CSE318 – Artificial Intelligence

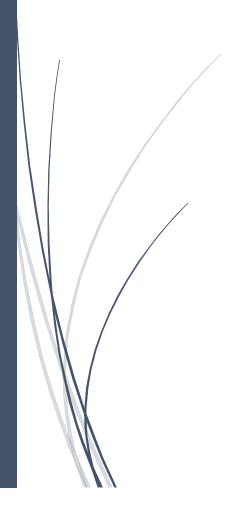
Jan 23, 2023

Report On Exam Scheduling

Offline-3 on Local Search

Abu Nowshed Sakib

ID: 1705107



	Known Soluti		L	Scheme - 1 argest-Degree + Kemp		After Pairswap			
Benchmark Data				Pe	enalty				
Data	Timeslots	Penalty	Timeslots	After Largest Degree	After Kempe				
CARF92	32	3.74	32	10.61	5.85	5.8			
CARS91	34	11.6	35	11.72	7.45	7.42			
KFU93	20	12.96	20	46.47	19.19	18.65			
TRE92	23	7.75	22	15.8	11	10.95			
YOR83	21	34.84	23	65.62	37.43	37.43			

	Known		Sa	Scheme - 2 turation-Degree + Kem		After Pairswap 6.34 8.19		
Benchmark	Soluti	on		Pe	enalty			
Data	Timeslots	Penalty	Timeslots	After Saturation Degree	After Kempe			
CARF92	32	3.74	30	9.59	6.36	6.34		
CARS91	34	11.6	31	12.45	8.21	8.19		
KFU93	20	12.96	19	46.69	21.08	19.39		
TRE92	23	7.75	23	15.91	10.26	10.19		
YOR83	21	34.84	20	61.66	46.42	46.42		

Penalty Strategy: Exponential

	Known Soluti		Lar	Scheme - 3 gest-Enrollment + Kempe + Pairswap Penalty After After After Largest Enrollment Kempe Pairswap 10.69 5 4.96			
Benchmark				Pe	enalty		
Data	Timeslots	Penalty	Timeslots				
CARF92	32	3.74	35	10.69	5	4.96	
CARS91	34	11.6	36	13.78	6.73	6.66	
KFU93	20	12.96	21	54.5	16.83	16.04	
TRE92	23	7.75	22	16.33	11	10.89	
YOR83	21	34.84	24	63.87	36.65	36.63	

David word	Known Soluti			Scheme - 4 Random + Kempe +		After Pairswap 4.24 4.66 13.65 7.8	
Benchmark Data	Timeslots	Penalty	Timeslots	After Random			
CARF92	32	3.74	42	8.65	4.31	4.24	
CARS91	34	11.6	50	9.25	4.74	4.66	
KFU93	20	12.96	25	35.06	14.74	13.65	
TRE92	23	7.75	28	13.09	7.89	7.8	
YOR83	21	34.84	28	48.93	30.13	29.91	

	Known Soluti			Scheme Largest-Degree + Ke		р
Benchmark					Penalty	
Data	Timeslots	Penalty	Timeslots	After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	32	6.77	3.81	3.73
CARS91	34	11.6	35	7.5	4.78	4.77
KFU93	20	12.96	20	28.7	12.85	12.74
TRE92	23	7.75	22	10.1	7.28	7.27
YOR83	21	34.84	23	41.32	24.67	24.66

	Known			: Saturation-Deg	Scheme - 2 gree + Kempe	e + Pairswap
	Solution	on			Pena	lty
Benchmark Data	Timeslots	Penalty	Timeslots	After Saturation Degree	After Kempe	After Pairswap
CARF92	32	3.74	30	6.27	4.05	4
CARS91	34	11.6	31	8.05	5.37	5.35
KFU93	20	12.96	19	28.98	13.32	13.24
TRE92	23	7.75	23	10.13	6.86	6.81
YOR83	21	34.84	20	38.92	29.82	29.82

	Known I Solutio		La	Sergest-Enrollm	cheme - 3 ent + Kempe	- Pairswap			
Benchmark					Penalt	у			
Data	Timeslots	Penalty	Timeslots	After Largest Enrollment	After Kempe	After Pairswap			
CARF92	32	3.74	35	6.73	3.31	3.28			
CARS91	34	11.6	36	8.84	4.34	4.32			
KFU93	20	12.96	21	34.24	11.63	11.44			
TRE92	23	7.75	22	10.43	7.04	6.98			
YOR83	21	34.84	24	40.57	23.16	23.15			

Benchmark Data	Known B			Schen Random + Kem		
	Solution	n			Penalty	
	Timeslots	Penalty	Timeslots	After Random	After Kempe	After Pairswap
CARF92	32	3.74	42	4.84	2.73	2.7
CARS91	34	11.6	49	6.23	3.25	3.21
KFU93	20	12.96	24	18.19	9.27	9.04
TRE92	23	7.75	28	8.64	5.18	5.14
YOR83	21	34.84	28	32.07	19.89	19.8