Report on

Local Search Offline

Course: CSE 318
Course Title: Artificial Intelligence Sessional

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Data set for Exponential Penalty:

Benchmark Data	Known Best Solution		Scheme -1 Largest Degree + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	32	10.6153	7.9939	7.9305
CARS91	35	4.42	34	11.4957	9.9521	9.8666
KFU93	20	12.96	20	46.5160	28.0247	27.2952
TRE92	23	7.75	23	15.9009	12.6573	12.6472
YOR83	21	34.84	23	64.6886	52.4559	52.4559

Benchmark Data	Known Best Solution		Scheme -2 Saturation Degree + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Saturation Degree	After Kempe	After Pairswap
CARF92	32	3.74	30	9.6871	9.0060	8.9077
CARS91	35	4.42	31	12.4525	10.3686	10.3276
KFU93	20	12.96	19	46.6996	32.8927	30.5945
TRE92	23	7.75	23	15.9177	13.0596	12.9275
YOR83	21	34.84	20	61.6589	60.7885	60.7758

Benchmark Data	Known Best Solution		Scheme -3 Largest Enrollment + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Largest Enrollment	After Kempe	After Pairswap
CARF92	32	3.74	35	10.6960	7.4810	7.2177
CARS91	35	4.42	36	13.7810	9.6047	9.5401
KFU93	20	12.96	21	54.5121	28.4257	26.2250
TRE92	23	7.75	22	16.3298	15.4005	15.2649
YOR83	21	34.84	25	63.2710	49.4846	49.2115

Benchmark Data	Known Best Solution		Scheme -4 Random Ordering + Kempe + Pairswap			
	Timeslots	Penalty	Timeslots	Penalty		
				After Random Ordering	After Kempe	After Pairswap
CARF92	32	3.74	43	8.2858	5.7184	5.5343
CARS91	35	4.42	46	9.1938	7.3783	7.2310
KFU93	20	12.96	23	38.2683	23.9254	21.9407
TRE92	23	7.75	29	12.3110	10.5755	10.3342
YOR83	21	34.84	27	48.9649	40.3900	40.3868

Data set for Linear Penalty:

Benchmark Data	Known Best Solution		Scheme -5 Largest Degree + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Largest Degree	After Kempe	After Pairswap
CARF92	32	3.74	32	6.7623	5.0933	5.0515
CARS91	35	4.42	34	7.4047	6.3604	6.3174
KFU93	20	12.96	20	28.7328	18.2842	18.1335
TRE92	23	7.75	23	10.1417	8.0826	8.0752
YOR83	21	34.84	23	40.7566	33.1923	33.1923

Benchmark Data	Known Best Solution		Scheme -6 Saturation Degree + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Saturation Degree	After Kempe	After Pairswap
CARF92	32	3.74	30	6.2755	5.6264	5.5512
CARS91	35	4.42	31	8.0539	6.6967	6.6678
KFU93	20	12.96	19	28.9852	20.3212	19.1243
TRE92	23	7.75	23	10.1349	8.3840	8.3161
YOR83	21	34.84	20	38.9245	38.5505	38.5441

Benchmark Data	Known Best Solution		Scheme -7 Largest Enrollment + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Largest Enrollment	After Kempe	After Pairswap
CARF92	32	3.74	35	6.73330	4.7423	4.5909
CARS91	35	4.42	36	8.8501	6.0057	5.9666
KFU93	20	12.96	21	34.2411	17.5506	15.9013
TRE92	23	7.75	22	10.4316	9.4963	9.4096
YOR83	21	34.84	25	40.2402	30.6738	30.5271

Benchmark Data	Known Best Solution		Scheme -8 Random Ordering + Kempe + Pairswap			
			Timeslots	Penalty		
	Timeslots	Penalty		After Random Ordering	After Kempe	After Pairswap
CARF92	32	3.74	45	4.9248	3.1857	3.0424
CARS91	35	4.42	44	5.9280	4.8163	4.7531
KFU93	20	12.96	25	21.3210	14.1395	12.4236
TRE92	23	7.75	30	7.8876	6.4101	6.1761
YOR83	21	34.84	27	32.0956	26.0128	25.7280