Feng-Jang Hwang

Office 313B, Institute of Information Management,

National Chiao Tung University, Hsinchu 300, Taiwan

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CURRENT POSITION

Postdoctoral Fellow (funded by National Science Council of Taiwan)

Institute of Information Management, National Chiao Tung University, Taiwan

RESEARCH INTERESTS

- **Operations Management and Scheduling Optimization**
  - Machine and shop scheduling, Project scheduling, Algorithm design
- **Industrial Engineering and Logistics Management**
  - Supply chain management, Global logistics, Logistics modeling
- **Data Mining**
  - Information retrieval, Decision support systems, Web mining
- **Computational Intelligence**
  - Evolutionary computation, Metaheuristic algorithms, Parallel computing

EDUCATION

Ph.D.

National Chiao Tung University, Taiwan   2007.02－2011.01

Information Management   (GPA: 92.04/100)

Dissertation: *Scheduling Problems Subject to Fixed Job Sequences*

Advisor: Prof. Bertrand M. T. Lin

M.Eng.

National Chiao Tung University, Taiwan   2000.09－2002.07

Major: Transportation Technology and Management   (GPA: 89.37/100, Rank: 1st/25)

Minor: Applied Mathematics

Thesis: *High Resolution Schemes for Numerical Solutions of*
Macroscopic Continuum Traffic Flow Models

Advisor: Prof. Hsun-Jung Cho

B.Sc.

Feng Chia University, Taiwan   1996.09－2000.07

Traffic Engineering and Management   (GPA: 86.10/100, Rank: 1st/182)

PROFESSIONAL EXPERIENCE

Dept. Industrial Engineering & Engineering Management, National Tsing Hua University

Postdoctoral Fellow (funded by Prof. Wei-Chang Yeh's lab)   2011.03－2011.06

- Conducted research projects involving <u>Green SCM</u>, <u>Cloud Computing</u>, and <u>RFID Network</u>
- Assisted in advising junior graduate students

Market Survey and Research Center, **Chung Chou Institute of Technology**

Assistant Researcher   2006.07－2007.01

- Planned and conducted market research survey projects for government departments and private enterprises
- Formulated the research design and statistical analysis

Institute of Statistical Science, Academia Sinica

Research Assistant   2004.10－2006.06

- Completed parallel computing training courses certified by Academia Sinica Computing Center
- Contributed to the system testing of PC clusters for parallel computing
- Developed MPI C++ programming for numerical computation
- Assisted with literature review, mathematical modeling, and statistical analysis

General Service Command, Navy General Headquarters, R.O.C. Navy

Logistics Officer (Ensign)   2002.10－2004.04

- Managed, planned and implemented the transportation and logistics processes of the command
- Provided strategic and operational advice on supply chain and human resource management

GIS Research Center, Feng Chia University

Research Assistant   1997.07－1999.01

- Assisted with data processing for GIS related software including MapInfo, ArcView, and AutoCAD
- Participated in GPS land surveying

TEACHING EXPERIENCE

Institute of Information Management, **National Chiao Tung University**

Teaching Assistant   2010

- Scheduling Theory and Applications

Department of Information Management, **Chung Chou Institute of Technology**

Adjunct Lecturer   2006

- Computer Programming
- Commercial Software Packages
- Excel VBA

Dept. Transportation Technology & Management, National Chiao Tung University

Teaching Assistant   2000

- Linear Algebra
- Dynamic Traffic Flow Simulation

COURSES TO BE OFFERED

- Supply Chain and Logistics Modeling ■ Logistics and Transportation Information Systems
- Green Supply Chain Management ■ Scheduling Optimization ■ Algorithms
- Computational Intelligence ■ Dynamic Programming
- Statistics ■ Transportation and Logistics ■ Object-Oriented Programming ■ Data Structures
- Database Systems ■ Data Mining ■ Mathematical Programming

RELEVANT COURSEWORK

- **Operations Research:** Optimization Theory, Mathematical Programming, Network Flow Programming, Dynamic Programming, Advanced Algorithm, Scheduling Theory and Applications, Advanced Scheduling Theory
- **Information Systems:** Expert Systems, GIS-Transportation, Computer Aided Network Design and Analysis, Intelligent Systems in Finances, Data Mining and Advanced Database Systems
- **Transportation and Logistics:** International Transportation and Logistics, Transportation Economics, Transportation System Analysis, Traffic Flow Theory, Dynamic Traffic Flow Simulation
- **Computational Methodology:** Advanced Engineering Mathematics, Scientific Computing, Matrix Computations, Mathematical Methods of Physics, Monte Carlo Method, Financial Computation

PUBLICATIONS

Journal Papers (published, under review or in preparation):

1. B.M.T. Lin and F.J. Hwang, Total completion time minimization in a 2-stage differentiation flowshop with fixed sequences per job type, *Information Processing Letters* (2011), Vol. 111, No. 5, 208-212. (SCI, IF: 0.612)

2. F.J. Hwang and B.M.T. Lin, Coupled-task scheduling on a single machine subject to a fixed job sequence, *Computers & Industrial Engineering* (2011), Vol. 60, No. 4, 690-698. (SCI, IF: 1.543)

3. F.J. Hwang and B.M.T. Lin, Two-stage assembly-type flowshop batching problem subject to a fixed job sequence, *Journal of the Operational Research Society* (2011), doi:10.1057/jors.2011.90, in press. (SCI; SSCI, IF: 1.102)

4. F.J. Hwang, M.Y. Kovalyov and B.M.T. Lin, Total completion time minimization in two-machine flow shop scheduling problems with a fixed job sequence, *Discrete Optimization* (2011), doi:10.1016/j.disopt.2011.11.001, in press. (SCI, IF: 0.776)

5. B.M.T. Lin, F.J. Hwang and A.V. Kononov, Relocation scheduling subject to fixed processing sequences, reviewed by *Information Sciences*. (SCI, IF: 2.833)

6. F.J. Hwang, M.Y. Kovalyov and B.M.T. Lin, Two-machine flowshop fabrication and assembly scheduling with a fixed processing sequence, *manuscript for submission*.

7. S.V. Sevastyanov, B.M.T. Lin and F.J. Hwang, Efficient geometrical approach to makespan minimization in parallel flow shops, *manuscript for submission*.

Refereed Conference Papers:

8. S.V. Sevastyanov, B.M.T. Lin and <u>F.J. Hwang</u>, Makespan minimization in parallel flow shops, *The 9th Workshop on Models and Algorithms for Planning and Scheduling Problems* (MAPSP 2009), Abbey Rolduc, Netherlands, June 29-July 3, 2009, pp. 244-246.

9. <u>F.J. Hwang</u>, M.Y. Kovalyov and B.M.T. Lin, Minimization of total completion time in flowshop scheduling subject to fixed job sequences, *The 12th International Workshop on Project Management and Scheduling* (PMS'10), Tours, France, April 26-28, 2010, pp. 249-252.

10. B.M.T. Lin, <u>F.J. Hwang</u> and A.V. Kononov, Resource-constrained scheduling with two parallel dedicated machines subject to fixed processing sequences, *The 24th Conference of the European Chapter on Combinatorial Optimization* (ECCO 2011), Amsterdam, Netherlands, May 30-June 1, 2011.

PROFESSIONAL SERVICE

Journal Referee:
- Information Sciences (SCI, IF: 2.833)
- Asia-Pacific Journal of Operational Research (SCI, IF: 0.303)

Conference Referee:
- 18th Annual International Conference on High Performance Computing 2011 (HiPC 2011)

CONFERENCE PRESENTATIONS / INVITED TALKS

- "*Minimization of total completion time in flowshop scheduling subject to fixed job sequences*", The 12th International Workshop on Project Management and Scheduling (PMS'10), Tours, France, April 27, 2010
- "*Makespan minimization in parallel flow shops*", Optimization Group Seminar, Sobolev Institute of Mathematics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia, June 11, 2009

ACADEMIC VISIT

- Sobolev Institute of Mathematics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia, June 1-15, 2009 (Taiwan-Russia joint research project, NSC)

HONORS / AWARDS

- 1998 Mr. Tsung Cho-Chang Memorial Scholarship (Ford Lio Ho Motor Co.)
- 2000 Honorary Member of the Phi-Tau-Phi Scholastic Honor Society (Division of FCU)
- 2002 Honorary Member of the Phi-Tau-Phi Scholastic Honor Society (Division of NCTU)
- 2004 Outstanding Compulsory Military Service Award (R.O.C. Navy)

PROGRAMMING SKILLS

■ C/C++ ■ MPI ■ Mathematica ■ MATLAB ■ SQL ■ CPLEX ■ LINGO ■ SPSS ■ SAS ■ R
■ MS-Office VBA ■ TeX

RESEARCH COLLABORATIONS / ACADEMIC CONNECTIONS

Dr. Jacek Blazewicz

Professor, Institute of Bioorganic Chemistry, Polish Academy of Sciences, Poland

Dr. Yi-Hau Chen

Researcher, Institute of Statistical Science, Academia Sinica, Taiwan

Dr. Alexander V. Kononov

Senior Researcher, Sobolev Institute of Mathematics, Russian Academy of Sciences, Russia

Dr. Mikhail Y. Kovalyov

Professor, Faculty of Economics, Belarusian State University, Belarus

Dr. Sergey V. Sevastyanov

Leading Researcher, Sobolev Institute of Mathematics, Russian Academy of Sciences, Russia

Dr. Wei-Chang Yeh

Professor, School of Software, University of Technology Sydney, Australia

REFERENCES

Dr. Bertrand M. T. Lin (*Ph.D. Dissertation Advisor*)

Professor

Institute of Information Management

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