

Kam A. Woods

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- EDUCATION**
- ◇ **Indiana University**, Bloomington, IN.
Ph.D. in Computer Science, expected graduation: May 2010.
Written and Oral qualifying exams passed. Dissertation proposal accepted.
 - ◇ **Indiana University**, Bloomington, IN.
M.S. in Computer Science, May 2008.
 - ◇ **Baylor University**, Waco, TX.
M.S. Computer Science, 2004. Thesis: Automatic Discovery and Classification of Discourse Contingency Relations
 - ◇ **Swarthmore College**, Swarthmore, PA.
B.A. in Computer Science, May 2002.
- PUBLICATIONS**
- K. Woods and G. Brown. 2009. Assisted Emulation for Legacy Executables. To Appear in *Proceedings of the 5th International Digital Curation Conference*.
- G. Brown and K. Woods. 2009. Born Broken - Fonts and Information Loss in Legacy Digital Documents. *Proceedings of the 6th International Conference on Preservation of Digital Objects*.
- K. Woods and G. Brown. 2009. From Imaging to Access - Effective Preservation of Legacy Removable Media. *Proceedings of Archiving 2009*.
- K. Woods and G. Brown. 2008. Virtualization for Preservation of Executable Art. *Proceedings of the 2008 DOCAM Summit and Symposium*.
- K. Woods and G. Brown. 2008. Creating Virtual CD-ROM Collections. *Proceedings of the 5th International Conference on Preservation of Digital Objects*.
- K. Woods and G. Brown. 2007. Migration Performance for Legacy Data Access. *3rd International Digital Curation Conference*.
- R. Girju and K. Woods. 2005. Exploring Contingency Discourse Relations. *Proceedings of the 6th International Workshop on Computational Semantics (IWCS-6)*, Harry Bunt (ed.), The Netherlands.
- RESEARCH INTERESTS**
- Development and evaluation of tools and techniques for long-term digital preservation. Development of systems for high-performance automated format migration, low-risk file format identification, and handling of legacy removable media. Development of risk-management tools for access, migration, and accurate rendition of outdated binary formats. Automation of emulation platforms to support access.
- ACADEMIC RESEARCH PROJECTS**
- ◇ **FDLP CD-ROM virtualization project**. Working with Dr. Geoffrey Brown at Indiana University, I performed primary technical and analysis tasks on this project, including methods for low-risk transfer of legacy materials to archival distributed storage, file distribution and format analysis, and writing of several publications. I coordinated the efforts of several undergraduates hired to perform scripting, programming, and data transfer tasks. (Summer 2007-Present)
 - ◇ **Legacy document font analysis**. With Dr. Geoffrey Brown, continued existing research into the identification, extraction, and use for quality assurance of font data from legacy binary document formats such as Microsoft Word. As part of this project I constructed a novel 1T+ dataset subsequently analyzed using existing software libraries and customized code written on-site. (Spring 2009-Present)
 - ◇ **Independent research (Indiana University): Interlingua research** performed with data from the Preliminary Mayan Etymological Dictionary. Automated approaches for ontology construction and mining of semantic information from sparse data. Software prototype and dataset constructed under supervision of Dr. Michael Gasser. (Spring 2007-Fall 2008)
- WORK EXPERIENCE**
- ◇ **Research Assistant**, Indiana University (Dr. Geoffrey Brown), Computer Science Department
May 2007 – present
 - ◇ **Associate Instructor**, Indiana University, Computer Science Department
August 2005 – May 2007
Teaching assistant for:

- A110: Introduction to Computers and Computing
- A201: Introduction to Programming (Introductory programming in Python)

Course instructor for:

- A202: Introduction to Programming II (Introductory object-oriented programming in Java)

◇ **Programmer**, Texas State Credit Company.

January 2004 – May 2004

Contract web developer for internal site development. PHP and MySQL development to provide on-demand financial reports from sales and earnings data.

◇ **System Administrator**, Swarthmore College Computer Society (SCCS).

May 2000 – August 2002

Worked with a team of 10 students to provide email and web space to a community of more than 3000 students and alumni.

TECHNICAL SKILLS ◇ C/C++, Java, Python, Perl, Scheme, PHP, Shell Scripting

◇ Long-term digital preservation, Machine Learning, Information Retrieval, and Natural Language Processing

SERVICE AND ORGANIZATIONS Member, ACM (2001-present)

Officer, Indiana University Computer Science Graduate Student Association (2005 – 2007)

Officer, Swarthmore College Computer Society (2000-2002)