

Po-An Chen

Ph.D. Student,
Department of Computer Science, Viterbi School of Engineering
University of Southern California

Contact Information

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Research Interests

I am generally interested in theoretical computer science and algorithms, specifically in algorithmic game theory, auctions and mechanisms design, distributed algorithms and systems. My current focus is the effect of altruism and spite in game-theoretic settings, such as in traffic routing, auctions, and virus inoculation games. Some questions that I was working on include incentivizing peer-to-peer systems via pricing and peer-to-peer routing networks.

Education

Aug 2005 - present

Ph.D. Student in Computer Science, University of Southern California

Advisor: Prof. David Kempe

Dissertation proposal: The Effect of Altruism and Spite on Games and Mechanisms

GPA: 3.964

Courses: Analysis of Algorithms; Approximation Algorithms; Randomized Algorithms; Structure and Dynamics of Networked Information; Game Theory; Theory of Computation; Foundations of Artificial Intelligence; Computer Vision; Advanced Operating Systems; Database Systems

Aug 2005 - May 2007

M.S. in Computer Science, University of Southern California

Sep 2001 - Jun 2003

M.B.A. in Information Management, National Taiwan University, Taiwan

Advisor: Prof. Yih-Kuen Tsay

Sep 1997 - Jun 2001

B.B.A. in Information Management, National Taiwan University, Taiwan

Publications

Po-An Chen and David Kempe. *Bayesian Auctions with Friends and Foes*. The 2nd International Symposium on Algorithmic Game Theory (SAGT'09), October 18-20, 2009. Paphos, Cyprus (acceptance rate: 50%).

Xiaoxun Sun, William Yeoh, Po-An Chen, Sven Koenig. *Simple Optimization Techniques for A*-Based Search*. The 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS'09), May 10-15, 2009. Budapest, Hungary (acceptance rate: 22%).

Po-An Chen and David Kempe. *Altruism, Selfishness, and Spite in Traffic Routing*. The 9th International ACM Conference on Electronic Commerce (EC'08), July 10-12, 2008. Chicago, IL (acceptance rate: 19%).

Po-An Chen and David Kempe. *Altruism and Selfishness in Traffic Routing* (a short version of *Altruism, Selfishness, and Spite in Traffic Routing*). The 45th Annual Allerton Conference on Communication, Control, and Computing, September 26-28, 2007 (invited talk). University of Illinois at Urbana-Champaign, IL, USA.

Rajiv T. Maheswaran, Craig M. Rogers, Romeo Sanchez, Pedro Szekely and Po-An Chen. *Scaling in Domains with Uncertainty: Criticality Sensitive Coordination*. The 3rd Workshop on Challenges in the Coordination of Large Scale Multi-Agent Systems (LSMAS), AAMAS 2006.

Rajiv T. Maheswaran, Craig M. Rogers, Romeo Sanchez, Pedro Szekely and Po-An Chen. *Distributed Scheduling for Multi-Agent Teamwork in Uncertain Domains: Criticality-Sensitive Coordination*. Workshop on Multi-Agent Sequential Decision Making in Uncertain Domains (MSDM), AAMAS 2006.

Po-An Chen and Tyng-Ruey Chuang. *Truthful Online Auctions for Pricing Peer-to-Peer Services*. The 7th International IEEE Conference on E-Commerce Technology 2005 (CEC'05), July 19-22, 2005. Munich, Germany (acceptance rate: 21%).

Po-An Chen and Yih-Kuen Tsay. *Emulating Small-World Networks on Content-Addressable Networks*. Unpublished manuscript. October 2004.

A Scalable and Efficient Object Location Scheme Based on the CAN Model. Master thesis. Department of Information Management, National Taiwan University. June 2003.
Advisor: Prof. Yih-Kuen Tsay

Awards

2007 - 2008 USC Annenberg Graduate Fellowship

Research Experience

2006 - present

Research Assistant. Department of Computer Science, USC

Advisor: Prof. David Kempe

- Altruistic traffic routing

- Spiteful auctions

- Altruistic virus inoculation

2005 - 2006

Graduate Research Assistant. Information Sciences Institute (ISI), USC

- Implementing some experiments for the project: Criticality-Sensitive Coordination (CSC)

2003 - 2005

Research Assistant. Institute of Information Science (IIS), Academia Sinica, Taiwan

Supervisor: Dr. Tyng-Ruey Chuang

- Incentivizing peer-to-peer systems via online auctions

Teaching Assistant Experience

2009 Fall

- CSCI 570: Analysis of Algorithms. Department of Computer Science, USC

2009 Spring

- CSCI 570: Analysis of Algorithms. Department of Computer Science, USC

2007 Spring

- CSCI 570: Analysis of Algorithms. Department of Computer Science, USC

2003 Spring

- Algorithms. Department of Information Management, National Taiwan University

2002 Fall

- Distributed Information Systems. Department of Information Management, National Taiwan University

2002 Spring

- Theory of Computing. Department of Information Management, National Taiwan University

2001 Fall

- Information Security. Department of Information Management, National Taiwan University

- E-Commerce Technology. Department of Information Management, National Taiwan University

Industrial Experience

2002

Summer Intern. The E-Commerce Laboratory, Institute for Information Industry (III), Taiwan

- System analysis

Services

Reviewer

- Distributed Computing: 19th International Conference (DISC'05), Cracow, Poland

- Games and Economic Behavior, 2009 (GEB'09)