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■ **Researcher information**

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Major

Visualization, Multimedia, 3D geometric processing

■ **Research topics**

Information Visualization

Keywords

Bioinformatics, Drug discovery, Simulation, Security, Multimedia
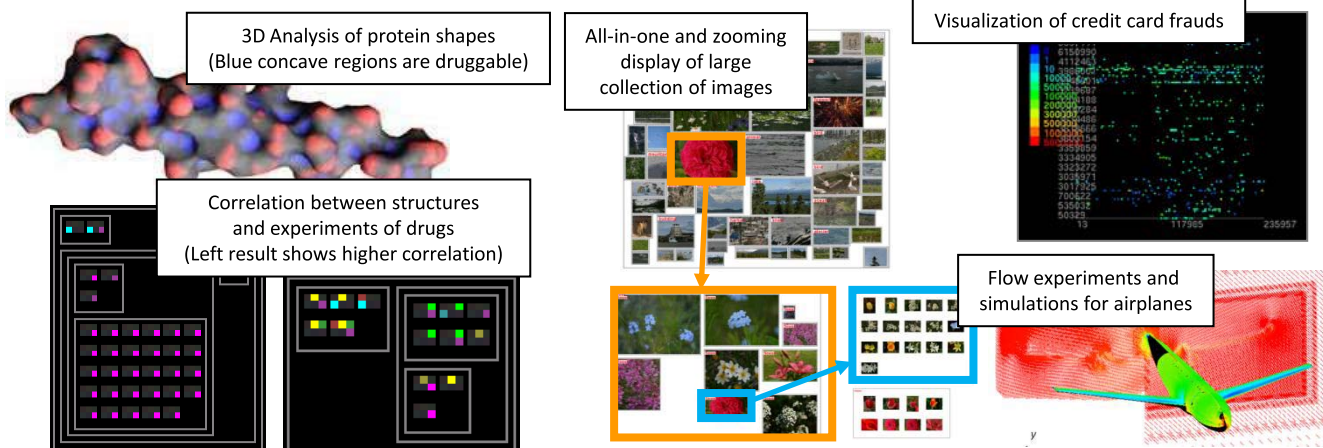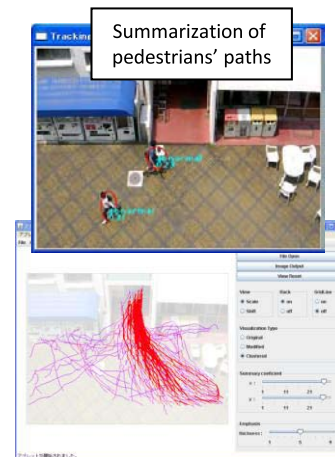
Contents

■ We focus on information visualization to assist intuitive understanding of information, including natural sciences (e.g. bioinformatics, drug discovery, scientific simulation) Information), literature and social sciences, and daily information (e.g. multimedia contents).

■ Following are examples of our research works:
1) Visualization for bioinformatics (e.g. gene network) and drug discovery (e.g. 3D shape analysis of proteins).
2) Visualization for scientific simulations (e.g. aerospace fluid experiments & simulations, human heart simulation).
3) Visualization for human observation (e.g. credit card fraud detection, pedestrians' paths, Web access patterns).
4) User interface for multimedia. Browsers for large collections of photographs and music.

Summarization of pedestrians' paths

3D Analysis of protein shapes
(Blue concave regions are druggable)

Correlation between structures
and experiments of drugs
(Left result shows higher correlation)

All-in-one and zooming
display of large
collection of images

Visualization of credit card frauds

Flow experiments and
simulations for airplanes

Intellectual properties (Patents, computer programs), productization, publications and social/industrial contributions

・Software "HeiankyoView" (3 license agreements)
・Patent Application 2008-299363

Potential of social/industrial contribution

■ Joint research/ licensing / technical consulting / knowledge sharing (open courses, workshops, publications)

Information Sciences