Open-shop problems without preemption

- **maximal polynomially solvable:**

$O\|p_{ij}=1;tree\|C_{max}$	Braesel et al. (1994) [4]
$O2\|\|C_{max}$	Gonzalez & Sahni (1976) [9]
$O\|p_{ij}=1;intree\|L_{max}$	Brucker et al. (1993) [6], Brucker (1998) [?]
$O\|p_{ij}=1;chains;r_i\|L_{max}$	Baptiste et al. (2004) [3]
$O2\|p_{ij}=1;prec;r_i\|L_{max}$	Brucker et al. (1993) [6], Brucker (1998) [?]
$O\|p_{ij}=1;outtree\|\sum C_i$	Braesel et al. (1995) [5]
$O2\|p_{ij}=1;outtree;r_i\|\sum C_i$	Lushchakova (2006) [15]
$O2\|p_{ij}=1;prec\|\sum C_i$	Coffman et al. (2003) [8]
$O\|p_{ij}=1;r_i\|\sum C_i$	Brucker & Kravchenko (2004) [7]
$O\|p_{ij}=1\|\sum w_iC_i$	Brucker et al. (1993) [6]
$O\|p_{ij}=1\|\sum U_i$	Liu & Bulfin (1988) [14]
$Om\|p_{ij}=1;r_i\|\sum w_iU_i$	Baptiste (2003) [2]
$O\|p_{ij}=1\|\sum T_i$	Liu & Bulfin (1988) [14]

- **minimal NP-hard:**

	$O3\|\|C_{max}$	Gonzalez & Sahni (1976) [9]
*	$O\|\|C_{max}$	Lenstra (-) [13]
*	$O\|p_{ij}=1;outtree;r_i\|C_{max}$	Timkovsky (2003) [17]
*	$O\|p_{ij}=1;prec\|C_{max}$	Timkovsky (2003) [17]
*	$O2\|chains\|C_{max}$	Tanaev et al. (1994) [16]
*	$O2\|r_i\|C_{max}$	Lawler et al. (1981,1982) [11] [12]
*	$O\|p_{ij}=1;outtree\|L_{max}$	Timkovsky (2003) [17]
*	$O2\|\|L_{max}$	Lawler et al. (1981,1982) [11] [12]
*	$O2\|\|\sum C_i$	Achugbue & Chin (1982) [1]
*	$O2\|p_{ij}=1;chains\|\sum w_iC_i$	Timkovsky (2003) [17]
*	$O3\|p_{ij}=1;chains\|\sum w_iC_i$	Timkovsky (2003) [17]
*	$O\|p_{ij}=1;r_i\|\sum U_i$	Kravchenko (1999) [10]
*	$O2\|p_{ij}=1;chains\|\sum U_i$	Timkovsky (2003) [17]
*	$O3\|p_{ij}=1;chains\|\sum U_i$	Timkovsky (2003) [17]
*	$O2\|p_{ij}=1;chains\|\sum T_i$	Timkovsky (2003) [17]
*	$O3\|p_{ij}=1;chains\|\sum T_i$	Timkovsky (2003) [17]

- **minimal open:**

$O3\|p_{ij}=1;intree;r_i\|C_{max}$	$O3\|p_{ij}=1;chains;r_i\|\sum C_i$	$O2\|p_{ij}=1;r_i\|\sum T_i$
$O3\|p_{ij}=1;outtree;r_i\|C_{max}$	$O3\|p_{ij}=1;intree\|\sum C_i$	$O3\|p_{ij}=1;r_i\|\sum T_i$
$O3\|p_{ij}=1;prec\|C_{max}$	$O2\|p_{ij}=1;r_i\|\sum w_iC_i$	$O2\|p_{ij}=1\|\sum w_iT_i$
$O3\|p_{ij}=1;outtree\|L_{max}$	$O3\|p_{ij}=1;r_i\|\sum w_iC_i$	$O3\|p_{ij}=1\|\sum w_iT_i$
$O2\|p_{ij}=1;intree;r_i\|\sum C_i$	$O\|p_{ij}=1\|\sum w_iU_i$	

- **maximal open:**

$O\|p_{ij}=1;intree;r_i\|L_{max}$	$O\|p_{ij}=1;prec;r_i\|\sum C_i$	$O\|p_{ij}=1;r_i\|\sum w_iT_i$
$Om\|p_{ij}=1;prec;r_i\|L_{max}$	$O\|p_{ij}=1\|\sum w_iU_i$	

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