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I have cultivated my great interest in interdisciplinary fields of physics and mathematics since I was middle school student. I attended a county-level best high school, where I won the first prize in Provincial Physics Contest. In 2008, I was admitted by School of Mathematical Sciences, UESTC. During that period, I found a constant source of pleasure in thinking logically and applying mathematics to solve specific problems. As an undergraduate, I won the Outstanding Winner in 2012 ICM and received a university-level outstanding-rated research grant.

In 2012, I received my B.Sc Degree in Mathematics from UESTC and then became a Master Student in Computer Science. My interest has spread to networks science and social physics. As a postgraduate, I worked with Prof. Tao Zhou, studying online ranking methods, graph mining and social network analysis. In parallel, I served as a research assistant to Prof. Ming-Sheng Shang and Dr Shi-Min Cai, studying recommender systems and missing value imputation. In 2014 and 2015, I found summer research intern in two big data companies.

Currently, I am a Second-year Ph.D. Student in Computer Science, UESTC. My research interests focus on understanding phenomena in social and economic systems through empirical and theoretical analysis. I am working with Prof. Tao Zhou and Dr Yanqing Hu in solving a variety of problems, including information spreading, economic structure, reputation evaluation, etc. My works have been published in some peer-reviewed journals, such as *Sci. Rep.*, *EPL* and *Physica A*. Three selected projects that I contributed to are summarized as follows:

- Local Economic Structure. The growths of companies are direct reflections of the economy development. We extract the local economic structure from data of 24 million companies. We are particularly interested in the dynamic pattern of the economic structure, the spatial structure of registered capital, the economic complexity, the interdependency of sectors, etc. This ongoing project contributes to local economic trends predication.
- Spatial Social Network. Previous empirical studies of online social networks have confirmed a spatial scaling law, which may origin from optimal information collection. We investigate how the spatial organization affects information spreading in spatial social network. Numerical results suggest that the self-organization of spatial structure is to some extent relevant to the principle of least effort in human behaviour.
- Online Reputation Evaluation. Individual reputation plays the role of fundamental blocks in building up online ecosystems. Meanwhile, new challenges arise that how to evaluate online reputation? Our approach is to group users based on their rating similarities, and calculate user reputation according to the corresponding group sizes. This project highlights the positive role of grouping behavior in better reputation evaluation.

Over three years working in both empirical and theoretical projects has increased my capacity for independent research due to my deep involvement in the full process of doing a creative project, from initiating ideas to co-authoring publications. Past works also amazed me to do further research in interdisciplinary areas and my background in mathematics and computer science should do well to my advanced study. As a Ph.D. student, I am particularly interested in figuring out the the mechanisms behind the observations and providing valuable insight into the laws that govern the social and economic systems. As future works, I will focus on and initiate new projects in the following topics, the adjustment of macro-industrial layout in China, the gender bias in academic achievement, the optimization of information spreading on social networks, the adoption of social behaviors in reality, etc. To be a distinguished young scholar in the interdisciplinary field, I really enjoy working on creative projects that enhance my technical skills and challenge me on a regular basis.

Aside from research, I enjoy presenting research results and sharing recent ideas at conferences and internal project meetings. I have attended 6 nation-level conferences and given 5 contributed talks. From 2012 to 2014, I also served as a Student Instructor in the Association of Mathematical Modeling and a member of volunteer groups of UESTC. I am looking forward to exploring new and exciting areas whether in research or in life.