Streams*", 4th International conference on Innovation in Information Technology, Dubai, November 2007
31. Maali Al Hachami and Ibrahim Kamel, "*On Providing Fault Tolerance for Collaborative Computing in MANET*", International Symposium on Signal Processing and its Applications (ISSPA), Sharjah, UAE, February 12-15, 2007
32. Q. Albluwi and Ibrahim Kamel, "Watermarking Essential Data Structures for Copyright Protection", The 5th Int. Conference on Cryptology and Network Security CANS, Suzhou, Dec. 2006, http://dx.doi.org/10.1007/11935070_17
33. Ibrahim Kamel, "*Technology Development in Computer and Information Technology*", 4th International Forum on Engineering Education, Sharjah, 25-27 April 2006
34. Ibrahim Kamel, "*IT Technology Transfer: Challenges and Priorities*", 2nd National Symposium on Technology Development and Transfer, Riyadh, Saudi Arabia, May 12-14, 2005
35. M. Ali, W. Aref, Ibrahim Kamel, "Scalability Management in Sensor-Network PhenomenaBases", the 18th International Conference on Scientific and Statistical Database Management, Vienna, Austria, July 2006.
36. H. Talhami and Ibrahim Kamel, "A Morphological Generator for the Indexing of Arabic Audio", The 9th IASTED International Conference on Artificial Intelligence & Soft Computing, Benidorm, Spain, September 12-14, 2005, <http://www.iasted.org/conferences/2005/spain/asc-programmain.htm>.
37. M. Ali M Mokbel, W. Aref, Ibrahim Kamel, Detection and Tracking of Discrete Phenomena in Sensor-Network Databases 17th International Scientific and Statistical Database Management Conference, June 2005, CA, USA
38. H. Talhami and Ibrahim Kamel, "Identifying Similar Arabic Words Using Large Vocabulary Recognition System", Euro IMA, Switzerland, 2005

39. Ibrahim Kamel, "Information Security: The next Frontier", 2nd International Workshop on Frontiers of Information Technology. Islamabad, December 2004
40. Ibrahim Kamel and Emad Bataienah "An Enhanced Multimedia-based System for e-learning Applications", International Conference on Educational Multimedia, Hypermedia & Telecommunications, June 21-26, 2004 Lugano, Switzerland
41. Ibrahim Kamel, Alaa Eltalmas, and Muneer Abubaker, "On Searching Arabic Records in Electronic Libraries", The MELCOM International, Munich, Germany, May 24-26, 2004.
42. Ibrahim Kamel, Habib Talhami, "An Efficient Mechanism for Searching Arabic Audio Libraries", **IEEE** international workshop on Multimedia Content-based Analysis and Retrieval Miami, Florida, USA December 15, 2004
43. Ibrahim Kamel, " On Connecting Smart Appliances to the Internet", International Workshop on Frontiers of Information Technology, Islamabad, Pakistan, December 2003, http://multimedia.ece.uic.edu/IT_workshop/
44. Ibrahim Kamel and K. Elbassioni, "Playing Video with Multiple Qualities", 9th International conference on Distributed Multimedia Systems, Miami, Florida, September 2003
45. M. Mokbel, W. Aref, and Ibrahim Kamel "Performance of Multi-Dimensional Space-Filling Curves", in Proceedings of the tenth International Conference on Geographic Information System, **ACM GIS**, pp149-154, McLean, VA, Nov. 2002
46. M. Rahman, C. Akinlar, Ibrahim Kamel, *On Secured End to End Appliance Control Using SIP*, 5th International Workshop on Networked Appliances (IWNA5), Liverpool, October 2002
47. K. Elbassioni, A. Elmasry and Ibrahim Kamel *Efficient Answering of Polyhedral Queries in Reusing BBS-trees*, The Proceedings of the 14th Canadian Conference on Computational Geometry, Canada, August 2002
48. W. Aref, K. Elbassioni, Ibrahim Kamel, and M. Mokbel *Scalable QoS-Aware Disk Scheduling*, International Database Engineering and Applications Symposium (IDEAS), Alberta, Canada, Jul. 2002
49. C. Akinlar, K. Elbassioni and Ibrahim Kamel, *QoS Management in Residential Gateways*, the **IEEE** International Conference on Wireless LANs and Home Networking (ICWLHN 2002), Atlanta, Georgia, August 2002
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51. B. Chen, K. Elbassioni, and Ibrahim Kamel, *Bundles Replacement in Gateways*, **IEEE** International Conference on Wireless LANs and Home Networks, Singapore, Dec 2001
52. M. El-Rahman, K. Elbassioni, Ibrahim Kamel, Handling Large Real-time Disk Access Requests with Variable Priorities, 2001 **IEEE** International Conference on Multimedia and Expo, Tokyo, Japan, August 2001
53. Chiara Ghirardini, Soon Ae Chun, Vijayalakshmi Atluri, Ibrahim Kamel, Nabil R. Adam: A Study on the Indexing of Satellite Images at NASA Regional Application Center., Fifth International Workshop on Query Processing and Multimedia Issues in Distributed Systems, **DEXA**: 859-864, 2001

54. W. Aref, Ibrahim Kamel, and M. Mokbel, *On the Analysis of High-Dimensional Space Filling Curves*, 1st International Conference on Geographic Information Science, Savannah, Georgia, October 2000.
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57. C. Akinlar, W.Aref, Ibrahim Kamel, and S. Mukherjee, "Autonomous Disks: The Building Block for a Scalable Distributed File System", 5th International Workshop on Multimedia Information Systems, October 1999
58. Z. Fei, Ibrahim Kamel, M. Ammar, S. Mukherjee, *Supporting VCR Functionalities for Staggered Multicast Near Video-on-Demand Systems*, **IEEE** International Conference on Multimedia Computing and Systems, Florence, Italy, June 1999
59. Ibrahim Kamel, T. Niranjana, "A Study on Scheduling Multiple Priority Requests in Multimedia Servers", **IEEE** International Conference on Multimedia Computing and Systems, ICMCS 1999, 395-399, Florence, Italy June 1999.
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61. Ibrahim Kamel, *Adaptive Replication Scheme for Multimedia Servers*, 4th International Conference on Information Systems, Analysis and Synthesis (ISAS'98), July 1998.
62. W. Aref, Ibrahim Kamel, T. Niranjana and S. Ghandeharizadeh, *Disk Scheduling for Displaying and Recording Video in Non-Linear News Editing Systems*, **IEEE** International Conference in Multimedia and Computer Networks, San Jose, CA, February 1997.
63. Ibrahim Kamel, M. Khalil, V. Kourmajian, *Bulk Insertion in Dynamic R-trees*, International Conference on Spatial Data Handling 1996
64. Ibrahim Kamel and Yukiko Ito, *A proposal on disk bandwidth definition for video servers*, The 1996 Society Conference of IEICE, September 96, (in Japanese). English version available as PINTL-TR-153-96, Panasonic Information Tech. Laboratory.
65. Y. Chang, W. Zeng, Ibrahim Kamel, R. Alonso, *Integrated Image and Speech Analysis for Content-Based Video Indexing*, **IEEE** Conference On Multimedia Computing and Systems 1996
66. Ibrahim Kamel, *Fast Retrieval of Cursive Handwriting*, Fifth International Conference on Information and Knowledge Management **CIKM**, 1996.
67. Ibrahim Kamel and D. Barbara, *Retrieving Electronic Ink by Content*, 1996 International Workshop on Multimedia Database Management Systems, 1996.
68. V. Kouramajian, Ibrahim Kamel, R. Elmasri, S. Waheed, *The Time index+ : An Incremental Access Structure for Temporal Databases*, Third International **ACM**

- Conference on Information and Knowledge Management (CIKM), pages 296-303, Gaithersburg, MD, 1994
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 70. M. Arya, B. Cody, Ibrahim Kamel, *Integrating Visualization and Database Systems*, **IEEE** Workshop on Database Issues for Data Visualization, Visualization, San Jose, California, October 1993.
 71. Ibrahim Kamel, *Data Compression of Environmental Satellite Images*, Master Thesis, Dept. of Environmental Studies, University of Alexandria, Egypt, Dec. 1988.
 72. Ibrahim Kamel, *High Performance Spatial Indexing for Parallel and Centralized Architectures*, Ph.D. thesis, Dept. of Computer Science, University of Maryland, College Park, USA, Dec. 1994. (Also available as a technical report CS-TR-3382 and UMIACS-TR-94-131).
 73. M. El-Raey, E. Korany, M. Elwahab, Ibrahim Kamel, *Image Data Compression Using Quadrees*, First Symposium on Environmental Sciences Alexandria, Egypt, April 1988.

Un-refereed technical reports

74. S. C. Yoon and Ibrahim Kamel *Towards A Framework for Using Domain Knowledge in Data Mining*; Technical report PINTL-TR-227-01
75. M. Rahman, Ibrahim Kamel , “*Implementation Schemes and Performance Optimization for I/O Subsystem in News Editing Systems*” , Technical report, PINTL-IM-091-99
76. C. Akinlar, M. Rahman and Ibrahim Kamel, “*Experience with SIP-based IP-Telephony System*”, Panasonic Research Technical Report
77. M. Rahman and I. Kamel, *Providing Soft Real-Time Guarantees in Disks Subsystems*. Technical Report, Panasonic Information and Networking Tech Lab PINTL-TR-224-00
78. C. Ren, Ibrahim Kamel, W. Aref “*Jini Home Networking Technology: Experiences and Examples*”, Technical Report, Panasonic Information and Networking Technologies PINTL TR-226-01
79. M. Mokhtar, Ibrahim Kamel, *Read and Write support in the PISA Multimedia Server*, Technical report , Panasonic Information and Networking Technologies PINTL TR-188-98
80. Ibrahim Kamel, M. Kozuch, *A Study of the Scan-EDF Policy for Video Server Applications*, Technical report , Panasonic Information and Networking Technologies PINTL TR-182-97
81. D. Barbara, W. Aref, I. Kamel, H. Korth, P. Vallabhaneni, *Commercial Applications of Macondo Technology*, Technical Report, Matsushita Information Technology Laboratory, PINTL-TR-125-94
82. W. Aref, D. Barbara, Ibrahim Kamel, P. Vallabhaneni, *The B-HMM-tree: a method to index Handwritten text*, PINTL-TR-124-94
83. W. Aref, Ibrahim Kamel, S. Mukherjee, L. Li, *Sorting and Scheduling Characteristics of Space-Filling Curves*, PINTL-TR-196-98

84. C. Akinlar, W. Aref, Ibrahim Kamel, S. Mukherjee, *A Scalable High-Bandwidth Distributed File System for Multimedia Applications*, PINTL-TR-211-99
85. L. Zou, Ibrahim Kamel, *A Dynamic Multicast Grouping Algorithm for Mobile Objects*, PINTL-TR-225-00
86. C. Akinlar, M. Rahman, Ibrahim Kamel, *Architecture and Design of PINTL's SIP Stack Implementation*, PINTL-TR-230-01

University Service:

- **Chair**, faculty senate, University of Sharjah, 2007 - 2009
- Member of the **University Strategic planning** (community services), 2007-2008
- Member of the **University Strategic planning** (information technology), 2007-2008
- Member of the **College Strategic planning** (college of engineering), University of Sharjah 2006 – 2007
- Member of the **College council**, University of Sharjah 2006-2007
- **Chair**, College of Engineering **curricula and education System committee** 2006-2007. The committee is responsible for improving curriculum across the college. The committee also responsible for evaluating the performance (and propose recommendations to improve) the college in the following areas: undergraduate programs; student welfare; extracurricular activities.
- Member of the **Advisory Board** of the College of Engineering, University of Sharjah, 2005-2006
- Advisor, IEEE student branch, University of Sharjah 2005-now
- Member of the Faculty and Staff Grievance committee, U of Sharjah 2005 - 2006
- **Chair**, capstone project (senior project) committee, U of Sharjah, 2005 - now
- **Advisor and founder**, Ethical Hacking Club (student professional club) 2004-05
- Member of **University Student affair committee**, Zayed University: 2003 - 2004
- Member of **College Student Affairs committee**, Zayed University: 2003 - 2004
- **Advisor**, ISClub (student professional club) 2003 - 2004
- Member of the **Dean Search committee**, Zayed University 2003 - 2004
- Member of **Language across the Curriculum Task Force** 2002 - 2003: this is a university task force which is chaired by the Deputy Provost. The goal is to review the language, both Arabic and English, support in the ZU curriculum in the different colleges and evaluate its effectiveness.
- **College Council** 2003-2004, Zayed University. The college council works closely with the Dean and acts as an advisory committee to the dean of the college in administrative, planning and college promotional issues. The council also helps the dean in preparing the yearly strategic plan for the college.
- Member in **Curriculum Committee**. The committee is responsible for developing new curriculum for the College of Information Systems, Zayed University 2002-2003.

- University academic re-**organizational committee**, Zayed University 2003-2004: This committee reports to the Provost. The role of the committee is to propose a plan to improve the overall university effectiveness and efficiency. The committee reviews various academic programs and courses offered by the various colleges. The output is a recommendation to combine academic programs or propose collaboration and cross-college teaching.

Honor and Awards:

- Best achievements award in the patent corner, University of Sharjah, June 2008
- Best Research Project Award. University of Sharjah May 7, 2008
- Two **Silver Medals** form 36th Exhibition of Inventions International in Geneva, April 2008.
- The Outstanding Academic Performance Award, Zayed University **Exemplary faculty** 2003-2004 based on the performance in research, teaching and professional services and contributions at both college and university levels
- Research Internship, **IBM Almaden Research Laboratory**, San Jose, CA, USA, 1993
- Research Assistant at Dept. of Computer Science, University of Maryland, College Park, 1989-1994
- Travel Grants from UNSCO, training at Feedback, UK, 1987
- Internship grant, UNSCO, Imperial College, London, 1987
- Practical training scholarship from National Institute of Nuclear Physics, Trieste, Italy 1986
- Academic excellence scholarship, University of Alexandria, 1979-1984

Personal:

Citizenship: USA

Marital Status: Married