

1 Pinning posets changes drastically under flypes and mutations

1.0.1 $[[7, 14, 8, 1], [6, 11, 7, 12], [13, 10, 14, 11], [8, 3, 9, 4], [1, 4, 2, 5], [12, 5, 13, 6], [2, 9, 3, 10]]$

PD code drawn by **SnapPy**: [(6, 1, 7, 2), (13, 2, 14, 3), (10, 3, 11, 4), (14, 7, 1, 8), (11, 8, 12, 9), (4, 9, 5, 10), (5, 12, 6, 13)]
Planar representation generated by **plantri**: -

Total optimal pinning sets: 2
Total minimal pinning sets: 5
Total pinning sets: 66
Pinning number: 4

Average optimal degree: 2.5
Average minimal degree: 2.68
Average overall degree: 2.91

Table 1: Pinning sets/average degree by cardinal

Cardinal	4	5	6	7	8	9	Total
Optimal pinning sets	2	0	0	0	0	0	2
Minimal (suboptimal) pinning sets	0	3	0	0	0	0	3
Nonminimal pinning sets	0	10	24	19	7	1	61
Average degree	2.5	2.74	2.9	3.01	3.07	3.11	

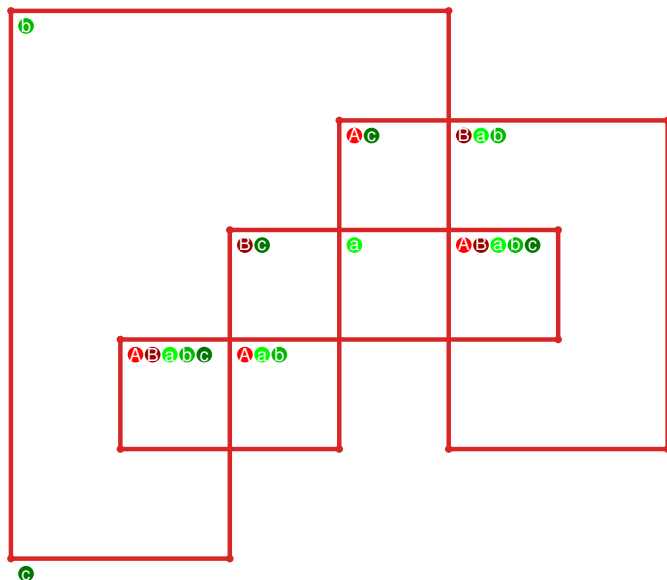


Figure 1: SnapPy multiloop plot.

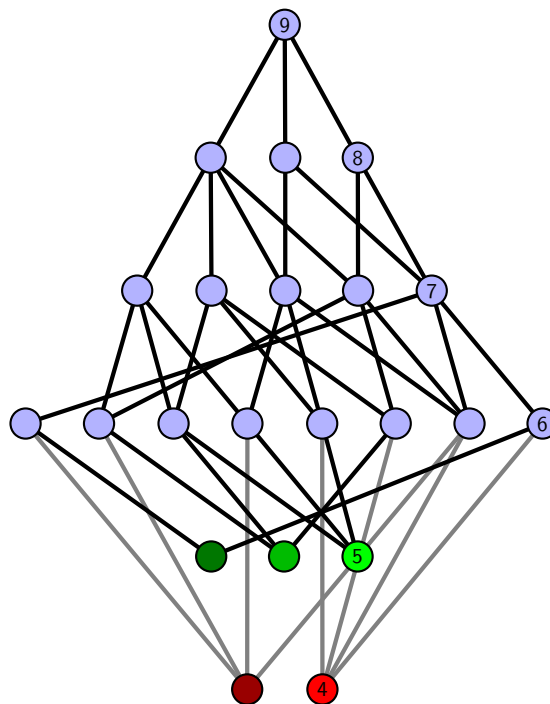


Figure 2: Minimal join sub-semi-lattice of minimal pinning sets.

1.0.2 $[[5, 14, 6, 1], [4, 11, 5, 12], [13, 10, 14, 11], [6, 10, 7, 9], [1, 9, 2, 8], [12, 3, 13, 4], [7, 3, 8, 2]]$

PD code drawn by SnapPy: $[(14, 5, 1, 6), (10, 1, 11, 2), (6, 13, 7, 14), (7, 4, 8, 5), (11, 8, 12, 9), (2, 9, 3, 10), (3, 12, 4, 13)]$

Planar representation generated by plantri: -

Total optimal pinning sets: 6
Total minimal pinning sets: 6
Total pinning sets: 48
Pinning number: 5

Average optimal degree: 2.63
Average minimal degree: 2.63
Average overall degree: 2.91

Table 2: Pinning sets/average degree by cardinal

Cardinal	5	6	7	8	9	Total
Optimal pinning sets	6	0	0	0	0	6
Minimal (suboptimal) pinning sets	0	0	0	0	0	0
Nonminimal pinning sets	0	17	17	7	1	42
Average degree	2.63	2.85	2.99	3.07	3.11	

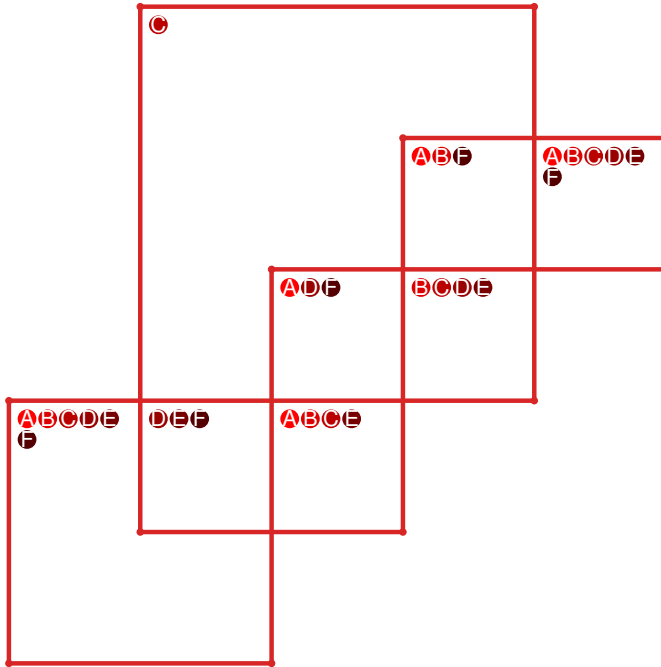


Figure 3: SnapPy multiloop plot.

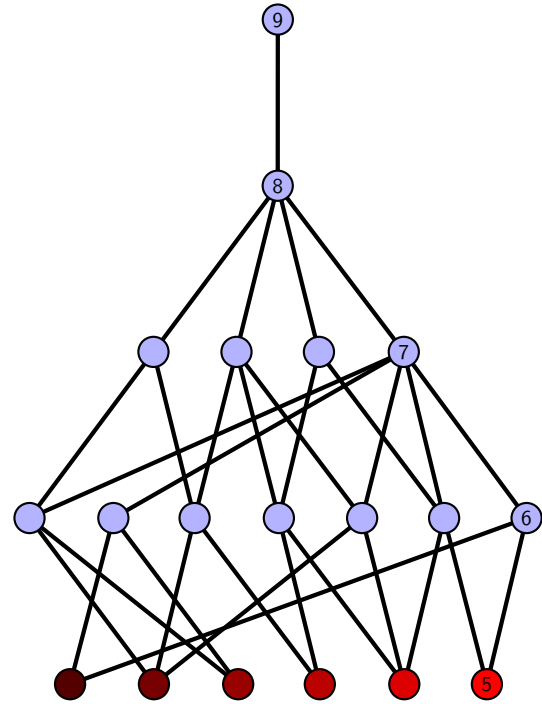


Figure 4: Minimal join sub-semi-lattice of minimal pinning sets.