

Brief Bio and (PR)²: Problems & Pitches – Rants & Raves by {Kei Cheung}

Self Introduction

Photo



Biography

Dr. Kei Cheung is an Associate Professor at the Yale Center for Medical informatics. He received his PhD degree in Computer Science from the University of Connecticut. Dr. Cheung's primary research interest lies in the area of bioinformatics database and tool integration. He has recently embarked on the exploration of how to use Semantic Web technologies in the context of Life Sciences (including Neuroscience) data integration. Dr. Cheung co-edited a book entitled: "Semantic Web: Revolutionizing Knowledge Discovery in the Life Sciences", which was published by Springer in January of 2007. He served as the chair of the First International Workshop on Health Care and Life Sciences Data Integration for the Semantic Web, which was co-located with the WWW2007 conference. He is currently a Guest Editor of the upcoming Special Issue: "Semantic BioMed Mashup", which will appear in the Journal of Biomedical Informatics. Dr. Cheung is an invited expert to the Semantic Web Health Care and Life Science Interest Group launched by the World Wide Web Consortium.

Publications

1. Cheung KH, deKnikker R, Guo Y, Zhong G, Hager J, Yip KY, Kwan AKH, Li P, Cheung DW. Biosphere: the interoperation of web services in microarray cluster analysis. *Applied Bioinformatics*: 3(4): 253-6, 2004.
2. Cheung KH, Yip KY, Smith A, deKnikker R, Masiar A, Gerstein M. YeastHub: a semantic web use case for integrating data in the life sciences domain. *Bioinformatics* 21(Suppl. 1): i85-i96, 2005.
3. Cheung KH, Qi P, Tuck D, Krauthammer M. A semantic web approach to biological pathway data reasoning and integration. *Web Semantics* 4(3): 207-15, 2006.
4. Ruttenberg A, Clark T, Bug W, Samwald M, Bodenreider O, Chen H, Doherty D, Forsberg K, Gao Y, Kashyap V, Kinoshita J, Luciano J, Scott Marshall M, Ogbuji C,

Rees J, Stephens S, Wong GT, Wu E, Zaccagnini D, Hongsermeier T, Neumann E, Herman I, Cheung KH. Advancing translational research with the Semantic Web. BMC Bioinformatics 8(Suppl 3):S2, 2007.

5. Shifman MA, Li Y, Colangelo CM, Stone KL, Wu TL, Cheung KH, Miller PL, Williams KR. YPED: a web-accessible database system for protein expression analysis. J Proteome Res. 6(10):4019-24, 2007.

My home page

<http://ycmi.med.yale.edu/people/cheung.html>

Project link

Semantic Web Portal for Neurosciences: <http://neuroweb3.med.yale.edu>

General Questions

- 1) What is (are) your main interest(s) in attending the workshop?

My main interest in attending the workshop is to interact with the community in identifying common goals and interests for cyber-enabled discovery and innovation.

- 2) What information/knowledge management needs do you have?

Explain your 'dream tool' for scientific discovery and innovation.

My main information/knowledge management needs involve representation and integration of complex scientific data (in the life sciences) that are diverse and heterogeneous. My dream tool for scientific discovery and innovation is one that can provide a seamless way of integrating diverse types of life sciences data for integrated data mining and visualization.

- 3) What is the most insightful visualization of static or dynamic phenomena you know?

[Ideally this visualization led to a major discovery/innovation. Examples could come from science, art, or any other field of human endeavor. Note that we plan to use this visualization on your name card.]

Pathway visualization tools that depict interactions among different types of objects including genes, proteins, small molecules, etc. Also, tools like Google Earth allow mashup of geographical data (including time series data).

- 4) What would you like to learn / achieve at the workshop?

I would like to learn more about what other researchers are working on in terms of CDI research. I would like to identify possible areas of collaboration with these researchers.