

Zhuowei Bao

	3rd year Ph.D. Candidate Department of Computer and Information Science University of Pennsylvania	
CONTACT INFORMATION	575 Levine Hall North 3330 Walnut Street Philadelphia, PA 19104	<i>Office:</i> (215) 573-2582 <i>Email:</i> zhuowei@cis.upenn.edu <i>Homepage:</i> http://www.cis.upenn.edu/~zhuowei/
RESEARCH INTERESTS	My research interests lie in the area of database management with emphasis on the efficient storage, querying and management of data provenance produced by scientific workflows. My recent work focuses on understanding the difference of workflow provenance in the context of series-parallel workflow patterns.	
EDUCATION	Ph.D. Candidate in Computer and Information Science University of Pennsylvania, Philadelphia, PA Advisor: Prof. Susan Davidson GPA: 3.94/4.00	Sept. 2006 – present
	M.S.E. in Computer and Information Science University of Pennsylvania, Philadelphia, PA GPA: 3.90/4.00	Sept. 2006 – Aug. 2008
	B.S.E. in Computer Science and Technology Tsinghua University, Beijing, China GPA: 89.6/100, Ranking: 8/174 (top 5%)	Sept. 2002 – June 2006
PUBLICATIONS	Zhuowei Bao, Sarah Cohen-Boulakia, Susan B. Davidson and Pierrick Girard. PDifView: Viewing the Difference in Provenance of Workflow Results. In Proceedings of the 35th International Conference on Very Large Data Bases (<i>VLDB</i>), Lyon, France, 2009 (demo).	
	Mengmeng Liu, Svilen Mihaylov, Zhuowei Bao, Marie Jacob, Zachary G. Ives, Boon Thau Loo and Sudipto Guha. SmartCIS: Integrating Digital and Physical Environments. In Proceedings of the 28th ACM SIGMOD International Conference on Management of Data (<i>SIGMOD</i>), Providence, USA, 2009 (demo).	
	Zhuowei Bao, Sarah Cohen-Boulakia, Susan B. Davidson, Anat Eyal and Sanjeev Khanna. Differencing Provenance in Scientific Workflows. In Proceedings of the 25th International Conference on Data Engineering (<i>ICDE</i>), Shanghai, China, 2009 (long paper, acceptance rate = 16.8%).	
RESEARCH EXPERIENCE	Database Group, University of Pennsylvania Graduate student researcher. Participated in several interesting research projects including ZOOM*UserViews, pPOD and SmartCIS, and in particular worked on the following topics:	Sept. 2006 – present
	<ul style="list-style-type: none">• <i>Differencing Workflow Provenance:</i> Developed efficient algorithms for differencing workflow provenance, and implemented a prototype system (PDifView) capable of visualizing the differencing results at any user-defined granularity.• <i>Storing and Querying Workflow Provenance:</i> Designed a dynamic labeling scheme for efficiently answering reachability queries over workflow provenance.	

- *Extended Stream SQL for Data Integration*: Designed a query language for integrating streaming data from the Web and sensor devices, and implemented its parser using the Eclipse DataTools open source.

Center for Advanced Study, Tsinghua University Sept. 2005 – June 2006
 Undergraduate student researcher. Worked with Prof. Ming Li and Prof. Xiaoyan Zhu on the topic of *Efficient Homology Search in Bioinformatics*. Analyzed homology search algorithms using multiple optimized spaced seeds, and applied the techniques to a corpus-based information retrieval system.

TEACHING EXPERIENCE University of Pennsylvania, Philadelphia, PA

- Teaching Assistant, CIS 511 – Theory of Computation Spring 2008
- Teaching Assistant, CSE 330 – Database Management Systems Fall 2007

AWARDS University of Pennsylvania, Philadelphia, PA

- Best Student Poster Award, the Northeast DB/IR Day Fall 2008
- Research Assistant Fellowship 2006 – 2008
- Teaching Assistant Fellowship 2007 – 2008

Tsinghua University, Beijing, China

- Excellent Graduate Award 2006
- Top Undergraduate Thesis Award 2006
- Honeywell Scholarship for Outstanding Senior 2005
- Xianglu Scholarship for Outstanding Junior 2004
- Beidian Scholarship for Outstanding Sophomore 2003
- University Scholarship for Outstanding Freshman 2002

High School Affiliated to Fudan University, Shanghai, China

- Gold Medal, the China Mathematics Olympiad (CMO) 2002
- First Prize, the National High School Math League 2001
- Second Prize, the National High School Physics League 2001
- Second Prize, the National High School Math League 1999 & 2000