Su Nguyen
School of Engineering and Computer Science (ECS)
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EDUCATION

Victoria University of Wellington, New Zealand
Ph.D. in Heuristic Optimisation   **2013**
Thesis: "Automatic Design of Dispatching Rules for Job Shop Scheduling Problems
with Genetic Programming"

Asian Institute of Technology, Thailand
M.E. in Industrial Engineering and Management   **2008**
Thesis: "Decision support framework for order review and release (ORR) based on workload"

Ho Chi Minh University of Technology, Vietnam
B.E. in Industrial and Systems Engineering   **2006**
Thesis: "Integration of optimization technique into simulation environment and its application in
job shop scheduling"

ACADEMIC EXPERIENCE

Victoria University of Wellington, New Zealand
Postdoctoral Research Fellow   **Since 2013**
Casual Lecturer – "COMP422: Data Mining, Neural Networks and GP."   **Since 2013**
Research Assistant – "Topic: Genetic Programming based Hyper-heuristics."   **2011-2013**
Tutor – "COMP307: Introduction to Artificial Intelligence."   **2012**

Asian Institute of Technology, Thailand
Research Associate   **2009-2010**
Developing multi-objective model to locate the bagasse ethanol plants.
Providing technical support for PhD/Master students.
Developing Evolutionary Technique library (ETlib, version 1.0).

University of Groningen, The Netherlands
Graduate Researcher   **2008-2009**
Investigating the relations between different logistic performance measures in
make-to-order companies.
Developing new job release methods to improve delivery performance.

SCHOLARSHIPS/AWARDS

Victoria Doctoral Completion award	**2013**
Strategic Faculty Research Grant	**2012**
ACM Travel Grant	**2011**
Victoria Doctoral Scholarship	**2010-2013**
Siam Cement Group Foundation Scholarship	**2007-2008**
The Tim Kendall Memorial Prize in recognition of the most outstanding academic performance in the field of Industrial Engineering & Management	**2008**
The AIT Alumni Association Prize in recognition of the outstanding academic performance in the School of Engineering and Technology	**2008**

[1] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Automatic Programming via Iterated Local Search for Dynamic Job Shop Scheduling". IEEE Transactions on Cybernetics. DOI: 10.1109/TCYB.2014.2317488. 2014. (To appear)

[2] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Automatic Design of Scheduling Policies for Dynamic Multi-objective Job Shop Scheduling via Cooperative Coevolution Genetic Programming". IEEE Transactions on Evolutionary Computation, 2014, Vol. 18, Issue 2, pp. 193-208. **ARC Rank A***.

[3] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "A Computational Study of Representations in Genetic Programming to Evolve Dispatching Rules for the Job Shop Scheduling Problem". IEEE Transactions on Evolutionary Computation, 2013, Vol. 17, No. 5, pp. 621-639. DOI: 10.1109/TEVC.2012.2227326. **ARC Rank A***.

[4] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "A MO-GPHH Approach to Dynamic Job Shop Scheduling Problems". Book Chapter on Automated Scheduling, Studies in Computational Intelligence, Springer, 2013, pp. 251-282.

[5] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Genetic Programming for Evolving Reusable Due-date Assignment Models in Job Shop Environments". Evolutionary Computation (Journal, MIT Press), 2014, Vol. 22, No. 1, pp. 105-138. **ARC Rank A**.

[6] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Hybrid evolutionary computation methods for quay crane scheduling problems". (Journal of) Computers and Operations Research, 2013, Vol. 40, Issue. 8, pp. 2083-2093. **ARC Rank A**.

[7] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Learning Iterative Dispatching Rules for Job Shop Scheduling with Genetic Programming". Special issue on Advanced Dispatching Rules for Large-scale Manufacturing Systems, International Journal of Advanced Manufacturing Technology, 2013, Vol. 67, Issue 1-4, pp. 85-100.

[8] Stephen Bennett, **Su Nguyen**, Mengjie Zhang. "A Hybrid Discrete Particle Swarm Optimisation Method for Grid Computation Scheduling". CEC'14: Proceedings of IEEE Congress on Evolutionary Computation. Beijing, China, 2014. (To appear)

[9] **Su Nguyen**, Mengjie Zhang and Mark Johnston. "A Sequential Genetic Programming Method to Learn Forward Construction Heuristics for Order Acceptance and Scheduling". CEC'14: Proceedings of IEEE Congress on Evolutionary Computation. Beijing, China, 2014. (To appear)

[10] Bing Xue, **Su Nguyen**, Mengjie Zhang. "A New Binary Particle Swarm Optimisation Algorithm for Feature Selection". EuroIASP'14: Proceedings of the European Conference on Image Analysis, Signal Processing and Pattern Recognition, 2014. (To appear)

[11] **Su Nguyen**, Mengjie Zhang, Mark Johnston. "Enhancing Branch-and-Bound Algorithms for Order Acceptance and Scheduling with Genetic Programming". EuroGP'14: Proceedings of the 17th European Conference on Genetic Programming, 2014. (To appear)

[12] John Park, **Su Nguyen**, Mark Johnston, Mengjie Zhang. "Evolving Stochastic Dispatching Rules for Order Acceptance and Scheduling via Genetic Programming". AI'13: Proceedings of the 26th Australasian Joint Conference on Artificial Intelligence, 2013, pp. 478-489.

[13] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Learning Reusable Initial Populations for Multi-objective Order Acceptance and Scheduling Problems with Genetic Programming". EuroGP'13: Proceedings of the 16th European Conference on Genetic Programming, 2013, pp. 157-168. **(Nominated for the Best Paper Award)**

[14] John Park, **Su Nguyen**, Mengjie Zhang and Mark Johnston. "Genetic Programming for Order Acceptance and Scheduling". CEC'13: Proceedings of IEEE Congress on Evolutionary Computation, 2013, pp. 1005-1012.

[15] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Tan Kay Chen. "A Coevolution Genetic Programming Method to Evolve Scheduling Policies for Dynamic Multi-objective Job Shop Scheduling Problems". CEC'12: IEEE Congress on Evolutionary Computation, 2012, pp. 3261-3268.

[16] **Su Nguyen**, Mengjie Zhang, Mark Johnston, Kay Chen Tan. "Evolving Reusable Operation-Based Due-Date Assignment Models for Job Shop Scheduling with Genetic Programming". EuroGP'12: Proceedings of the 15th European Conference on Genetic Programming, 2012, pp. 121-133. **(Nominated for the Best Paper Award)**

[17] **Su Nguyen**, Mengjie Zhang, Mark Johnston. "A Genetic Programming Based Hyper-heuristic Approach for Combinatorial Optimisation". GECCO'11: Proceeding of Genetic and Evolutionary Computation Conference, 2011, pp. 1299-1306.

[18] **Su Nguyen,** Voratas Kachitvichyanukul. "Movement strategies for multi-objective Particle Swarm Optimization". Int. Journal of Applied Metaheuristic Computing, 2010, Vol. 1, No. 3, 59-79.

[19] Voratas Kachitvichyanukul, **Su Nguyen**. "Evolutionary Strategies to Find Pareto Fronts in Multiobjective Problems". In: Applications of Swarm Intelligence, Editors: Louis P. Walters, ISBN: 978-1-61728-602-5, Nova Science Publishers, Inc., 2010.

[20] **Su Nguyen,** Voratas Kachitvichyanukul. "An efficient differential evolution algorithm for multi-mode resource-constrained project scheduling problems". International Journal of Operational Research, 2012, Vol. 15, No. 4, 466-481.

[21] **Su Nguyen**, Voratas Kachitvichyanukul. "Decision Support Framework For Order Review/Release Based On Workload". ICPR'08: Proceedings of International Conference of Production Research, 2009, pp. 478-489.

[22] **Su Nguyen**, Martin Land, Gerard Gaalman. "Workload Control with Continuous Release". Proceedings of the IEEE International conference on Industrial Engineering and Engineering Management, 2009, pp.1905-1909.

[23] Martin Land, Gerard Gaalman, **Su Nguyen**. "In search of the key to delivery improvement". The Sixteenth International Working Seminar on Production Economic, 2010.

JOURNAL REVIEWER

- IEEE Transactions on Evolutionary Computation (**ARC Rank A***)
- IEEE Transactions on Cybernetics
- Computers and Operations Research (**ARC Rank A)**
- Journal of Scheduling
- Applied Soft Computing
- Evolutionary Computation (Journal)

RELATED TRAINING

- Stochastic Programming (LNMB - Dutch Network on the Mathematics of Operations Research)
- Stochastic Modeling In Manufacturing Systems (LNMB)
- Research Methodologies in Operations Management (EIASM)
- Internship at Nidec Tosok Vietnam Co, Ltd, Vietnam

COMPUTER SKILLS

- Microsoft Office
- Programming language: C++, C#, Visual Basic, Delphi, Java
- Optimization software: Lingo, Cplex
- Simulation software: Arena, EMPlant, Sigma

MEMBERSHIPS

- IEEE - Institute of Electrical and Electronics Engineers
- IEEE - Computational Intelligence Society
- SIGEVO - ACM Special Interest Group on Genetic and Evolutionary Computation