# Scientific Knowledge Creation from Science Databases

- Project in School of Knowledge Science -

Leader: T.B. Ho (Professor, School of Knowledge Science)

Abstract

Based on the basic research for several fundamental issues in knowledge discovery and data mining, we are developing novel and effective methods and tools that enable to discover/create or support the scientists to discover/create knowledge by exploiting the large volume they obtained. The main focus is knowledge discovery/creation from scientific documents, biological and materials databases.
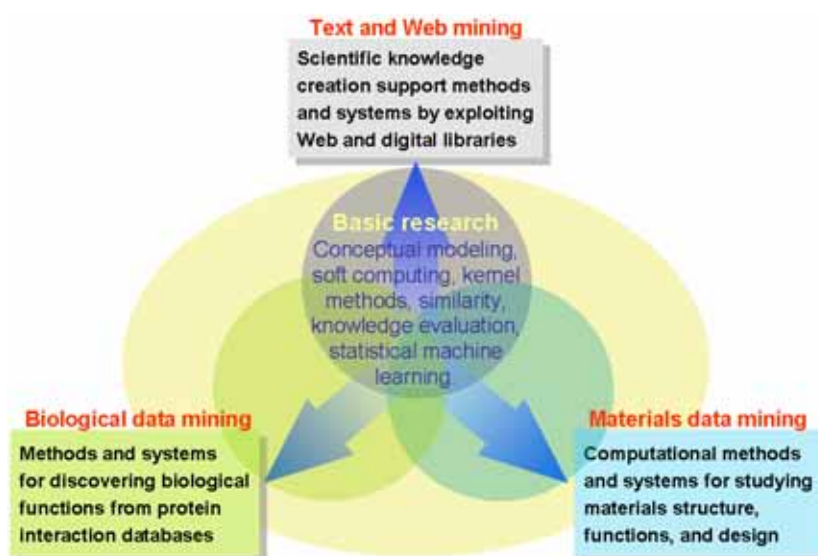
Members

T. Mitani (Professor, School of Materials Science), H.C. Dam (RA, COE), S. Kawasaki (RA, School of Knowledge Science), T.H. Pham, S.Q. Le, M.H. Le (Ph.D. students, School of Knowledge Science), H.X. Phan (Ph.D. student, School of Information Science), L.M. Nguyen (PD, School of Information Science).

Publications

- A Knowledge Discovery System with Support for Model Selection and Visualization, T.B. Ho, T.D. Nguyen, H. Shimodaira, M. Kimura, *Applied Intelligence*, Kluwer Academic Publishers, Vol. 19, Issue 1-2, 125-141 (2003).
- An Association-based Dissimilarity Measure for Categorical Data, S.Q. Le, T.B. Ho, *Pattern Recognition Letters*, Elsevier (in press).
- Bond Switching from Two- to Three-Dimensional Polymers of C_{60} at High Pressure, H. C. Dam, Y. Iwasa, T. Takano, T. Watanuki, Y. Ohishi, and S. Yamanaka, *Physical Review B*, American Physical Society Publisher, Vol. 68, 153402 (2003).
- Conditional Models for Automatic Data Integration from the Web, H.X. Phan, S. Horiguchi, T.B. Ho, *International Journal on Business Intelligence and Data Mining*, Inderscience Publishers (in press).
- Computational Discovery of Transcriptional Regulatory Rules, T.H. Pham, J. Clemente, K. Satou, T.B. Ho, *Bioinformatics*, Oxford University Press, Vol. 21, Suppl. 2, September 2005 (in press).