**Job Shop Scheduling Problem Instances**

This document describes two sets of Benchmark Problem Instances for the Job Shop Scheduling Problem. Each set is supplied as a zipped archive containing a text file for each instance

**Definition**

The following two zip archives contain 500 and 200 job shop scheduling problems respectively. Each problem instance is contained within its own file. The problem generation process is described in <http://rollproject.org/jssp/jsspGen.pdf>

* [TrainingSet](http://rollproject.org/jssp/JsspTraining.zip) - 500 Instances named from jssp3500 – jssp3999. Available [here](http://rollproject.org/jssp/JsspTraining.zip)
* [TestSet](http://rollproject.org/jssp/JsspTest.zip) - 200 Instances named from jssp5000 – jssp5199. Available [here](http://rollproject.org/jssp/JsspTest.zip)

The text based file format is taken from <http://www.emn.fr/z-auto/clahlou/mdl/Benchmarks.html> and is described below

Number of jobs, Number of machines, Number of operations

RD\_1, DD\_1, W\_1, O\_1, M\_1\_1, P\_1\_1, M\_2\_1, P\_2\_1, ...M\_n\_1, P\_n\_1

RD\_2, DD\_2, W\_2, O\_2, M\_1\_2, P\_1\_2, M\_2\_2, P\_2\_2, ...M\_n\_2, P\_n\_2

...

RD\_j, DD\_j, W\_n, O\_j, M\_1\_j, P\_1\_j, M\_2\_j, P\_2\_j, ...M\_n\_j, P\_n\_j

* RD\_1 is the release date of job 1
* DD\_1 is the due date of job 1
* WD\_1 is the release date of job 1
* O\_1 is the number of operations in job 1
* M\_1\_1 is the machine for operation 1 of job 1
* M\_n\_1 is the machine for operation n of job 1
* P\_1\_1 is the processing time of operation 1 from job 1
* P\_n\_j is the processing time of operation n from job j

These problem instances were used in the following publications.

Sim, K., Hart, E.: *A Novel Heuristic Generator for JSSP Using a Tree-Based Representation of Dispatching Rules* in Proceedings of GECCO 2015 Companion. ACM, 2015

[Preprint @ napier](http://researchrepository.napier.ac.uk/6060/)

[Full @ ACM](http://dx.doi.org/10.1145/2463372.2463555)

Hart, E. Sim, K.: *Ensemble Methods for JSSP in* Evolutionary Computation Special Issue on metaheuristics (Submitted August 2015)

Coming soon