1st International Workshop on
Spatial and Spatio-Temporal Data Management for Visualization, Analysis and Mining (SSTDM-VAM) 2007.
(In conjunction with DASFAA 2007)

http://www.dasfaa07.ait.ac.th/

April 9, 2007.
Ambassador Hotel, Bangkok, Thailand.

The popularity of GPS devices and RFID tags; concerns about climate change; the threat of pandemic diseases; geographical aspects of unconventional warfare; are some of the reasons why interest in the analysis of spatio-temporal data has shown a significant increase recently. What can computer scientists offer in these domains? The database community has over the years developed expertise to declaratively access and manage large repositories of spatial data. Tools for spatial querying and indexing like spatial extension of SQL and R-Trees are now part of a standard rollout of most commercial systems. However, tools for spatio-temporal data management are still in an early "research stage." Spatial data naturally lends itself to two-dimensional geo-referenced visualization but spatio-temporal data requires at least four dimensions for visualization. Are there better metaphors for spatio-temporal data visualization than a time-evolving heat map? The spatial statistics community is actively working towards enhancing their set of techniques to analyse spatio-temporal data. Is there something unique, besides raw computation power that the data mining community can bring to the table?

The aim of the Spatial and Spatio-Temporal Data Management for Visualization, Analysis and Mining (SSTDM-VAM) is to bring under ``one roof'' experts from across the spectrum of subject matter, data management, mining and visualization who are interested in research and development aspects of spatio-temporal data.

Topics of Interest (A non-exhaustive list)

1. Spatio-temporal data management, visualization and analysis issues from the perspective of subject matter and domain experts.
2. Spatio-temporal algebra for declarative querying.
3. Indexing and query optimization for spatio-temporal data.
4. Spatio-temporal Online Analytical Processing (OLAP).
5. Metaphors for visualizing spatio-temporal data.
6. Spatio-temporal analogues of interesting patterns: frequent itemset, clusters outliers and algorithms to mine them.
7. Spatio-temporal autocorrelation and heterogeneity and its impact on data mining techniques.
8. Spatial and Spatio-temporal uncertainty handling.
9. Integrated multi-source (remote sensing imagery, vector and attribute data) data mining and visualization.
10. Spatio-temporal data mining for homeland security.

Submission Format and Selection Procedure

We welcome papers (8 pages, IEEE-CS Proceedings format, Trim size 9" x 6") on any of the above areas. Papers must be sent in pdf format to sameepmehta@in.ibm.com. The reviewing process will be blind with each submission getting three reviews. Our workshop program committee will select the papers based on the novelty, originality, and technical quality. Papers will be selected for oral or poster sessions. The title page should include the following information:

- Title
- Authors' names, affiliations, and email addresses
- Topic(s) of the above list, as appropriate

Participants must register for this workshop to attend. Post workshop proceedings will be published by World Scientific.

Important Dates

Submission of papers: 29 January 2007.
Notification of acceptance: 19 February 2007.
Camera-ready copies for workshop: 5 March 2007.
Camera-ready copies for post workshop proceedings: 12 May 2007.

Workshop Organization

Workshop Co-Chairs:

Sanjay Chawla, University of Sydney (chawla@it.usyd.edu.au)
Sameep Mehta, IBM, India Research Labs (sameepmehta@in.ibm.com)
Ranga Raju Vatsavai, Oak Ridge National Laboratory. (vatsavairr@ornl.gov)

Program Committee:

1. Masatoshi Arikawa, University of Tokyo.
2. Chris Bailey-Kellogg, Darthmouth College.
3. Thomas E. Burk, University of Minnesota, USA.
4. Wei CR Ding, IBM-Research.
5. Auroop Ganguly, ORNL, USA.
6. Erik Hoel, ESRI, USA.
7. Yan Huang, University of North Texas, USA.
8. Sang-Wook Kim, Hanyang University, Korea.
9. Ki-Joune Li, Pusan National University, Korea.
10. C.T. Lu, Viginia Tech, USA
11. Raghu Machiraju, Ohio State University. USA.
12. Nikos Mamoulis, University of Hong Kong. HK.
13. Mohamed Mokbel, University of Minnesota, USA.
14. Dimitris Papadias, HKUST, HK.
15. Gyana Parija, IBM Research.
16. Naren Ramakrishnan, Viginia Tech, USA.
17. Siva Ravada, Oracle, USA.
18. Shashi Shekhar, Univ. of Minnesota, USA.
19. Michalis Vlachos, IBM Research.
20. Mike Worboys, University of Maine, USA.
21. Jae Soo Yoo, Chungbuk National University, Korea.
22. Hwan-Seung Yong, Ewha Womans Univ. Seoul, Korea.