VASIL G. SLAVOV

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EDUCATION

Kansas City, MO **University of Missouri-Kansas City** **Spring 2008 – present**

- Ph.D. in Computer Science, present, GPA: 3.95
  - Dissertation topic: Cloud-driven RDF query processing using gossip-based algorithms, Advisor: Prof. Praveen Rao
- M.S. in Computer Science, University of Missouri-Kansas City, Summer 2012, GPA: 3.95
  - Thesis topic: A Study of Gossip Algorithms for Internet-Scale Cardinality Estimation of Distributed XML Data, Advisor: Prof. Praveen Rao

Liberty, MO **William Jewell College** **Spring 2001 – May 2005**

- B.A., Summa Cum Laude, in Computer Science and Mathematics, William Jewell College, May 2005, GPA: 3.97

HONORS AND AWARDS

UMKC

- Outstanding Ph.D. Student in Computer Science 2012, School of Computing and Engineering
- Balaji Krithikaivasan Memorial Student Travel Grant, Computer Science and Electrical Engineering, 2012
- Dean's International Computing & Engineering (DICE) award

William Jewell College

- Computer Science Faculty Award for the Outstanding Junior and Senior in Computer Science, 2004 and 2005
- Phi Epsilon Honor Society, 2005
- Who's Who Among Students in American Universities and Colleges, 2005
- Dean's List (7 semesters)
- Certificate of Achievement, Undergraduate Colloquium 2004
- Kappa Mu Epsilon National Mathematics Honor Society, 2003
- Alpha Lambda Delta National Academic Honor Society for Freshmen, 2001
- Azima Scholarship

EMPLOYMENT

Graduate Research Assistant **University of Missouri-Kansas City** **September 2011 - Present**

Research interests

- Using gossip-based algorithms for cardinality estimation of queries over semi-structured data
- Scalable RDF query processing using a cloud infrastructure
- RDF and XML data models in P2P networks

Network Administrator **Kansas City Art Institute** **July 2006 – August 2011**

- Responsible for all servers and network equipment
- Migrated all network equipment from Cisco to 3Com
- Migrated from MS Exchange to Google Apps
- Set up and maintained: NAS, VoIP, Wireless, Backup, Virtualization, QoS, Network security

Open Systems Analyst **William Jewell College** **June 2005 – July 2006**

- Set up and maintained all campus firewalls using the OpenBSD Packet Filter (PF)
- Set up and maintained all campus computer labs

PUBLICATIONS

Published

- **Vasil Slavov**, Praveen Rao, Dinesh Barenkala, Srivenu Paturi - Performance of RDF Query Processing on the Intel Single-chip Cloud Computer (SCC). Proceedings of the 6th Manycore Applications Research Community Symposium (MARC 2012), Toulouse, France, July 2012, pp. 7-12.
- **Vasil Slavov**, Praveen Rao - Towards Internet-Scale Cardinality Estimation of XPath Queries over Distributed XML Data. Proceedings of 6th International Workshop on Networking Meets Databases (NetDB 2011), Athens, Greece, June 2011, pp. 1-8.

Submitted

- **Vasil Slavov**, Praveen Rao - Internet-Scale Cardinality Estimation of XPath Queries over Distributed Semistructured Data. The VLDB Journal.
- Dipali Pal, Praveen Rao, **Vasil Slavov** - A New Signature Based Approach for Indexing and Querying of Graphs. The VLDB Journal.
- Praveen Rao, Srivenu Paturi, **Vasil Slavov**, Tivakar Swami, Michael Barnes, Deepthi Rao, Raghuvarun Palvai - A New Tool for Sharing and Querying of Clinical Documents Modeled Using HL7 Version 3 Standard. In Computer Methods and Programs in Biomedicine Journal, Elsevier.

LANGUAGES AND TECHNOLOGIES

- Languages: C++, C, Shell programming, Python, C#, MPI
- Cloud Platforms/Distributed Networks: Amazon Elastic Compute Cloud (EC2), IBM SmartCloud Enterprise, PlanetLab
- Frameworks: Distributed Hash Tables (Chord), Hadoop
- Operating Systems: UNIX/Linux, Mac OS X Server, Windows Server
- Tools: GDB, Valgrind, CVS, git

TECHNICAL EXPERIENCE

Projects

- **XGossip** (2010 - 2012). *C++, Sfslite, Chord DHT, Amazon EC2.* Implemented and evaluated a novel gossip algorithm for estimating the number of XML documents that contain a match for an XPath query in a large-scale network in the presence of churn and failures.
- **RDF query processing on Intel SCC** (2011). *MPI-CH, C.* Evaluated large-scale RDF query processing on the 48-core Intel Single-chip Cloud Computer (SCC) using task and data parallelism.
- **SyncMe!** (2010). *C#, .NET, Facebook Graph API, Twitter REST API, Google Calendar API, Google OAuth.* In a team, designed and developed a web site for aggregating Twitter and Facebook events on a user's Google Calendar.
- **Link-state protocol** (2009). *C, Linux.* Implemented an OSPF-like link-state routing protocol on top of UDP.
- **Intelligent file transfer protocol** (2009). *C, zlib, TCP, Linux.* Designed and developed an intelligent, BitTorrent-like file transfer protocol.
- **P2P file system** (2008). *C++, Chord DHT, Linux, PlanetLab.* Designed, implemented, and evaluated a distributed file system using the Chord DHT framework.
- **Web server** (2008). *C, TCP, Linux.* Designed and implemented a lightweight web server.
- **Comparison of the Performance Characteristics of the OpenBSD Stateful Packet Filter (PF) and Microsoft Internet Security and Acceleration (ISA) Server** (2004). Undergraduate Colloquium, William Jewell College.
- **Velositor** (2004). *Python, Apache, Cerner Millennium API.* In a team, designed, developed, and presented a web-based mobile application, which fetches patient data from Cerner Corp. Millennium database and displays it for use by physicians.
- **Sentinel** (2003). *C, Linux.* Designed and developed a magnetic card swipe reader client-server application for the Computer Science Lab, William Jewell College.

TALKS

- Presented - Performance of RDF Query Processing on the Intel SCC. The 6th Manycore Applications Research Community (MARC) Symposium, Toulouse, France, July 19, 2012.
- Presented - Internet-Scale Cardinality Estimation of XPath Queries over Distributed XML Data. UMKC CSEE Seminar Series, April 2, 2012.
- Guest Lectures
  - Advanced Operating Systems course, UMKC, Fall 2011
  - Advanced Operating Systems course, UMKC, Fall 2010

SERVICE

- External reviewer
  - International Conference on Database and Expert Systems Applications (DEXA) 2012
  - International Conference on Database and Expert Systems Applications (DEXA) 2011
- Organizer for School of Computing and Engineering E-Week Quiz Contest, UMKC, 2012