

# Shangfu Peng

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INTEREST	Geographic Information Systems (GIS), Distributed System, Database and Machine Learning.	
EDUCATION	<b>University of Maryland</b> Ph.D. in Computer Science (Advisor: Prof. Hanan Samet) GPA: 4.0/4.0	College Park, MD Sep. 2012 – present
	<b>Shanghai Jiao Tong University</b> B.S. in Computer Science (Advisor: Prof. Yu Yong) GPA: 3.62/4.0	Shanghai, China Sep. 2008 – Jun. 2012
RESEARCH EXPERIENCE	<b>Institute for Advanced Computer Studies, University of Maryland</b> Graduate Research Assistant (Advisor: Prof. Hanan Samet)	College Park, MD, USA Jun. 2013 – present
	<b>APEX Data Knowledge Management Lab</b> Research Student (Advisor: Prof. Yong Yu)	Shanghai, China Aug. 2010 – Jul. 2012
INDUSTRY EXPERIENCE	<b>Intern at Advanced Digital Sciences Center(ADSC)</b> supervised by Dr. Yin Yang, Dr. Zhenjie Zhang, and Prof. Marianne Winslett mainly on Differential Privacy topics.	Singapore Aug. 2011 – Jan. 2012
APP/DEMO	<ul style="list-style-type: none"><li>NewsStand: <a href="http://newsstand.umiacs.umd.edu">http://newsstand.umiacs.umd.edu</a></li><li>ASDO Demo for Spatial Analytical Queries: <a href="http://sametnginx.umiacs.umd.edu/oracle/">http://sametnginx.umiacs.umd.edu/oracle/</a></li><li>Geolloery: <a href="http://sametphp.umiacs.umd.edu/geollery/">http://sametphp.umiacs.umd.edu/geollery/</a></li></ul>	
PUBLICATION	<ol style="list-style-type: none"><li>[1] <b>S. Peng</b>, H. Wei, H. Li, and H. Samet. Simplification and Refinement for Speedy Spatio-temporal Hot Spot Detection Using Spark (GIS Cup). SIGSPATIAL, 2016.</li><li>[2] <b>S. Peng</b>, and H. Samet. CDO: Extremely High-Throughput Road Distance Computations on City Road Networks. <i>Best Demo Award</i>. SIGSPATIAL, 2016.</li><li>[3] H. Li, <b>S. Peng</b>, and H. Samet. Streaming News Image Summarization. ICPR, 2016.</li><li>[4] <b>S. Peng</b>, J. Sankaranarayanan, and H. Samet. SPDO: High-Throughput Road Distance Computations on Spark using Distance Oracles. ICDE, 2016.</li><li>[5] <b>S. Peng</b>, and H. Samet. Analytical Queries on Road Networks: An Experimental Evaluation of Two System Architectures. SIGSPATIAL, 2015.</li><li>[6] <b>S. Peng</b>, H. Samet, and M. D. Adelfio. Viewing Streaming Spatially-Referenced Data at Interactive Rates. <i>Short Paper</i>. SIGSPATIAL, 2014.</li><li>[7] <b>S. Peng</b>, Y. Yang, Z. Zhang, M. Winslett, and Y. Yu. Query Optimization for Differentially Private Data Management Systems. ICDE, 2013.</li><li>[8] <b>S. Peng</b>, Y. Yang, Z. Zhang, M. Winslett, and Y. Yu. DP-Tree: Indexing Multi-Dimensional Data under Differential Privacy. <i>Poster</i>. SIGMOD, 2012.</li></ol>	
PROJECTS SELECTED	Managing spatial data in a distributed environment Social media photos retrieval and geographic information extraction for Instagram Viewing streaming labels in a map at Interactive Rates Data management systems under differential privacy	Oct. 2013-Present Oct. 2014-Present Aug. 2013-Aug. 2014 Aug. 2011-Oct. 2012
PATENTS FILED	<ul style="list-style-type: none"><li>All-Store Distance Oracles: Complex Analytical Queries on Large Road Networks Inside Any Database</li><li>SPDO: High-Throughput Road Distance Computations on Spark using Distance Oracles</li></ul>	

HONORS, GRANTS, AND SCHOLARSHIPS SELECTED	National Science Foundation I-CORPS Program Grant as Entrepreneurial Lead (EL) \$50,000	2016
	ACM SIGSPATIAL NSF Travel Award	2015
	Graduate School Outstanding Graduate Assistant Award	2015
	ACM SIGSPATIAL NSF Travel Award	2014
	Amazon Web Services (AWS) in Education Research Grant Award, \$10,000	2014
	John D. Gannon Scholarship Fund	2013
	Dean's Fellowship, University of Maryland	2012-2014
	SIGMOD 2012 Student Travel Grant	2012
	Outstanding Undergraduate Thesis Award, Shanghai Jiao Tong University	2012
	Computer World Corporation Scholarship (62 awardees nation-wide)	2010
	Excellent Student Leader Scholarship from Shanghai Jiao Tong University	2010
	National Scholarship (highest-level scholarship from the Chinese government)	2009
	Academic Excellence Scholarship (1st-class, 1%) from Shanghai Jiao Tong University	2009
ACM-ICPC AWARDS SELECTED	Participated in more than 10 ACM-International Collegiate Programming Contests (ICPC) as the team leader: 27th Place of 2013 ACM-ICPC World Finals, St. Petersburg, Russia First to solve a problem winner in 2013 ACM-ICPC World Finals, Russia Champion of 2012 ACM-ICPC Mid-Atlantic Regional Contest, USA 13th Place of 2011 ACM-ICPC World Finals, Orlando, USA Champion of 2010 ACM-ICPC Asia Regional Contest, Hangzhou, China Champion of 2010 ACM-ICPC Asia Regional Contest, Fuzhou, China 2nd place of 2010 ACM-ICPC Asia Regional Contest, Japan	
PROFESSIONAL	<i>Student Coach</i> for University of Maryland ACM-ICPC team Sep. 2013 - Present <i>Student volunteer</i> for Computer Science Graduate Admissions for Fall 2016 Jan. 2016 - Mar. 2016 <i>Teaching Assistant</i> for Geographical Information Systems and Spatial Databases, CMSC725 Fall 2015 <i>Teaching Assistant</i> for Discrete Structures, CMSC250 Spring 2013 - Fall 2013 <i>Teaching Assistant</i> for Data Structure, CMSC420 Fall 2012 <i>Student Coach</i> for Shanghai Jiao Tong University ACM-ICPC team Sep. 2011 - Jun. 2012	
GRADUATE COURSES	<ul style="list-style-type: none"> <li>• Reinforcement Learning (auditor) Fall 2016</li> <li>• Advanced Topics in Information Processing: Deep Learning (auditor) Fall 2016</li> <li>• High Performance Computing (A) Fall 2015  <b>Project:</b> Explore optimal partition of deep neural network in a distributed environment</li> <li>• Computational Geometry (A) Fall 2014</li> <li>• Computational Linguistics I (A+) Fall 2014  <b>Project:</b> Quizbowl: predict whether the answer to a trivia question is correct or not</li> <li>• Computational Systems Biology and Functional Genomics (A+) Spring 2014  <b>Project:</b> Statistics for K-mer Based Splicing Analysis</li> <li>• Computer Processing of Pictorial Information (A) Fall 2013</li> <li>• Geographical Information Systems and Spatial Databases (A) Fall 2013  <b>Project:</b> Distance Oracle in MapReduce Framework</li> <li>• Data-Intensive Computing with MapReduce (A) Spring 2013  <b>Project:</b> Deep Learning using MapReduce</li> <li>• Database Management Systems (A) Spring 2013  <b>Project:</b> Automated Materialized View Selection in PostgreSQL</li> <li>• Machine Learning (A) Fall 2012  <b>Project:</b> Geotagging for geographic locations in news articles</li> <li>• Analysis of Algorithms (A) Fall 2012</li> </ul>	
QUALIFICATION	Languages: C++, JAVA, PYTHON, SCALA, SQL, RUBY, BASH, MATLAB, JAVASCRIPT, DHTML. Tools/Frameworks: HADOOP, SPARK, OPEN MPI, OPENMP, LIBSVM, L <sup>A</sup> T <sub>E</sub> X, GNUPLOT.	