

Philip Shilane

Department of Computer Science, Princeton University
35 Olden Street, Princeton, NJ 08540
(609) 933-6189
pshilane@cs.princeton.edu
<http://www.cs.princeton.edu/~pshilane>

EDUCATION

Ph.D., Computer Science, Princeton University. Degree expected in Summer 2007.

Dissertation: 3D Shape Matching with Distinctive Surface Regions. The dissertation explores a measure of importance over the surface of shape that is useful for shape-matching and other applications. Advisor: Dr. Thomas Funkhouser

Master of Arts, Computer Science, Princeton University. November 2004. Focus: Computer Graphics. Advisor: Thomas Funkhouser

Master of Science, Computer Science, Stanford University. June 2001. Focus: Artificial Intelligence.

Bachelor of Science, Computer Science and minor in Psychology, Stanford University. June 2000.

RESEARCH EXPERIENCE:

Doctoral Research, Princeton University, 6/03-present.

Explored and developed an importance measure for the surface of 3D shapes called shape distinction that involves an analysis of classified databases. Shape distinction improves shape-matching and is useful for applications such as icon generation and shape simplification. Other projects include analyzing the symmetry of 3D shapes, improvements to shape-matching techniques, and creation of the Princeton Shape Benchmark for testing shape-matching algorithms. Advisor: Dr. Thomas Funkhouser.

Summer Intern, Computer Vision Lab, Sarnoff Corporation, Princeton NJ 6/04-10/04.

Designed and implemented software to recognize partial 3D scans of military and civilian vehicles in a database for a Phase III DARPA program. Supervisor: Dr. Harpreet Sawhney

TEACHING EXPERIENCE:

Completing the Teaching Transcript from Princeton University through the McGraw Center for Teaching and Learning, which included seminars on teaching techniques and feedback on teaching a precept. Princeton University, 2005-present. As a teaching assistant at Princeton University and Stanford University, I lectured weekly precepts, graded assignments, designed exam questions, and held office hours.

COS 126, Introduction to Computer Science, Princeton University, Spring 2005.

COS 111, Computers and Computing, Princeton University, Spring 2004.

CS 229, Machine Learning, Stanford University, Spring 2001.

CS 194, Senior Project, Stanford University, Winter 2001.

CS 143, Compilers, Stanford University, Fall 2000.

CS 143, Compilers, Stanford University, Summer 2000.

CS 107, Programming Paradigms, Stanford University, Spring 1999.

PUBLICATIONS:

Philip Shilane and Thomas Funkhouser. Distinctive Regions of 3D Surfaces. Accepted for publication in ACM Transactions on Graphics (date to be determined).

Philip Shilane and Thomas Funkhouser. Selecting Distinctive 3D Shape Descriptors for Similarity Retrieval. Shape Modeling International, Matsushima, Japan, June 2006.

Thomas Funkhouser and Philip Shilane. Partial Matching of 3D Shapes with Priority-Driven Search. Symposium on Geometry Processing, Sardinia, Italy, July 2006.

Joshua Podolak, Philip Shilane, Aleksey Golovinskiy, Szymon Rusinkiewicz, and Thomas Funkhouser. A Planar-Reflective Symmetry Transform for 3D Shapes. ACM Transactions on Graphics (SIGGRAPH 2006), Boston MA, August 2006.

Philip Shilane and Thomas Funkhouser. Partial Matching of 3D Shapes with Priority-Driven Search. *In* SHREC2006: 3D Shape Retrieval Contest by Remco Veltkamp, Remco Ruijsenaars, Michela Spagnolo, Roelof van Zwol, Frank ter Haar. Utrecht University Technical Report UU-CS-2006-030, 40-41, 2006.

Thomas Funkhouser, Michael Kazhdan, Patrick Min, and Philip Shilane. Shape-based Retrieval and Analysis of 3D Models. Communications of the ACM. 48(6):58-64, June 2005.

Philip Shilane, Patrick Min, Michael Kazhdan, and Thomas Funkhouser. The Princeton Shape Benchmark. Shape Modeling International, Genoa Italy, June 2004.

Thomas Funkhouser, Michael Kazhdan, Philip Shilane, Patrick Min, William Kiefer, Ayellet Tal, Szymon Rusinkiewicz, and David Dobkin. Modeling by Example. ACM Transactions on Graphics (SIGGRAPH 2004), Los Angeles, CA, August 2004.

Diego Nehab and Philip Shilane. Stratified Point Sampling of 3D Models. Point Based Graphics, Zurich Switzerland, June 2004.

WORK EXPERIENCE:

Artificial Intelligence Software Engineer, Stottler Henke Associates Inc., San Mateo CA, 2001-2002. My projects included developing a tool for NASA that assists in scheduling assembly of the space shuttle and an application for tracking aircraft carrier radar information for the Navy to perform threat assessment. Supervisor: Richard Stottler.

HONORS and AWARDS:

Program in Integrative Information, Computer and Application Sciences Fellowship, Princeton University, 2005-2007.

Departmental Fellowship Award, Princeton University, 2002-2003.

Stanford President's Scholar, Stanford University, 1996-2000.

National Merit Scholarship, Stanford University, 1996-1997.

ACADEMIC SERVICE:

Vice-President and Treasurer of the Graduate Engineering Council representing graduate students in the School of Engineering and organizing graduate student activities, Princeton University, 2005-2007.

Paper Reviewer for: SIGGRAPH, Eurographics, Shape Modeling International, Multimedia Systems Journal, The Visual Computer, Journal of Computer Aided Design, IEEE Transactions on Multimedia, European Journal on Applied Signal Processing, Computer Graphics Forum, and Multimedia Technologies and Services Symposium