

## Results for Uchoa instances (CVRP)

Keld Helsgaun, February 23, 2018

Instance	$m$	BKS	LKH-3	Gap (%)
X-n101-k25	26	27591	27591	0.00
X-n106-k14	14	26362	26362	0.00
X-n110-k13	13	14971	14971	0.00
X-n115-k10	10	12747	12747	0.00
X-n120-k6	6	13332	13332	0.00
X-n125-k30	30	55539	55539	0.00
X-n129-k18	18	28940	28940	0.00
X-n134-k13	13	10916	10916	0.00
X-n139-k10	10	13590	13590	0.00
X-n143-k7	7	15700	<i>15711</i>	<i>0.07</i>
X-n148-k46	47	43448	43448	0.00
X-n153-k22	23	21220	<i>21225</i>	<i>0.02</i>
X-n157-k13	13	16876	16876	0.00
X-n162-k11	11	14138	14138	0.00
X-n167-k10	10	20557	20557	0.00
X-n172-k51	53	45607	45607	0.00
X-n176-k26	26	47812	47812	0.00
X-n181-k23	23	25569	25569	0.00
X-n186-k15	15	24145	24145	0.00
X-n190-k8	8	16980	16980	0.00
X-n195-k51	53	44225	44225	0.00
X-n200-k36	36	58578	<i>58601</i>	<i>0.04</i>
X-n204-k19	19	19565	19565	0.00
X-n209-k16	16	30656	<i>30659</i>	<i>0.01</i>
X-n214-k11	11	10856	<i>10873</i>	<i>0.16</i>
X-n219-k73	73	117595	117595	0.00
X-n223-k34	34	40437	<i>40484</i>	<i>0.12</i>
X-n228-k23	23	25742	<i>25744</i>	<i>0.01</i>
X-n233-k16	16	19230	<i>19243</i>	<i>0.07</i>
X-n237-k14	14	27042	27042	0.00
X-n242-k48	48	82751	<i>82792</i>	<i>0.05</i>
X-n247-k50	51	37274	37274	0.00
X-n251-k28	28	38684	<i>38768</i>	<i>0.22</i>
X-n256-k16	17	18839	<i>18913</i>	<i>0.39</i>
X-n261-k13	13	26558	<i>26620</i>	<i>0.23</i>
X-n266-k58	58	75478	<i>75614</i>	<i>0.18</i>
X-n270-k35	36	35291	<i>35324</i>	<i>0.09</i>
X-n275-k28	28	21245	21245	0.00
X-n280-k17	17	33503	<i>33559</i>	<i>0.17</i>
X-n284-k15	15	20226	<i>20300</i>	<i>0.37</i>
X-n289-k60	61	95151	<i>95430</i>	<i>0.29</i>

X-n294-k50	51	47161	47259	0.21
X-n298-k31	31	34231	34277	0.13
X-n303-k21	21	21744	21803	0.27
X-n308-k13	13	25859	25872	0.05
X-n313-k71	72	94044	94430	0.41
X-n317-k53	53	78355	78363	0.01
X-n322-k28	28	29834	29945	0.37
X-n327-k20	20	27532	27629	0.35
X-n331-k15	15	31102	31103	0.00
X-n336-k84	86	139135	139439	0.22
X-n344-k43	43	42056	42211	0.37
X-n351-k40	41	25928	26060	0.51
X-n359-k29	29	51505	51676	0.33
X-n367-k17	17	22814	22861	0.21
X-n376-k94	94	147713	147717	0.00
X-n384-k52	53	65943	66295	0.53
X-n393-k38	38	38260	38315	0.14
X-n401-k29	29	66187	66403	0.33
X-n411-k19	19	19718	19761	0.22
X-n420-k130	130	107798	107884	0.08
X-n429-k61	62	65483	65737	0.39
X-n439-k37	37	36391	36404	0.04
X-n449-k29	29	55269	55871	1.09
X-n459-k26	26	24173	24251	0.32
X-n469-k138	140	221909	222341	0.19
X-n480-k70	70	89458	89726	0.30
X-n491-k59	59	66510	67003	0.74
X-n502-k39	39	69230	69256	0.04
X-n513-k21	21	24201	24268	0.28
X-n524-k153	155	154594	154597	0.00
X-n536-k96	96	94988	95659	0.71
X-n548-k50	50	86701	86882	0.21
X-n561-k42	42	42722	42845	0.29
X-n573-k30	30	50719	50930	0.42
X-n586-k159	159	190423	190649	0.12
X-n599-k92	93	108490	109384	0.82
X-n613-k62	62	59556	60084	0.89
X-n627-k43	43	62210	62554	0.55
X-n641-k35	35	63737	64236	0.78
X-n655-k131	131	106780	106867	0.08
X-n670-k130	133	146451	146726	0.20
X-n685-k75	75	68261	68841	0.85
X-n701-k44	44	81934	82564	0.77
X-n716-k35	35	43414	43846	1.00
X-n733-k159	160	136250	136691	0.32
X-n749-k98	98	77365	78034	0.86

X-n766-k71	71	114525	<i>115086</i>	<i>0.49</i>
X-n783-k48	48	72445	<i>73124</i>	<i>0.94</i>
X-n801-k40	40	73331	<i>73596</i>	<i>0.36</i>
X-n819-k171	172	158267	<i>159204</i>	<i>0.59</i>
X-n837-k142	142	193813	<i>194637</i>	<i>0.43</i>
X-n856-k95	95	89007	<i>89226</i>	<i>0.25</i>
X-n876-k59	59	99331	<i>99954</i>	<i>0.63</i>
X-n895-k37	37	53946	<i>54951</i>	<i>1.86</i>
X-n916-k207	207	329247	<i>330687</i>	<i>0.44</i>
X-n936-k151	158	132926	<i>133354</i>	<i>0.32</i>
X-n957-k87	87	85482	<i>85755</i>	<i>0.32</i>
X-n979-k58	58	119008	<i>119640</i>	<i>0.53</i>
X-n1001-k43	43	72404	<i>73203</i>	<i>1.10</i>