

# Umar Qasim

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**Objective** To better facilitate student learning in the area of information system and technology.

## Education

- 2005 - present **Ph.D. in Information Systems** (GPA 3.95/4.0)  
**New Jersey Institute of Technology, USA**  
Dissertation Topic: Active Caching for Recommender Systems (Expected Completion 2009)
- 2003 - 2004 **MS. in Information Systems** (GPA 3.83/4.0)  
**New Jersey Institute of Technology, USA**  
Thesis Title: Digital Libraries and Middleware Architecture
- 1997-1999 **MBA in Management Information System**  
**Hamdard University, Pakistan**  
Thesis Title: Library Automation, Opportunities and Challenges
- 1994-1997 **BS. in Computer Science**  
**Hamdard University, Pakistan**  
Recipient of Excellence Award

## Teaching/Research Interests

**Information Systems**( Management, Evaluation)  
**Data Management** ( Databases, Data optimization, Data structure)  
**Application Development** ( Web/software development, Programming languages )  
**Knowledge Management** ( Information retrieval/extraction/filtering, Text/data Mining)  
**System Analysis and Design** ( Requirement engineering, Software engineering)  
**Information Collection** (Digital libraries, Content management )

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## Software Skills

**Programming languages:** Visual Basic, C#, Java, C++, SQL, VBA  
**Databases:** SQL Server, Oracle, My SQL, DB2, MDEX, MS Access, Visual FoxPro  
**Packages:** Endeca Information Access Platform, SAS Business Intelligence, SPSS  
**Interactivity:** Flash, Photoshop  
**Web/Internet:** Dream weaver, FrontPage, ASP. NET, PHP, VB Script, Java Script, Html  
**Data Connectivity:** ADO.NET, DAO, ODBC, COM, DCOM, MTS  
**Other:** Visual Studio, Word, Excel, PowerPoint, Outlook, Acrobat

## Experience

### Teaching

- 1/09-05/09 **McMaster University, Canada**  
Sessional Lecturer  
Taught Information Systems in Business course at DeGroote School of Business during Winter 2009 semester.
- 1/06-08/06 **New Jersey Institute of Technology, USA**  
Teaching Assistant  
Taught Evaluation of Computer Applications / Information System Evaluations in Spring and Summer semester at the College of Computing Sciences
- 1/99-6/00 **University of Management & Technology, Pakistan**  
Adjunct Professor  
Taught Database Management, System Analysis & Design, Management Information Systems and Computer Applications to graduate and under-graduate students.

## Research

- 10/08 - Present **McMaster University**, Canada  
Mills Memorial Library  
Digital Initiatives Research Intern  
As part of Digital Library group exploring various aspects of Endecca information access platform to be used in digital libraries. Also developing recommender system for the library catalog using state of the art technologies.
- 1/05-08/08 **National Science Foundation / National Science Digital Library Research Grant**  
**New Jersey Institute of Technology**, USA  
General Recommendation Engine(<http://gre.njit.edu>)  
Research Assistant  
The General Recommendation Engine (GRE) provides recommendations for the National Science Digital Library collections. GRE is developed by combining three next generation approaches to recommendations: collaborative-filtering, content-based and knowledge-based recommendations to craft the best set of links to related information. For this web-based application developed three recommendation engines using visual studio .net, c#, vb.net, visual C++, asp.net and SQL Server. Also developed and integrated NJIT library, DLESE, Econport and Teachers Domain demo websites with GRE.
- 1/04-12/04 **National Science Foundation / National Science Digital Library Research Grant**  
**New Jersey Institute of Technology**, USA  
Digital Library Service Integration(<http://is.njit.edu/dlsi>)  
Research Assistant  
The Digital Library Service Integration (DLSI) infrastructure provides a systematic approach for integrating digital library collections and services. Developed applications for lightweight integration between heterogeneous systems in digital libraries. Lightweight integration is achieved by the use of wrappers to identify similar concepts in diverse systems and provide information and services for these items of interest. Used Java and MySQL for implementation.

## Industry

- 9/01-12/04 **Reason Technologies**, USA  
*Analyst Programmer*  
Architected and developed information systems for various client companies. Developed the Active Server Pages and COM components for these applications. Worked with Visual Basic, Visual InterDev, ADO, SQL Server, VB Script and JavaScript to build the software. Responsibilities included design, development and implementation of projects and leading a team of developers. Developed and implemented projects before the designated time in a tight schedule. Mentored the developer team, guiding them throughout the ongoing projects.
- 8/00-8/01 **SoftSource Inc.**, USA  
*Programmer / System Analyst*  
Worked on B2B application for SolutiaNet that provides intelligent business solutions to help analyze, optimize and organize businesses. Application contains information about business and industrial products and services, auction and exchange market, consulting services, educational courses, user training and technical support. This project required upfront planning, analysis, design and development. Developed web pages using ASP, VBScript, Microsoft Visual Interdev, whereas the back-end database work was done in SQL Server.
- 7/98-6/00 **University of Management & Technology**, Pakistan  
*Analyst Programmer*  
Responsible for the development of software applications for the internal departments of this organization. For Client/Server applications used Visual Basic and Microsoft Access. For 3-tier compliant software used Microsoft Transaction Server as a middle tier, SQL Server 7 as database and thin client user interface using ADO Object Model for Visual Basic 6. Involved in the total software life cycle from depicting business flow charts, data model, Entity-Event relationship, and developing business objects and coding for the same.
- 7/97-6/98 **Bata International**, Pakistan  
*Programmer*  
Designed and programmed custom software for Finance department. The system kept the information of all the payments from the retail stores and agencies through out Pakistan. This information was reconciled through biweekly statements. All the transactions in the Bank accounts and reconciliation with these accounts regarding stores and agencies were managed through this software. Skills included extensive Microsoft Access including extensive Visual Basic programming and subroutine design. Involved in all phases of System development life cycle.

## Honors & Awards

- 1/05-8/08 National Science Foundation Research Grant, NJIT, Newark, NJ  
Funding award for research as a PhD student
- 12/04 - Present Membership  
Association of Information Systems
- 12/04 - Present Membership  
The Sigma Chapter of the Alpha Epsilon Lambda Honor Society of Graduate and Professional Students at NJIT
- 8/99 Dean's award  
For achievement during MBA degree
- 8/97 Excellence award  
For outstanding performance in BS degree

## Publications

**Umar Qasim**, Vincent Oria, Yi-Fang Wu, Michael Houle and M. Tamer Özsu.(2009). A Partial Order Based Active Cache for Recommender Systems. In Proceeding of the 3rd ACM Conference on Recommender Systems. October 22-25, 2009, New York, USA.(Under Review)

Michael Houle, **Umar Qasim**, Vincent Oria.(2009). Active Caching for Ranked List Queries Based on Shared-Neighbor Information. In Proceeding of the 35th International Conference on Very Large Data Bases. August 24-28, 2009, Lyon, France.(Under Review)

Yi-fang Wu, Il Im, Todd Will, **Umar Qasim**, Michael Bieber, Vincent Oria. Poster Abstracts NSDL Annual Meeting 2007 Washington, DC November 6 – November 8, 2007

Yi-fang Wu, Il Im, Todd Will, **Umar Qasim**, Michael Bieber, Vincent Oria. Poster Abstracts NSDL Annual Meeting 2006 Washington, DC October 18 – October 20, 2006

**Umar Qasim**. *Digital Libraries and Middleware Architecture*. MS.IS Thesis. IS Department, New Jersey Institute of Technology, USA. December 2004.

**Umar Qasim**. Library Automation, Opportunities and Challenges. MBA Thesis. University of Management and Technology, Pakistan. August 1999.

## Working Papers (to be submitted 2009)

**Umar Qasim**, Vincent Oria. A 2-D Active Cache for Recommender Systems.

**Umar Qasim**, Michael Houle, Vincent Oria. An Active Cache Mechanism for Search Engine Queries.

**Umar Qasim**, Vincent Oria. Locality of reference in recommender system query streams.

## References

Amanda Etches-Johnson (etchesa@mcmaster.ca)  
User Experience Librarian  
McMaster University Library  
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Hamilton, ON, Canada

Dr. Michael Bieber (bieber@njit.edu)  
MS Thesis Advisor / Department Chair and Professor  
Information Systems Department, College of Computing Sciences  
New Jersey Institute of Technology  
University Heights, Newark, NJ 07102, USA

Dr. Vincent Oria (oria@homer.njit.edu)  
PhD Dissertation Committee Chair / Associate Professor  
Information Systems Department, College of Computing Sciences  
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University Heights, Newark, NJ 07102, USA