

# Recommendation in reciprocal bipartite social networks for online dating

Kang Zhao<sup>\*1</sup> and Mo Yu<sup>†2</sup>

<sup>1</sup>Tippie College of Business, The University of Iowa

<sup>2</sup>College of Information Sciences and Technology, The Pennsylvania State University

## Abstract

Many social networks in our daily life are bipartite networks that are built on reciprocity. How can we recommend users/friends to a user, so that the user is interested in and attractive to recommended users? In this research, we propose a new collaborative filtering model to improve user recommendations in reciprocal and bipartite social networks. The model considers a user's "taste" in picking others and "attractiveness" in being picked by others. A case study of an online dating network shows that the new model outperforms a baseline collaborative filtering model on recommending both initial contacts and reciprocal contacts.

*Keywords:* bipartite social network, reciprocity, online dating, user recommendation

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\*Address: S224 Pappajohn Bus Bldg, Iowa City, IA 52242. Email: kang-zhao@uiowa.edu

†Address: 324 IST Bldg, University Park, PA 16802. Email: muy145@ist.psu.edu