

Y.C. Fang, Ph.D

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Objective	Search for an academic job and/or a research-oriented career with focuses on statistical analysis and data mining in hydrogeology field. (Available in June, 2006)
Status	<i>United States Permanent Resident (No H-1 sponsorship required)</i>
Education	The Ohio State University, Columbus, OH <u>Doctor of Philosophy, 2004</u> (Thesis title: Scientific Research Impact and Data Mining Applications in Hydrogeology) The Ohio State University, Columbus, OH <i>Department of Statistics</i> <u>Master of Applied Statistics, 1998</u> National Taiwan University, Taipei, Taiwan <i>Department of Civil Engineering</i> <u>Bachelor of Science in Engineering, 1995</u>
Research Interests	Statistical Analysis; Data Mining; Geostatistics; Contaminant Hydrogeology; Groundwater Modeling; Risk Analysis; Global Climate Change; Hurricane Activities; Trend Analysis (Time-series, Spatial)
Experiences	<i>2004-present</i> Comer Post-Doctoral Fellow , The Ohio State University <u>Ice Core Paleoclimatology Research Group,</u> <u>Byrd Polar Research Lab</u> <ul style="list-style-type: none">• Ice core database assimilation• Exploiting statistical and mathematical approaches to investigate climate variability using ice core database• Using statistical and wavelet analysis to investigate the recent hurricane activities with ice core datasets <i>1998 – 2004</i> Graduate Research Associate , The Ohio State University <u>Hydrogeology Lab, Department of Geology</u> <ul style="list-style-type: none">• Conducting experiments of 3-d in-situ destruction of TCE (Trichloroethylene) by flood of MnO₄ (Potassium Permanganate)• Developing monitoring scheme of groundwater contamination by measurement of electrical conductivity• Applying data mining techniques in the discovery of scientific research its impact• Developing textual data mining techniques and statistical analysis on literatures in water sciences• Building data warehouse of text documents using MySQL combined with citation data information• Creating web-based visualization on citation data analysis• Applying multimedia data mining on hydrogeological research

1997 - **Graduate Research Assistant**, The Ohio State University,
1998 Department of Internal Medicine
•CL-HTTP (CommonLisp-HTTP) programming
•Developing on-line tutorial program for dental students
•Designing and maintaining medical information system

Training

2000 Center for Automated Learning and Discovery (CALD), Carnegie Mellon University, Pittsburgh, PA
Summer **CALD Summer School for Data Mining and Knowledge Discovery**

Publications

Y.C. Fang, F. W. Schwartz, and M. Ibaraki "Analysis of Research Impact in Hydrology and Ground-Water Modeling", proceedings of *MODFLOW 2001 and OTHER MODELING ODYSSEYS Conference*, Vol.I, p4. 2001

Y.C. Fang, F. W. Schwartz, and S. Parthasarathy "Data Mining in Geoscience Research", *Proceedings of the 36th Meeting of the Geoscience Information Society*, Vol.32, pp75-80. 2001

Y.C. Fang, S. Parthasarathy, and F. Schwartz "Using Clustering to Boost Text Classification", *Proceedings of the IEEE ICDM-2001, The 2001 IEEE International Conference on Data Mining*, 2001 (url: <http://citeseer.nj.nec.com/506760.html>)

Y.C. Fang, R.A. Schincariol, F.W. Schwartz and Y. Seol "Multimedia Data Mining Applied to Site Investigation", CD-ROM Series of the *Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Battelle Press, 2002

F.W. Schwartz, Y.C. Fang, and M. Ibaraki, 2002 "Hydrogeological Research Redux: Response to Critics" *Ground Water* 40, no.3: 317-319

E.S Lee, Y. Seol, Y.C. Fang, and F.W. Schwartz, 2003 "Destruction Efficiencies and Dynamics of Reaction Fronts Associated with the Permanganate Oxidation of Trichloroethylene", *Environ. Sci. & Technol* 37(11): 2540-2546

F.W. Schwartz, G. Allen, Y.C. Fang, M. Ibaraki, 2003 "Opportunities and Challenges in Research on Ground-water Modeling", proceedings of *MODFLOW and More 2003: Understanding through Modeling conference*, Vol.I: 32-36

F.W. Schwartz, Y.C. Fang and S. Parthasarathy, 2005 "Patterns of Evolution of Research Strands in the Hydrologic Sciences", *Hydrogeology Journal* 13:25-36

F.W. Schwartz and Y.C. Fang, 2005 "Citation Data Analysis on Hydrogeology", *Journal of the American Society for Information Science and Technology*. (submitted)

- Conferences** Y.C. Fang, F. W. Schwartz, and M. Ibaraki "Analysis of Research Impact in Hydrology and Ground-Water Modeling", *MODFLOW 2001 and OTHER MODELING ODYSSEYS Conference*, September 11-14, 2001, Golden, Colorado, USA
- Y.C. Fang, F. W. Schwartz, and S. Parthasarathy "Data Mining in Geoscience Research", *GSA Annual Meeting & Exposition - 2001*, November 1–10, 2001, Boston, Massachusetts, USA
- Y.C. Fang, S. Parthasarathy, and F. Schwartz "Using Clustering to Boost Text Classification", *Workshop on Text Mining (TextDM'2001), IEEE ICDM-2001, The 2001 IEEE International Conference on Data Mining*, November 29, 2001, San Jose, California, USA
- Y.C. Fang, R.A. Schincariol, F.W. Schwartz and Y. Seol "Multimedia Data Mining Applied to Site Investigation", *Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, May 20-23, 2002, Monterey, California, USA
- F.W. Schwartz, Y.C. Fang "Dare to be Different - Pat Domenico Showed us How!", *GSA Annual Meeting & Exposition – 2002*, October 27–30, 2002, Denver, Colorado, USA
- F.W. Schwartz, Y.C. Fang "Data Fusion for the Discovery of Scientific Impacts in the Hydrologic Research", *AGU 2002 Fall Meeting*, 6-10 December 2002, San Francisco, California, USA
- F.W. Schwartz, G. Allen, Y.C. Fang, M. Ibaraki 2003 "Opportunities and Challenges in Research on Ground-water Modeling", *MODFLOW and More 2003: Understanding through Modeling conference*, September 17-19, 2003, Golden, Colorado, USA
- F.W. Schwartz, Y.C. Fang "DESIGNING FOR RESEARCH IMPACT: SOME ESSENTIAL STEPS", *GSA Annual Meeting & Exposition – 2004*, November 7–10, 2004, Denver, Colorado, USA
- Y.C. Fang, F.W. Schwartz and R.A. Schincariol "Data Mining Application: Self-Organizing Maps (SOMs) Application to Assisting Ground-Water Modeling", *GSA Annual Meeting & Exposition – 2005*, October 16–19, 2005, Salt Lake City, Utah, USA
- F.W. Schwartz and Y.C. Fang "Innovation in Hydrology: Lessons from the Business World", *AGU 2005 Fall Meeting*, 5-9 December 2005, San Francisco, California, USA

Computer Skills

Programming languages (Apache, Perl, PHP, Python, MySQL, CommonLisp, Fortran, VB), Web programming (MySQL/Perl/PHP), Statistics packages (SAS, SPSS, S-plus, R), SAS programming, Database programming (Access/Visual Basic)

**Exams and
Certifications**

Society of Actuaries (SOA) Course 1 Exam (Pass; 8 out of 10)

**Activities &
Societies**

Choir member in Chorale at The Ohio State University;
American Geophysical Union; Geological Society of America

References

Franklin W. Schwartz, Ph.D

Professor - Ohio Eminent Scholar of hydrogeology, The Ohio State University

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125 South Oval Mall	e-mail: frank@geology.ohio-state.edu
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Motomu Ibaraki, Ph.D

Associate Professor of Geological Sciences, The Ohio State University

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Srinivasan Parthasarathy, Ph.D

Associate Professor of Computer Science and Engineering, The Ohio State University

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