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RESEARCH INTERESTS

Software Visualization: debuggers, programming language systems, development tools, distributed software development, human-computer interaction.

EDUCATION

Princeton University, Princeton, NJ
Ph. D., Computer Science, June 1999 (expected)
M. A., Computer Science, May 1996

Brown University, Providence, RI
B. Sc., Math and Computer Science, May 1994
GPA: 3.96 (4.0 in major), *magna cum laude*, honors

Stuyvesant High School, New York, NY, June 1990

ACADEMIC RESEARCH EXPERIENCE

Princeton University, Princeton, NJ, Sept. 1994 – present
Research Assistant: Thesis title: *Graphical Debugging With Visualization*. Working on the design of portable graphical debuggers and support for user-specified program visualizations. Advisor: Andrew Appel.

Brown University Department of Computer Science, Providence, RI, Summer 1993
Research Assistant: Worked on *BOSS* (Brown Object Storage System), an object oriented database backend. Designed and implemented a distributed memory management system.

INDUSTRIAL RESEARCH EXPERIENCE

AT&T Research, Florham Park, NJ, Summer 1996 and 1998
Member of Technical Staff: Researched programming environments. Designed and implemented a graphical debugger for Java, a graphical browser for program dependencies, and a visual project manager. Advisors: Robin Chen and Eleftherios Koutsofios.

AT&T Bell Labs, Murray Hill, NJ, Summer 1994
Researched approaches for migration of UNIX applications to Microsoft Windows 3.1. Wrote a POSIX library on top of the Windows API.

Microsoft Corporation, Redmond, WA, Summer 1992
Software Developer: Worked with Microsoft Access development team. Independently designed, implemented and tested an application to import multiple graphics formats into programs supporting OLE (Object Linking and Embedding).

Bell Laboratories, Murray Hill, NJ, Summer 1991
Research Assistant: Wrote file servers for the Plan 9 operating system. Implemented a database file server and wrote a paper describing the research. Advisors: Andrew Hume and Dennis Ritchie.

ADDITIONAL EXPERIENCE

Banker's Trust Corporation, New York, NY, 1998
Optimized performance of a market simulation application, improving running time sevenfold.

Addison Wesley, Reading, MA, 1995 - present
Reviewed book proposals and manuscripts; principal reviewer for two books.

Princeton University Department of Chemical Engineering, Princeton, NJ, 1997-1998.
Designed and implemented user interface for chemical engineering research projects.

Educational Testing Service, Princeton, NJ, Summer 1995
Wrote and reviewed questions for a computer competency exam administered in China; reviewed questions for the Computer Science GRE.

PUBLICATIONS

Refereed:

1. J. Korn, R. Chen, E. Koutsofios. Reverse Engineering of Java Applets, *submitted for publication*, December, 1998.
2. J. Korn and A. Appel. Traversal-based Visualization of Data Structures, *IEEE Information Visualization '98*, Research Triangle Park, NC, October 1998, 11-18.
3. D. Korn, J. Korn, F. Korn. The New KornShell: A Command and Scripting Language, *IEEE Software*, to appear.
4. D. Wang, A. Appel, J. Korn, C Serra. The Zephyr Abstract Syntax Description Language, *Conference on Domain-Specific Languages*, Santa Barbara, CA, October 1997, 213-227.
5. J. L. Korn and D. R. Hanson. A Simple and Extensible Graphical Debugger, *Proceedings of the Winter USENIX Technical Conference*, Anaheim, CA, Jan. 1997, 173-184.
6. J. Korn. Tksh: A Tcl Library for KornShell, *Fourth Annual Tcl/Tk Workshop*, Monterey, CA, July 1996, 149-159.

Non-Refereed:

7. D. G. Korn, C. J. Northrup and J. L. Korn. The New Korn Shell, *The Linux Journal #27*, July 1996, 30-37.
8. J. Korn. Data Compression Techniques, *Brown University Senior Thesis*, Providence, RI, December, 1993.
9. J. Korn. A Database File System for Plan 9, *AT&T Bell Laboratories Technical Memorandum*, August, 1991.

PATENTS

10. J. Korn, R. Chen, E. Koutsofios, Reverse Engineering Of Java Applets, filed October 1998.

INVITED TALKS

Center for Computing Sciences, Bowie, MD, 1997

TEACHING EXPERIENCE

Brown University:

Teaching Assistant, Introduction to Computer Science, 1991
Teaching Assistant, Discrete Mathematics, 1992
Head Teaching Assistant, Discrete Mathematics, 1993, 1994
Head Teaching Assistant, Operating Systems, 1992, 1993
Tutor, Algorithms and Data Structures, 1991

Princeton University:

Teaching Assistant, Computers and Computing, 1994, 1995
Teaching Assistant, Advanced Programming Techniques, 1995, 1996
Teaching Assistant, Algorithms and Data Structures, 1999

DISTINCTIONS

Award for Top Graduate in Computer Science, Brown University, 1994
Sigma Xi, elected 1994
Semifinalist, Westinghouse Science Talent Search, 1990

SERVICE

Member of ACM, IEEE, USENIX
Reviewer for *Software, Practice and Experience*

PERSONAL

Music (drummer in Brown University Jazz Band and three other bands), travel, tennis

REFERENCES

- 1. Andrew Appel** (advisor)
Professor of Computer Science
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- 2. Robin Chen**
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- 3. David Hanson** (former advisor)
Senior Researcher
Microsoft Research
1 Microsoft Way
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- 4. Stephen North**
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AT&T Research
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- 5. David Dobkin**
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