

Dissertation Defense Doctor of Philosophy in Information Sciences

“Controllability and Explainability in a Hybrid Social Recommender System” by Chun-Hua Tsai

Date: August 22, 2019

Time: 1:00pm – 3:00pm

Place: Room 828, Information Sciences Building, 135 North
Bellefield Avenue, Pittsburgh, PA 15260

Committee:

- Dr. Peter Brusilovsky, Professor, School of Computing and Information, University of Pittsburgh
- Dr. Yu-Ru Lin, Associate Professor, School of Computing and Information, University of Pittsburgh
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- Dr. John O'Donovan, Associate Research Scientist, Department of Computer Science, University of California, Santa Barbara

Abstract:

My dissertation studies the issue of user controllability and explainability in a hybrid social recommender system. The approach is to propose an enhanced intelligent user interface which supports the user perception of the multi-dimension recommendation relevance. The interface design considers the *user controllable, explainable components and beyond relevance factors*. A user-centric evaluation framework was extended to explaining the user experience in multiple systems and user aspects. The primary goal of my dissertation can be seen in three-fold: First, I expect to uncover the moderators which explain the user experience while interacting with the system. It helps to ground out the relationship between the interface design and the feedback on user experience. Second, I expect to explain the mediation variables between the proposed interface and the beyond relevance factors, i.e., recommendation diversity and transparency. It helps to realize the effects of adopting the interface on various social exploratory tasks. Third, my dissertation will include four studies to assess the effectiveness of the proposed interface and, more broadly, to investigate the role of applying a social recommender system in real-world academic events.