

CHRISTIAN HALASCHEK-WIENER

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RESEARCH INTERESTS

Automated Reasoning

- Reasoning for Web ontologies
- Description logic reasoning
- Optimizations for incremental reasoning in tableau algorithms

Syndication Systems

- Expressive syndication frameworks
- Description logic based syndication systems

Finance

- Quantitative financial modeling
- Volatility impact of qualitative information (e.g. news)

EDUCATION

The University of Maryland – College Park, Maryland 8/04 – Present

- Ph.D. Candidate in Computer Science

Thesis: *Syndication on the Web using Incremental Description Logic Reasoning*
Expected graduation date: 10/07

The University of Georgia – Athens, Georgia 8/02 – 08/04

- Master of Science in Computer Science, GPA: 4.0

Thesis: *A Flexible Approach for Ranking Complex Relationships on the Semantic Web*

The University of Georgia – Athens, Georgia 8/98 – 05/02

- B.S. in Computer Science

Graduated with magna cum laude honors

EXPERIENCE

Semantic Innovations, LLC – Washington, DC 8/04 – Present

Principal

- Web technology consultancy focusing on advising, developing and deploying Semantic Web technologies
- Past clients: Clark Parsia LLC, Image Matters LLC, TopQuadrant Inc., Valley Services Inc., Edelweiss Systems LLC, Heaping Bowl LLC

The University of Maryland – College Park, Maryland 8/04 – Present

Graduate Research Assistant – MINDSWAP Research Group

- Researched techniques for incremental description logic reasoning
- Developed framework for content syndication on the Web using ontologies and description logic reasoning
- Researched techniques for annotating images and other multimedia on the Web

The University of Georgia – Athens, Georgia 1/03 – 5/03, 8/03 – 8/04
Graduate Research Assistant – LSDIS Lab

- Researched new ranking techniques for discovered semantic associations
- Participated in ontology development and metadata extraction within the domain of national security
- Implemented context-aware algorithms for semantic association discovery

The University of Georgia – Athens, Georgia 8/02 – 12/03
Graduate Teaching Assistant – Computer Science Department

- Teaching Assistant: Clarified lecture concepts, designed and graded programming assignments for Database Management course (Computer Science senior/grad level)
- Lab Assistant: Explained and graded computer lab assignments for an Introduction to Personal Computing Course

Edelweiss Systems, LLC – Atlanta, Georgia 5/02 – 8/02, 5/03 – 8/03
Project Manager

- Managed and oversaw completion of entire software lifecycle for handheld/desktop survey application
- Coordination of team members daily operations to maximize efficiency and productivity
- Acted as primary liaison between project team and upper management
- Developed Pocket PC and Windows-based software

The Coca-Cola Company – Atlanta, Georgia 5/99 – 8/99
Systems Support Specialist – Information Systems Division

- Provided support for both UNIX and NT platforms
- Installing IBM NT and RS/6000 systems
- Performed and monitored backups on all systems
- Updated system files and databases on UNIX systems

PUBLICATIONS

JOURNAL PUBLICATIONS

- Boanerges Aleman-Meza, Christian Halaschek-Wiener, I. Budak Arpinar, Cartic Ramakrishnan, and Amit Sheth. A Flexible Approach for Analyzing and Ranking Complex Relationships on the Semantic Web, *IEEE Internet Computing Journal*, Special Issue on Information Discovery: Needles and Haystacks, May-June 2005.
- A. Sheth, B. Aleman-Meza, B. Arpinar, C. Halaschek-Wiener, C. Ramakrishnan, C. Bertram, Y. Warke, D. Avant, F. S. Arpinar, K. Anyanwu, and K. Kochut, Semantic Association Identification and Knowledge Discovery for National Security Applications, *Journal of Database Management*, 16(1), 33-53, 2005.
- Christian Halaschek-Wiener and John A. Miller, Native XML Databases Today, *XML-Journal*, Volume 04, Issue 01 (January - February 2003) pg.22-27.

CONFERENCE PUBLICATIONS

- Bernardo Cuenca Grau, Christian Halaschek-Wiener, and Yevgeny Kazakov. History Matters: Incremental Ontology Reasoning Using Modules, *The 6th International Semantic Web Conference (ISWC 2007)*, 2007. To Appear.
- Christian Halaschek-Wiener and James Hendler. Toward Expressive Syndication on the Web. In *Proc. of the 16th International World Wide Web Conference*, 2007. Nominated for best student paper.

- Christian Halaschek-Wiener, Bijan Parsia, and Evren Sirin. Description Logic Reasoning with Syntactic Updates, In Proc. of the 5th International Conference on Ontologies, Databases, and Applications of Semantics (ODBase2006), 2006.
- Boanerges Aleman-Meza, Christian Halaschek-Wiener, I. Budak Arpinar, and Amit Sheth., Context-Aware Semantic Association Ranking, Int. Conf. on Semantic Web and Databases, Berlin Germany September 7-8; pg. 33-50.
- Boanerges Aleman-Meza, Christian Halaschek-Wiener, Satya Sanket Sahoo, Amit Sheth, and I. Budak Arpinar. Template Based Semantic Similarity for Security Applications , Intl. Conf. on Intelligence and Security Informatics, May 2005.

WORKSHOP PUBLICATIONS

- Christian Halaschek-Wiener, Yarden Katz and Bijan Parsia. Belief Base Revision Expressive Description Logics. In the Proc. of OWL Experiences and Directions Workshop. 2006.
- Christian Halaschek-Wiener, Bijan Parsia, Evren Sirin and Aditya Kalyanpur. Description Logic Reasoning for Dynamic ABoxes, In International Workshop on Description Logics - DL2006, 2006.
- Bijan Parsia, Christian Halaschek-Wiener, and Evren Sirin. Towards Incremental Reasoning Through Updates in OWL-DL, In Reasoning on the Web (RoW), 2006.
- Christian Halaschek-Wiener, Jennifer Golbeck, Bijan Parsia, Vladimir Kolovski, and Jim Hendler. Image Browsing and Natural Language Paraphrases of Semantic Web Annotations, Workshop on Semantic Web Annotations for Multimedia , 2006.
- Christian Halaschek-Wiener, Jennifer Golbeck, Andrew Schain, Bijan Parsia, and Jim Hendler. Annotation and Provenance Tracking in Semantic Web Photo Libraries, International Provenance and Annotation Workshop (IPAW), 2006.
- Christian Halaschek-Wiener, Andrew Schain, Jennifer Golbeck, Michael Grove, Bijan Parsia, and Jim Hendler. A Flexible Approach for Managing Digital Images on the Semantic Web, 5th International Workshop on Knowledge Markup and Semantic Annotation, Galway, Ireland, November 7, 2005.
- Boanerges Aleman-Meza, Christian Halaschek-Wiener, Amit Sheth, Budak Arpinar, and Gowtham Sannapareddy, SWETO: Large-Scale Semantic Web Test-bed, International Workshop on Ontology in Action, Banff, Canada, June 20-24, 2004.
- Boanerges Aleman-Meza, Christian Halaschek-Wiener, I. Budak Arpinar, and Amit Sheth, Context-Aware Semantic Association Ranking, First International Workshop on Semantic Web and Databases, Berlin, Germany, September 7-8, 2003; pp. 33-50.

POSTERS, POSITION PAPERS, TECHNICAL REPORTS & OTHER

- Christian Halaschek-Wiener. Syndication on the Web using Incremental Description Logic Reasoning, 5th International Semantic Web Conference, Poster Paper, Georgia, November 5, 2006.
- Christian Halaschek-Wiener. Towards Real Time Ontology Editing. 5th International Semantic Web Conference, Poster Paper, Georgia, November 5, 2006.

- Christian Halaschek-Wiener, Jennifer Golbeck, Andrew Schain, Michael Grove, Bijan Parsia, and Jim Hendler. PhotoStuff - An Image Annotation Tool for the Semantic Web, 4th International Semantic Web Conference, Poster Paper, Galway, Ireland, November 7, 2005.
- Boanerges Aleman-Meza, Christian Halaschek-Wiener, Budak Arpinar, Collective Knowledge Composition in a Peer-to-Peer Network: A Survey for Peer-to-Peer Applications, Book Chapter, Encyclopedia of Database Technologies and Applications, Laura C. Rivero, Jorge H. Doorn and Viviana E. Ferragine Editors, Idea-Group Inc. 2004.
- Christian Halaschek-Wiener, A Flexible Approach for Ranking Complex Relationships on the Semantic Web, Masters Thesis, August 2004.
- Christian Halaschek-Wiener, Boanerges Aleman-Meza, I. Budak Arpinar, Amit Sheth, Discovering and Ranking Semantic Associations over a Large RDF Metabase, 30th Int. Conf. on Very Large Data Bases, August 30 – September 03, 2004, Toronto, Canada. Demonstration Paper.

PROFESSIONAL SERVICE

Conference and Workshop Committees

- International Workshop on Ontology Dynamics (IWOD), 2007
- Journal of Web Semantics Special Issue on Semantic Multimedia, 2007
- International Workshop on Semantic Web Annotations for Multimedia (SWAMM), 2006
- International Conference on Semantic and Digital Media Technologies, (SAMT), 2006

Standards Committees

- World Wide Web Consortium Semantic Web Best Practices Working Group – Multimedia Task Force, May 2005 – September 2006
- World Wide Web Consortium Multimedia Semantics Incubator Group – News Metadata Interoperability Group, September 2006 – Present

RELATED COURSEWORK

Comprehensive list available upon request

Coursework

- Computer Science: AI on the Web, Natural Language Processing, etc.
- Finance: Mathematical Finance
- Math: Multivariate Calculus, Stochastic Processes, Ordinary Differential Equations, etc.

Reading

- J. Hull, Options, Futures, and Other Derivatives
- S. Ross, Elementary Introduction to Mathematic Finance

SKILLS

- Java, C, C++, Visual Basic, VBA, Python
- UML, RDF, DAML, OWL
- Relational databases and SQL, semi-structured databases and query language design
- HTML, JavaScript, JSP
- Windows 95/98/NT/2000/XP, Linux, UNIX, MS Office
- Genetic algorithms, neural networks, machine learning techniques such as classifiers, clustering, and decision trees

REFERENCES

Available upon request