

LIST OF SYMBOLS

We used the following notation throughout the thesis and will introduce additional notation when needed:

S	Schedule;
n	Number of Jobs;
m	Parallel machines;
i	Job index;
j	Machine index;
P	Non-negative constants;
a	Learning index;
d	The common due-date;
d_i	Due date of operation with respect to job i ;
r_i	Release time of operation with respect to job i ;
p_j	The normal processing time of job j , $j = 1, 2, \dots, n$;
p_{ij}	Processing time of job i on machine j ;
d_{ij}	Due date of job i on machine j ;
w_i	Weight of job i ;
a_j	The aging factor of job j , $j = 1, 2, \dots, n$;

- Π All possible job Sequences;
- r_{ij} Release time of job i on machine j ;
- d^* Optimal common due date;
- σ^* Optimal job sequence;
- C_j The completion time of job j , $j = 1, 2, \dots, n$;
- E_j The earliness of job j , $j = 1, 2, \dots, n$, i.e. $E_j = \max\{0, d - C_j\}$;
- T_j The tardiness of job j , $j = 1, 2, \dots, n$, i.e. $T_j = \max\{0, C_j - d\}$;
- t_i Due-date tolerance for job i ;
- N_T Number of tardy jobs;
- C_{\max} Makespan or total completion time;
- Idm Increasing series of dominating machines;
- ddm Decreasing series of dominating machines;