

Xiaofang Wang

CONTACT INFORMATION

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EDUCATION

- Ph.D.** Candidate, **Carnegie Mellon University**, Pittsburgh, PA, expected May '08
Management of Manufacturing and Automation (Joint program of the **Tepper School of Business** with the Robotics Institute in the **School of Computer Science**)
- Dissertation: "Essays on the Interface of Health Care and Operations Management: Human Judgement, Quality and Technology"
 - Committee: Stephen Smith, Co-Chair (Robotics), Alan Scheller-Wolf, Co-Chair (Tepper) Laurens Debo (Tepper), Martin Gaynor (Heinz School of Public Policy)
- M.S.**, **Carnegie Mellon University**, Pittsburgh, PA May '03
Management of Manufacturing and Automation
- M.S.**, **Tsinghua University**, Beijing, China Jul '01
Systems Engineering
- Thesis: "Adaptive Multi-agent Modeling and its Applications in Manufacturing Systems"
 - Advisor: Jiaben Yang
- B.S.**, **Tsinghua University**, Beijing, China Jul '99
Automation

RESEARCH INTERESTS

Application Areas: Service Management, Health Care, Project Management and Scheduling, Supply Chain Management.
Methodological Areas: Stochastic Modelling, Game Theory, Artificial Intelligence.

TEACHING INTERESTS

Production and Operations Management	Supply Chain Management
Project Management	Total Quality Management
Service Operations Management	Probability and Statistics

PAPERS UNDER REVIEW

Xiaofang Wang, Laurens Debo, Alan Scheller-Wolf, Stephen Smith. Design and Analysis of Diagnostic Service Centers.
Under revision for second round review at *Management Science*.

REFERRED PUBLICATIONS

Xiaofang Wang, Stephen Smith. Retaining Flexibility to Maximize Quality: When the Scheduler Has the Right to Decide Activity Durations, in *Proceedings of the 15th International Conference on Automated Planning and Scheduling (ICAPS 05)*, Monterey, CA, June, 2005. Acceptance Rate 35%.

Nicola Policella, Xiaofang Wang, Stephen Smith and Angelo Oddi, Exploiting Temporal Flexibility to Obtain High Quality Schedules, in *Proceedings of the 20th National Conference on Artificial Intelligence (AAAI-05)*, Pittsburgh, PA, July, 2005. Acceptance Rate 18%.

Xiaofang Wang, Jiaben Yang, Adaptive Agent Modeling in Manufacturing Systems, in *Proceedings*

of the 11th International Conference on Flexible Automation and Intelligent Manufacturing, Dublin, Ireland, July, 2001.

Xiaofang Wang, Jiaben Yang, Self-Adaptive Agent Model for Task Allocation in Manufacturing Systems, *Journal of Computer Integrated Manufacturing Systems (in Chinese)*, v7, n8, 2001: 17-20.

PAPERS IN
PROGRESS

Xiaofang Wang and Alan Scheller-Wolf. Visits on schedule or visits on demand: Impact of Technology Adoption on Chronic Care.

Xiaofang Wang and Stephen Smith. Value of Flexibility in Generating High-Quality Project Schedules.

Xiaofang Wang and Alan Scheller-Wolf. Revenue Management of Discretionary Service in the Presence of Strategic Customers.

PRESENTATIONS

Design and Analysis of Diagnostic Service Centers

INFORMS Annual Meeting, Seattle, WA, November 4, 2007, Sunday, Session SB54, 10:00 - 11:30AM.

Nurse Triage Line: Value of Information and Strategic Implementation Policies

INFORMS Annual Meeting, Pittsburgh, PA, November 2006

Modelling the Impact of Emergency Department Overcrowding on Patients, Physicians and Hospitals

INFORMS Annual Meeting, San Francisco, CA, November 2005

Exploiting Temporal Flexibility to Obtain High Quality Schedules

INFORMS Annual Meeting, San Francisco, CA, November 2005

Retaining Flexibility to Maximize Quality: When the Scheduler Has the Right to Decide Activity Durations

15th International Conference on Automated Planning and Scheduling, Monterey, CA, June 2005

TEACHING
EXPERIENCE

Instructor with Full Responsibilities

Tepper School of Business, Carnegie Mellon University

Production (70-371) Instructor rating 4.67 (over 5.00)

Summer '05

- Core course for undergraduate program
- Designed and gave 30 lectures.
- Conducted office hours, designed assignments, quizzes and exams, did all the grading.

MBA Student Supervisor

Tepper School of Business, Carnegie Mellon University

A Production Management Project (45-837)

Spring '08

- Project course for MBA Program
- Supervising MBA students to work together with Amazon.com to create optimization models for Amazon's logistics supply chain.
- My task includes:
 - Answering questions.
 - Pointing them to related literature.

- Organizing weekly meetings and monitoring the progress.
- At the completion of the project course, students will present their findings to executives at Amazon.com.

Teaching Assistant

Tepper School of Business, Carnegie Mellon University (All MBA Courses)

Decision Making and Optimization (45-760) (MBA/core)	Fall '04
Production and Operations Management (45-765) (MBA/core)	Summer '03
Quality Design and Analysis (45-938) (MBA/elective)	Fall '02, Spring '03

RESEARCH PROJECTS

Carnegie Mellon University, Intelligent Coordination and Logistics Laboratory, Robotics Institute

Co-designed incremental scheduling algorithms for an NSF (National Science Foundation) funded research project “Management of Knowledge-Intensive Dynamic Systems” toward applications in news companies and pharmaceutical companies. 2003-2005

Tsinghua University, China, Systems Engineering Lab, Dept. of Automation

Major designer and co-developer of the Production Planning/Scheduling Computer Integrated System for Dalian Petroleum Corporation, supported by National 863/CIMS Key Project 1999-2001

PROFESSIONAL EXPERIENCE

Consultant

Jan—May '06

Children’s Hospital of Pittsburgh (CHP), Pittsburgh, PA

- Participated in the patient flow optimization project at CHP.
- Interviewed team members including managers, physicians, nurses and administrative personnel and healthcare consultants.
- Conducted a comprehensive survey on hospital performance metrics, cost structures and service management strategies.
- Developed a patient flow simulation model (using the software ARENA) for the emergency department. This model has been used to study the impact of staffing, physician schedule and fast track opening schedule on patients’ average length of stay in the emergency room.

HONORS AND AWARDS

William Larimer Mellon Doctoral Fellowships, Carnegie Mellon University	2001-2006
The ICAPS Conference Doctoral Consortium Scholarship	2005
Distinguished Student Award, Tsinghua University, China	1996-2000

SERVICES

Reviewer for CP-AI-OR '07 (The 4th International Conference on Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems), AAMAS '04 (The 13rd International Conference on Autonomous Agents and Multiagent Systems) and ICAPS '04 (International Conference on Automated Planning and Scheduling)

MEMBERSHIPS

Member of INFORMS	Aug '04 - present
Member of American Association for Artificial Intelligence	Aug '05 - present
Member of Women@SCS, Carnegie Mellon University	Aug '04 - present

- <http://women.cs.cmu.edu/>, an organization facilitating social networking and education for women faculty and students in school of computer science

Member of CMU Symposium Toastmasters Club, Carnegie Mellon University Nov '06 - present

- <http://symposium.freetoasthost.us/>

I am one of the organizers and speakers of the CMU branch of this worldwide non-profit organization developing public speaking and leadership skills

LANGUAGES Fluent in English; Native: Chinese

COMPUTER SKILLS Languages: C/C++, Java, Delphi
Applications: Matlab, Maple, Lindo, CPLEX, ARENA, Mathematica.

DOCTORAL
COURSEWORK

Course	Instructor
Graph Theory	Egon Balas
Network and Matching	Lisa K. Fleischer
Linear Programming	Javier F. Pena
Integer Programming	Egon Balas
Nonlinear Optimization	Reha Tuchucu
Dynamic Programming	Alan Scheller-Wolf
Econometrics	Holger Sieg
Game Theory	Uday Rajan
OM Seminar I: Revenue Management	Itir Z. Karaesmen
OM Seminar II: Global Supply Chain and Technology Management	Bahar Biller and Laurens Debo
OM Seminar III: Stochastic Processes	Alan Scheller-Wolf
OM Seminar IV: Supply Chain Management	Sridhar Tayur
Artificial Intelligence	Andrew W. Moore
Theory and Performance Modeling I	Mor Harchol-Balter
Theory and Performance Modeling II	Mor Harchol-Balter
Communication Skills	Mildred S. Myers
Language and Culture for Teaching	Peggy Allen Heidish

REFERENCES

Dr. Stephen F. Smith
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Director, Intelligent Coordination and Logistics Laboratory
Robotics Institute
Carnegie Mellon University
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Dr. Alan Andrew Scheller-Wolf
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Dr. Laurens G. Debo
Assistant Professor of Operations Management
Tepper School of Business
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Phone: (412) 268-8403, *E-mail:* laurdebo@andrew.cmu.edu