

Knarig Arabshian

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Research Interests

Computer networks, service discovery, ubiquitous and pervasive computing, service-oriented computing. Current research focus is in developing an ontology-based context-aware service discovery system which operates in a globally distributed network.

Education

Columbia University

Ph.D., Computer Science - Defended May 2008

Advisor: Henning G. Schulzrinne

Thesis: Ontology-based Context-aware Service Discovery in a Globally Distributed Network

Columbia University

M.Phil. Computer Science - October 2004

Columbia University

M.S. Computer Science - October 2001

Queens College of the City University of New York

B.S. Major: Computer Science, Minor: Mathematics - June 1998

Research and Work Experience

Columbia University

Postdoctoral Research Scientist

New York, NY

July 2008 - Present

Part of the Internet Real-Time Laboratory's ITA (International Technology Alliance in Network and Information Science) project. Working on communication content analysis to discover semantic and topic similarities in order to detect success or potential failure in communication.

Columbia University

Graduate Research Assistant

New York, NY

Oct 2001 - May 2008

Part of the Internet Real-Time Laboratory developing GloServ, an ontology-based context-aware service discovery system which operates in a globally distributed network. Created a service discovery architecture that uses a description logic ontology for classifying services and mapping it onto a hierarchical peer-to-peer network.

IBM Research Labs

Summer Intern

Hawthorne, NY

Jun 2004 - Sept 2004

Designed and implemented a document file collaboration system on pervasive devices. Created a SIP extension to handle document file collaboration between multiple endpoints. Implemented a prototype on a desktop and a Pocket PC, in J2ME, JNI and C++ using IBM WebSphere Device Developer and Microsoft Embedded Visual C++.

Avaya Research Labs

Summer Intern

Basking Ridge, NJ

Jun 2002 - Sept 2002

Developed an enterprise communication system where Bluetooth devices are able to communicate with each other and make outbound calls using the Session Initiation Protocol.

Summit Systems, Inc.*Product Developer*

Developed software in the back office group to produce documents for payment messages, and trade tickets. Trained new hires on the business and technical aspects of the Summit applications.

New York, NY

Jul 1998 - Feb 2000

Teaching Experience

Instructor, Data Structures in C, Columbia University, Spring 2007

Instructor, Introduction to Computer Science in C, Columbia University, Fall 2006

Teaching Assistant, Computer Networks, Columbia University, Spring 2002

Teaching Assistant, Data Structures, Queens College, Fall 1995

Private Tutor, Undergraduate Mathematics and Computer Science, 1996-1998

Publications

K. Arabshian, C. Dickmann and H. Schulzrinne *Ontology-based Service Discovery Front-end Interface for GloServ*, May 2008 (Under Submission).

K. Arabshian and H. Schulzrinne, *An Ontology-based Hierarchical Peer-to-Peer Global Service Discovery System*, Journal of Ubiquitous Computing and Intelligence Volume 1, Number 2, pp 133-144, December 2007.

K. Arabshian, C. Dickmann, H. Schulzrinne, *Service Composition in an Ontology-based Global Service Discovery System*, Columbia University Technical Report CUCS-033-07, New York, NY, September 2007 (Under Submission).

K. Arabshian and H. Schulzrinne, *Combining Ontology Queries with Key Word Search in Service Discovery*, ACM/IFIP/USENIX 8th International Middleware Conference, Work In Progress Track, Newport Beach California, November 2007.

K. Arabshian and H. Schulzrinne, *Distributed Context-aware Agent Architecture for Global Service Discovery*, The Second International Workshop on Semantic Web Technology For Ubiquitous and Mobile Applications (SWUMA'06), Trentino, Italy, August 2006.

K. Arabshian and H. Schulzrinne, *Hybrid Hierarchical and Peer-to-Peer Ontology-based Global Service Discovery System*, Columbia University Technical Report CUCS-016-05, New York, NY, April 2005.

K. Arabshian, H. Schulzrinne, D. Trossen, and D. Pavel, *GloServ: Global Service Discovery using the OWL Web Ontology Language*, International Workshop on Intelligent Environments, Colchester, England, June 2005.

K. Arabshian and H. Schulzrinne, *GloServ: Global Service Discovery Architecture*, First Annual International Conference on Mobile and Ubiquitous Systems: Networking and Services (Mobiquitous), Boston, MA, August, 2004.

K. Arabshian and H. Schulzrinne, *A Generic Event Notification System Using XML and SIP* 3rd New York Metro Area Networking Workshop (NYMAN), Brooklyn, NY, September 2003.

K. Arabshian and H. Schulzrinne, *A SIP-based Medical Event Monitoring System*, 5th International Workshop on Enterprise Networking and Computing in Healthcare Industry (Healthcom 2003), Santa Monica, CA, June 2003.

H. Schulzrinne and K. Arabshian, *Providing Emergency Services in Internet Telephony*, IEEE Internet Computing Magazine May/June 2002 (Vol. 6 No. 3) and SPIE Proceedings Vol 4868, Boston, MA, 2002.

Professional Activities

TPC Member IEEE International Conference on Communications (ICC 2009)
TPC Member IEEE Global Communication Conference (GLOBECOMM 2008)
TPC Member IEEE Workshop on Semantic Web meets the Deep Web (SWDW'08)
TPC Member IEEE International Symposium on Multimedia (ISM 2006)
TPC Member IEEE International Conference on Communications (ICC 2003)
Reviewer IEEE International Conference on Communications (ICC 2007)
Reviewer IEEE International Conference on Communications (ICC 2006)
Reviewer IEEE International Conference on Communications (ICC 2005)

Student Activities

Vice President, Women In Computer Science, Department of Computer Science, Columbia University, 2005-2006
PhD Representative, Department of Computer Science, Columbia University, 2003-2005

Honors and Awards

Computer Science Department Preceptorship, Columbia University, 2006-2007
Computer Science Department Service Award, Columbia University, 2006, 2007
Fellowship Grant Recipient, Nokia Research Center, 2004-2007
Dean's List, Queens College, 1994 - 1998
Computer Science Departmental Award for Achievement of Excellence, Queens College, 1998
UPE Association Computer Science Honor Society, Queens College, 1996-1998
Presidential Achievers Honor Roll, Queens College, 1995-1996
Member of Honors in Mathematics and Natural Sciences, Queens College, 1994-1998

References

Henning G. Schulzrinne

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Bell Laboratories, Murray Hill, NJ
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Dirk Trossen

BT Research, Suffolk, UK
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Gail E. Kaiser

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The University of Arizona, Phoenix, AZ
(602) 827-2010, ted.shortliffe@arizona.edu

Doree Seligmann

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