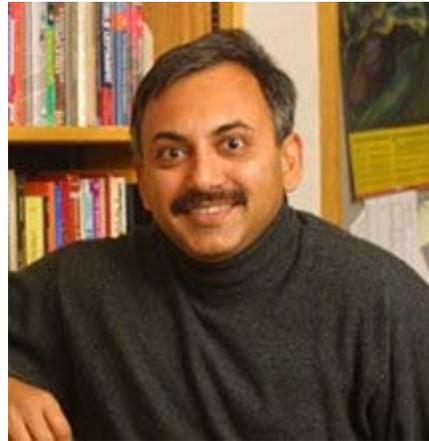


*Distinguished Speakers Series Presents*

Pankaj K. Agarwal  
Duke University



**STREAM: Scalable Techniques for High-Resolution Elevation Analysis and Modeling**

With recent advances in terrain-mapping technologies such as Laser altimetry (LIDAR) and ground based laser scanning, millions of georeferenced points can be acquired within short periods of time. However, while acquiring and georeferencing the data has become extremely efficient, transforming the resulting massive amounts of heterogeneous data to useful information for different types of users and applications is lagging behind, in large part because of the scarcity of robust, efficient algorithms for terrain modeling and analysis that can handle massive data sets acquired by different technologies and that can rapidly detect and predict changes in the model as the new data is acquired.

This talk will review our on-going work on efficient algorithms for terrain modeling and analysis that work with massive data sets, with an emphasis on approximation and memory-aware algorithms. A few open questions will also be discussed.

Bio: Dr. Pankaj Agarwal earned his PhD in Computer Science from the Courant Institute of Mathematical Sciences at New York University. He joined the Department of Computer Science of Duke University in 1989 where he is now the Chair and Professor of Computer Science and Professor of Mathematics. His research interests include geometric algorithms and data structures, computational molecular biology, spatial databases, global change, geographic information systems, sensor networks, and robotics. He has authored four books, and more than 250 scholarly articles in various journals, edited volumes, and international conferences. He has received many awards, including National Young Investigator, Sloan Fellow, and ACM Fellow, and he serves on the editorial boards of a number of journals.

**Thursday, April 29, 2010 3:30-4:30 PM**  
**University at Buffalo North Campus – Clemens 120**

This talk is free and open to the public. Refreshments for attendees after the talk in 224 Bell Hall