BINGHAMTON UNIVERSITY
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THE DEPARTMENT OF COMPUTER SCIENCE & THE COMPUTER SCIENCE GRADUATE STUDENT ORGANIZATION (GSOCS) PRESENT

INVITED SPEAKER SERIES

Professor Hanan Samet
University of Maryland

Friday, March 9th at 12 noon, Engineering Building Room 110

Reading News with Maps by Exploiting Spatial Synonyms

Abstract: NewsStand is an example application of a general framework to enable people to search for information using a map query interface, where the information results from monitoring the output of over 10,000 RSS news sources and is available for retrieval within minutes of publication. The advantage of doing so is that a map, coupled with an ability to vary the zoom level at which it is viewed, provides an inherent granularity to the search process that facilitates an approximate search thereby permitting the use of spatial synonyms instead of being limited to an exact match of a query string. This is predicated on the use of a textual specification of locations rather than a geometric one, which means that one must deal with the potential for ambiguity. The issues that arise in the design of a system like NewsStand, including the identification of words that correspond to geographic locations, are discussed, and examples are provided of its utility. More details can be found in the video at http://vimeo.com/106352925 which accompanies the ``cover article" of the October 2014 issue of the Communications of the ACM about NewsStand at http://tinyurl.com/newsstand-cacm or a cached version at at http://www.cs.umd.edu/~hjs/pubs/cacm-newsstand.pdf.

Bio: Hanan Samet (http://www.cs.umd.edu/~hjs/) is a Distinguished University Professor of Computer Science at the University of Maryland, College Park. He received the B.S. degree in engineering from UCLA, and the M.S. Degree in operations research and the M.S. and Ph.D. degrees in computer science from Stanford University. His doctoral dissertation dealt with proving the correctness of translations of LISP programs which was the first work in translation validation and the related concept of proof-carrying code. He is the author of the recent book "Foundations of Multidimensional and Metric Data Structures" (http://www.cs.umd.edu/~hjs/multidimensional-book-flyer.pdf) published by Morgan-Kaufmann, an imprint of Elsevier, in 2006, an award winner in the 2006 best book in Computer and Information Science competition of the Professional and Scholarly Publishers (PSP) Group of the American Publishers Association (AAP), and of the first two books on spatial data structures "Design and Analysis of Spatial Data Structures", and "Applications of Spatial Data Structures: Computer Graphics, Image Processing, and GIS", both published by Addison-Wesley in 1990. He is the Founding Editor-In-Chief of the ACM Transactions on Spatial Algorithms and Systems (TSAS), founding chair of ACM SIGSPATIAL, and a Fellow of ACM, IEEE, AAAS, IAPR (International Association of Pattern Recognition), and UCGIS (University Consortium for Geographic Science). He is a recipient of a Science Foundation of Ireland (SFI) Walton Visitor Award at the Centre for Geocomputation at the National University of Ireland at Maynooth (NUIM), 2009 UCGIS Research Award, 2011 ACM Paris Kanellakis Theory and Practice Award, and 2014 IEEE Computer Society Wallace McDowell Award. He has had a number of best paper awards including at the 2008 SIGMOD and SIGSPATIAL conferences. He was elected to the ACM Council as the Capitol Region Representative for the term 1989-1991, and was an ACM Distinguished Speaker.