3D Motion Estimation of Volumetric Deformable Objects from RGB-D Images Synthetically Generated by a Multi-Camera System: **Supplementary Material**

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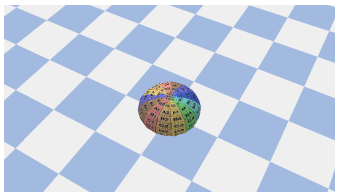
Supplementary Material Contents

S1 Datasets - frame examples

S1.1 Dataset 1



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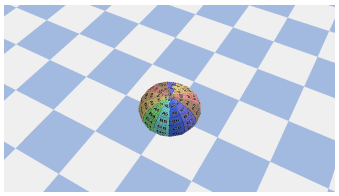

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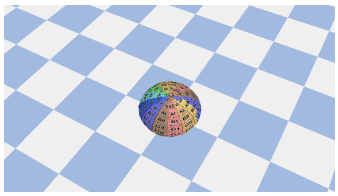

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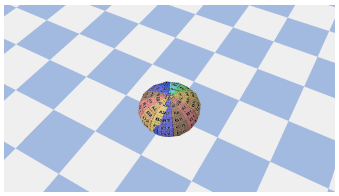
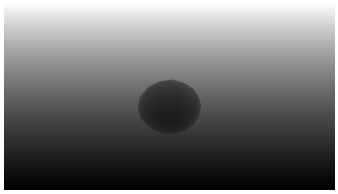


im70; cam4

Figure S1: Examples of color frames from dataset1.



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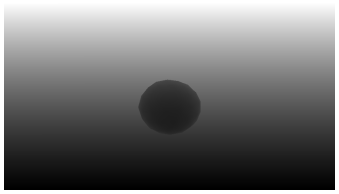

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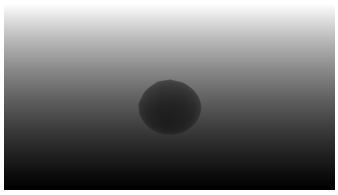

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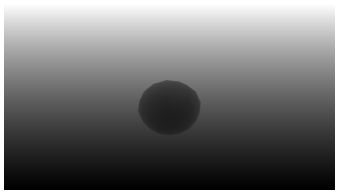
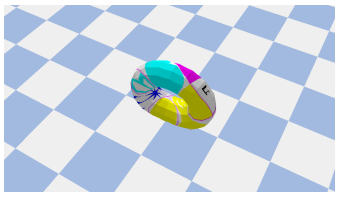


im70; cam4

Figure S2: Examples of depth frames from dataset1.

S1.2 Dataset 2



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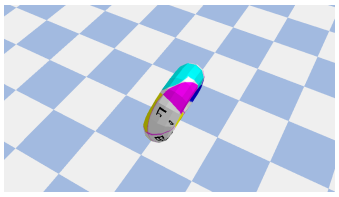

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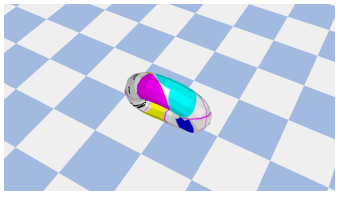
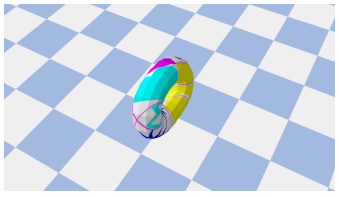
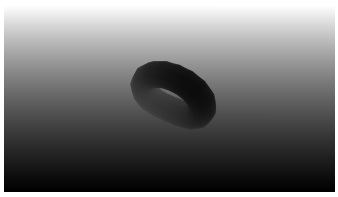


im75; cam3



im75; cam4

Figure S3: Examples of color frames from dataset2.



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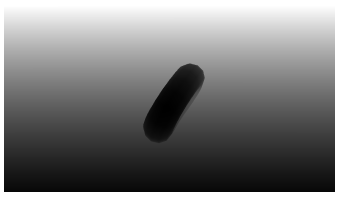

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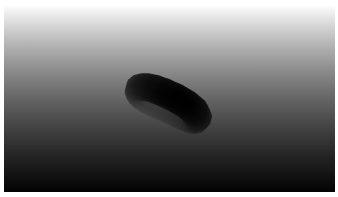

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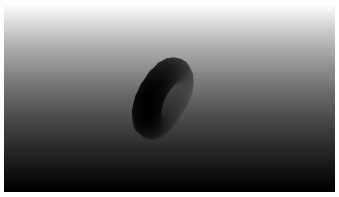
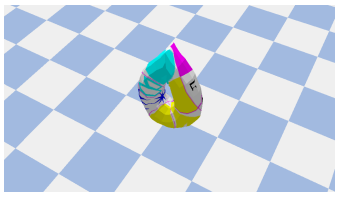


im75; cam4

Figure S4: Examples of depth frames from dataset2.

S1.3 Dataset 3



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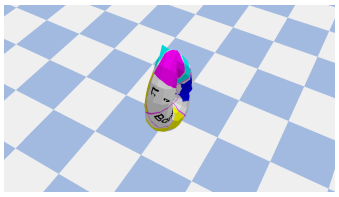

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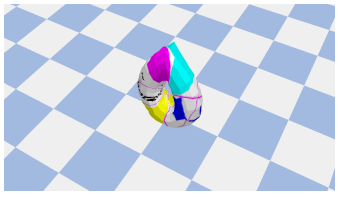

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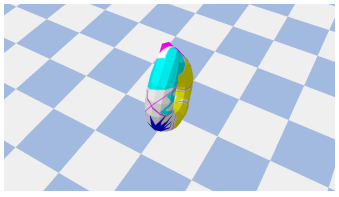
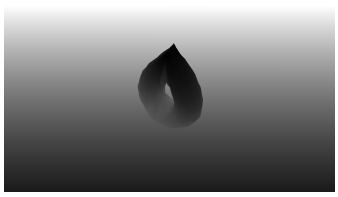


im75; cam4

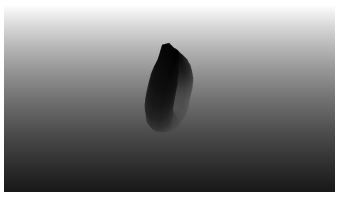
Figure S5: Examples of color frames from dataset3.



im75; cam1

im75; cam2

im75; cam3



im75; cam4

Figure S6: Examples of depth frames from dataset3.

S2 Working Environment of McDeforms

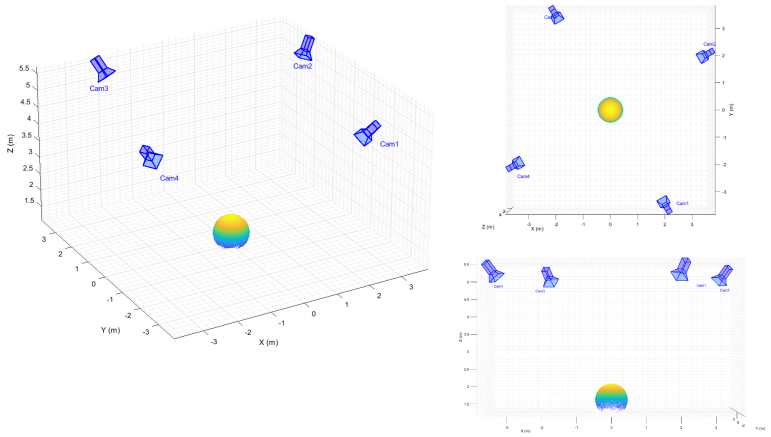


Figure S7: Working environment regarding the dataset 1. On the right side of the image, we can see the XY projection of the 3D space (top) and the XZ projection of the 3D space (bottom).

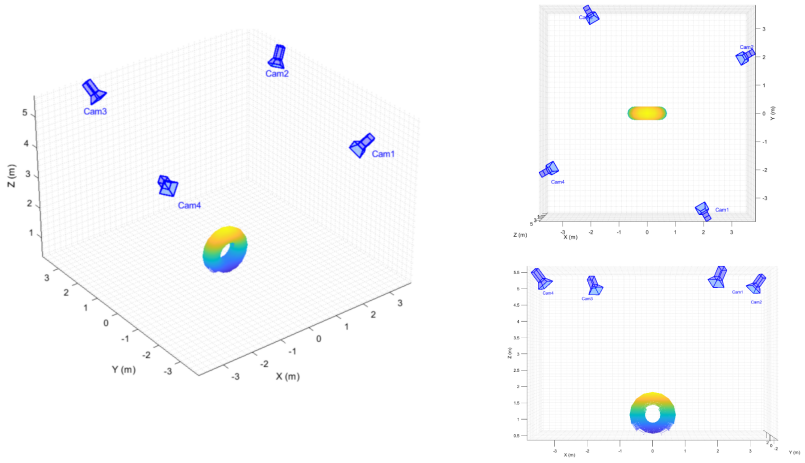


Figure S8: Working environment regarding the datasets 2 and 3. On the right side of the image, we can see the XY projection of the 3D space (top) and the XZ projection of the 3D space (bottom).

S3 EPE, RMSE and AAE tables

In this section, we provide the exact values corresponding to the minimum, maximum and average errors of EPE, RMSE and AAE. For each sequence and for each camera, the underlined values correspond to the minimum, the bold values represent the maximum and the ones with the yellow-shaded entries represent the average values. Comprehensive tables detailing errors across complete sequences can be accessed at https://tinyurl.com/FullTablesError.

S3.1 Dataset 1

Table S1: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 10$.

	EPE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	0.0122	0.0119	0.0087	0.0136	0.0129	0.0133	0.0138	0.0135
t10_20	0.0134	0.0150	0.0138	0.0094	0.0145	0.0143	0.0147	0.0142
t70_80	**0.2839**	**0.2428**	**0.3258**	**0.2774**	**0.2376**	**0.2432**	**0.2814**	**0.2469**
Avg	0.0594	0.0587	0.0632	0.0598	0.0571	0.0589	0.0641	0.0611

Table S2: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 10$.

	RMSE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	0.0154	0.0148	0.0102	0.0156	0.0137	0.0141	0.0144	0.0141
t10_20	0.0172	0.0164	0.0174	0.0105	0.0155	0.0153	0.0154	0.0151
t70_80	**0.2907**	**0.2471**	**0.3283**	**0.2819**	**0.2412**	**0.2462**	**0.2845**	**0.2630**
Avg	0.0665	0.0662	0.0702	0.0643	0.0615	0.0642	0.0684	0.0665

Table S3: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 10$.

	AAE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	0.6966	0.6818	0.4964	0.7777	0.7406	0.7622	0.7912	0.7743
t10_20	0.7625	0.8506	0.7842	0.5338	0.8230	0.8114	0.8369	0.8037
t70_80	**15.5293**	**13.1816**	**17.9625**	**15.1875**	**12.9224**	**13.2101**	**15.4417**	**13.4083**
Avg	3.2841	3.2404	3.5093	3.3166	3.1565	3.2617	3.5576	3.3797

Table S4: Number of flow vectors for dataset 1 with $\Delta = 10$.

Seq.	cam1	cam2	cam3	cam4
t0_10	64	61	61	64
t10_20	52	55	65	61
t70_80	11	12	10	11

Table S5: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 4$.

	EPE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.0069	0.0119	0.0071	0.0072	0.0123	0.0120	0.0114	0.0133
t4_8	0.0094	0.0131	0.0058	0.0093	0.0130	0.0121	0.0117	0.0123
t20_24	0.0092	0.0133	0.0117	0.0065	0.0137	0.0130	0.0135	0.0137
t24_28	0.0150	0.0151	0.0119	0.0136	0.0132	0.0119	0.0136	0.0138
t72_76	**0.1587**	**0.1597**	**0.1745**	**0.1291**	**0.1078**	**0.1146**	**0.1220**	**0.1198**
Avg	0.0371	0.0395	0.0381	0.0340	0.0342	0.0346	0.0367	0.0368

Table S6: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 4$.

	RMSE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.0079	0.0152	0.0103	0.0089	0.0129	0.0126	0.0119	0.0138
t4_8	0.0103	0.0155	0.0071	0.0108	0.0137	0.0128	0.0122	0.0128
t20_24	0.0123	0.0145	0.0148	0.0077	0.0143	0.0137	0.0140	0.0142
t72_76	**0.1604**	**0.1661**	**0.1782**	**0.1361**	**0.1113**	**0.1179**	**0.1232**	**0.1230**
Avg	0.0409	0.0436	0.0424	0.0374	0.0371	0.0377	0.0398	0.0396

Table S7: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 1 with $\Delta = 4$.

	AAE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.3927	0.6814	0.4079	0.4148	0.7032	0.6864	0.6533	0.7631
t4_8	0.5380	0.7487	0.3310	0.5332	0.7449	0.6925	0.6718	0.7032
t20_24	0.5267	0.7603	0.6663	0.3728	0.7800	0.7402	0.7739	0.7801
t24_28	0.8575	0.8592	0.6801	0.7742	0.7513	0.6796	0.7746	0.7856
t72_76	**9.0216**	**9.0747**	**9.9135**	**7.3277**	**6.1110**	**6.4937**	**6.9148**	**6.7892**
Avg	2.4260	1.9948	1.7409	1.5635	1.8740	1.6433	2.1332	1.8767

Table S8: Number of flow vectors for dataset 1 with $\Delta = 4$.

Seq.	cam1	cam2	cam3	cam4
t0_4	64	61	61	64
t4_8	64	62	71	63
t20_24	42	53	52	51
t24_28	38	42	45	43
t72_76	21	19	17	21

S3.2 Dataset 2

Table S9: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 10$.

	EPE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	0.0179	0.0207	0.0170	0.0180	0.0798	0.0968	0.0763	0.0899
t20_30	**0.2465**	**0.2025**	**0.2640**	**0.2160**	**0.2440**	**0.2362**	**0.2674**	**0.1970**
t140_150	0.0478	0.0512	0.0474	0.0443	0.0477	0.0479	0.0454	0.0550
Avg	0.1018	0.0961	0.0983	0.0974	0.1065	0.1291	0.1384	0.1123

Table S10: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 10$.

	RMSE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	0.0229	0.0280	0.0258	0.0251	0.0939	0.1119	0.0876	0.1016
t20_30	**0.2751**	**0.2288**	**0.2958**	**0.2433**	**0.2653**	**0.2640**	**0.2913**	**0.2416**
t140_150	0.0528	0.0553	0.0518	0.0480	0.0518	0.0510	0.0494	0.0580
Avg	0.1178	0.1112	0.1134	0.1137	0.1176	0.1462	0.1591	0.1263

Table S11: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 10$.

	AAE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_10	1.0008	1.1603	0.9490	1.0071	4.4814	5.4392	4.2887	5.0565
t20_30	**13.6950**	**11.4263**	**14.6339**	**12.0692**	**13.6520**	**13.3192**	**14.9121**	**11.0849**
t140_150	2.7283	2.9242	2.7062	2.5335	2.7284	2.7345	2.5944	3.1459
Avg	5.6952	5.3768	5.4844	5.4548	5.9653	7.2097	7.6968	6.2843

Table S12: Number of flow vectors for dataset 2 with $\Delta = 10$.

cam1	cam2	cam3	cam4	
t0_10	128	103	142	95
t20_30	52	30	51	25
t140_150	125	157	120	104

Table S13: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 4$.

	EPE							
	RAFT-3D				CPD			
t0_4	0.0076	0.0128	0.0110	0.0155	0.0736	0.0911	0.0693	0.0858
t4_8	0.0119	0.0185	0.0097	0.0077	0.0646	0.0953	0.0652	0.0971
t20_24	**0.1225**	**0.1121**	**0.1391**	**0.0984**	**0.1305**	0.1310	**0.1330**	**0.1353**
t32_36	0.0833	0.0867	0.0806	0.0796	0.0939	**0.1360**	0.0903	0.1148
t80_84	0.0286	0.0324	0.0413	0.0363	0.0272	0.0965	0.0885	0.0433
t144_148	0.0221	0.0252	0.0202	0.0218	0.0279	0.0312	0.0317	0.0311
Avg	0.0427	0.0422	0.0452	0.0427	0.0531	0.0854	0.0763	0.0665

Table S14: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 4$.

	RMSE							
	RAFT-3D				CPD			
t0_4	0.0139	0.0178	0.0234	0.0205	0.0894	0.1074	0.0821	0.0981
t4_8	0.0144	0.0219	0.0131	0.0086	0.0752	0.1124	0.0749	0.1145
t8_12	0.0235	0.0160	0.0182	0.0180	0.0656	0.1172	0.0646	0.0896
t12_16	0.0155	0.0242	0.0114	0.0241	0.0788	0.0885	0.0787	0.0917
t20_24	**0.1337**	**0.1251**	**0.1532**	**0.1161**	**0.1387**	0.1451	**0.1442**	**0.1484**
t60_64	0.0221	0.0257	0.0207	0.0317	0.0497	**0.1453**	0.0956	0.0818
t144_148	0.0251	0.0280	0.0221	0.0248	0.0307	0.0328	0.0349	0.0326
Avg	0.0495	0.0480	0.0522	0.0491	0.0588	0.0983	0.0885	0.0737

Table S15: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 2 with $\Delta = 4$.

	AAE							
	RAFT-3D				CPD			
t0_4	0.4350	0.7339	0.6308	0.8842	4.1956	5.1835	3.9570	4.8941
t4_8	0.6780	1.0509	0.5557	0.4406	3.6857	5.4091	3.7207	5.5134
t12_16	0.6926	1.0766	0.5548	1.1252	4.2282	4.4162	4.2369	4.6120
t20_24	**6.9488**	**6.3769**	**7.8810**	**5.6046**	**7.4138**	7.4492	**7.5480**	**7.6948**
t32_36	4.7521	4.9511	4.6080	4.5446	5.3576	**7.7453**	5.1591	6.5436
t80_84	1.6359	1.8539	2.3620	2.0781	1.5558	5.4722	4.9563	2.4707
t144_148	1.2653	1.4442	1.1575	1.2499	1.6006	1.7852	1.8141	1.7833
Avg	2.4340	2.4093	2.5802	2.4355	3.0315	4.8469	4.3342	3.7868

Table S16: Number of flow vectors for dataset 2 with $\Delta = 4$.

Seq.	cam1	cam2	cam3	cam4
t0_4	128	103	142	95
t4_8	91	64	102	64
t8_12	63	45	75	42
t12_16	45	30	48	33
t20_24	52	30	51	25
t32_36	45	62	53	62
t60_64	123	107	83	66
t80_84	94	47	61	55
t144_148	129	154	119	112

S3.3 Dataset 3

Table S17: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 10$.

	EPE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t10_20	**0.0976**	**0.0976**	**0.0946**	**0.0861**	**0.1105**	**0.1379**	**0.1118**	**0.1332**
t110_120	0.0093	0.0215	0.0144	0.0148	0.0251	0.0694	0.0262	0.0648
t130_t140	0.0082	0.0119	0.0108	0.0119	0.0214	0.0681	0.0253	0.0656
t140_150	0.0085	0.0114	0.0117	0.0120	0.0206	0.0603	0.0244	0.0669
Avg	0.0235	0.0292	0.0278	0.0253	0.0382	0.0794	0.0417	0.0774

Table S18: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 10$.

	RMSE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t10_20	**0.1144**	**0.1192**	**0.1058**	**0.1007**	**0.1241**	**0.1504**	**0.1258**	**0.1455**
t110_120	0.0104	0.0261	0.0165	0.0168	0.0272	0.0757	0.0283	0.0742
t130_t140	0.0094	0.0142	0.0124	0.0132	0.0234	0.0745	0.0274	0.0745
t140_150	0.0098	0.0138	0.0133	0.0134	0.0224	0.0650	0.0263	0.0795
Avg	0.0269	0.0346	0.0322	0.0296	0.0423	0.0876	0.0461	0.0886

Table S19: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 10$.

	AAE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t10_20	**5.4736**	**5.4810**	**5.2895**	**4.8155**	**6.2243**	**7.7310**	**6.2948**	**7.4571**
t110_120	0.5314	1.2301	0.8259	0.8457	1.4360	3.9659	1.4995	3.7050
t130_t140	0.4694	0.6828	0.6184	0.6829	1.2278	3.8892	1.4487	3.7500
t140_150	0.4863	0.6532	0.6685	0.6901	1.1791	3.4498	1.3967	3.8204
Avg	1.3352	1.6620	1.5808	1.4386	2.1773	4.5223	2.3750	4.4032

Table S20: Number of flow vectors for dataset 3 with $\Delta = 10$.

Seq.	cam1	cam2	cam3	cam4
t10_20	85	58	99	58
t110_120	96	75	88	78
t130_140	83	78	84	83
t140_150	89	77	91	80

Table S21: Minimum, maximum and average values of EPE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 4$.

	EPE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.0134	0.0176	0.0132	0.0160	**0.0721**	0.0914	0.0696	0.0873
t8_12	0.0372	0.0326	0.0408	0.0341	0.0659	0.0898	0.0701	**0.0982**
t12_16	**0.0438**	**0.0419**	**0.0524**	**0.0494**	0.0686	**0.0997**	**0.0728**	0.0969
t108_112	0.0056	0.0101	0.0097	0.0132	0.0232	0.0674	0.0247	0.0671
t116_120	0.0064	0.0076	0.0096	0.0107	0.0216	0.0643	0.0242	0.0689
t128_132	0.0064	0.0083	0.0082	0.0084	0.0214	0.0690	0.0234	0.0643
t136_140	0.0061	0.0084	0.0081	0.0096	0.0209	0.0646	0.0227	0.0603
t140_144	0.0058	0.0089	0.0079	0.0095	0.0206	0.0615	0.0230	0.0667
t144_148	0.0072	0.0084	0.0074	0.0088	0.0210	0.0595	0.0223	0.0646
Avg	0.0118	0.0163	0.0165	0.0165	0.0321	0.0736	0.0374	0.0731

Table S22: Minimum, maximum and average values of RMSE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 4$.

	RMSE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.0192	0.0214	0.0225	0.0216	**0.0893**	0.1069	0.0828	0.1027
t4_8	0.0284	0.0282	0.0282	0.0286	0.0792	0.1042	0.0815	**0.1167**
t12_16	**0.0514**	**0.0488**	**0.0580**	**0.0579**	0.0792	**0.1146**	**0.0860**	0.1068
t108_112	0.0063	0.0118	0.0113	0.0152	0.0256	0.0734	0.0272	0.0761
t116_120	0.0074	0.0092	0.0108	0.0119	0.0239	0.0697	0.0267	0.0810
t136_140	0.0072	0.0109	0.0093	0.0101	0.0230	0.0696	0.0250	0.0704
t140_144	0.0071	0.0111	0.0090	0.0102	0.0227	0.0664	0.0253	0.0798
t144_148	0.0084	0.0107	0.0084	0.0094	0.0229	0.0641	0.0244	0.0768
Avg	0.0135	0.0190	0.0190	0.0190	0.0361	0.0824	0.0433	0.0847

Table S23: Minimum, maximum and average values of AAE error for 3D flow estimated by RAFT-3D and CPD for dataset 3 with $\Delta = 4$.

	AAE							
	RAFT-3D				CPD			
Seq.	cam1	cam2	cam3	cam4	cam1	cam2	cam3	cam4
t0_4	0.7661	1.0073	0.7565	0.9137	**4.1084**	5.2029	3.9720	4.9716
t8_12	2.1190	1.8581	2.3246	1.9434	3.7622	5.1013	3.9956	**5.5724**
t12_16	**2.4964**	**2.3875**	**2.9840**	**2.8140**	3.9166	**5.6585**	**4.1518**	5.5119
t108_112	0.3186	0.5802	0.5574	0.7575	1.3269	3.8536	1.4120	3.8314
t116_120	0.3693	0.4368	0.5496	0.6139	1.2398	3.6757	1.3855	3.9346
t128_132	0.3653	0.4782	0.4694	0.4793	1.2250	3.9408	1.3415	3.6753
t140_144	0.3320	0.5099	0.4552	0.5454	1.1786	3.5163	1.3170	3.8076
t144_148	0.4108	0.4799	0.4236	0.5050	1.2020	3.4033	1.2763	3.6854
Avg	0.6744	0.9306	0.9306	0.9441	1.8366	4.1984	2.1398	4.1679

Table S24: Number of flow vectors for dataset 3 with $\Delta = 4$.

Seq.	cam1	cam2	cam3	cam4
t0_4	126	104	141	94
t4_8	97	80	119	80
t8_12	84	60	98	62
t12_16	90	58	94	62
t108_112	100	82	90	79
t116_120	90	79	91	84
t128_132	86	72	86	81
t136_140	86	73	94	82
t140_144	89	77	91	80
t144_148	85	76	87	84

S4 Examples of 3D flow estimation for some of the dataset sequences

S4.1 Dataset 1, $\Delta = 10$

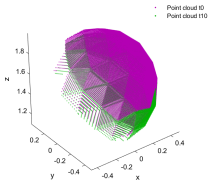


Figure S9: Point clouds for t_0 and t_{10} from dataset 1 (camera 1).

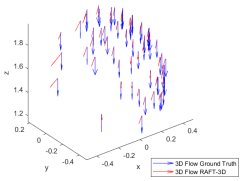


Figure S10: 3D flow between t_0 and t_{10} from dataset 1 (camera 1) estimated by RAFT-3D method.

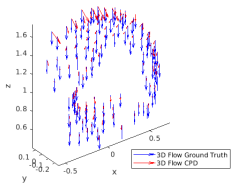


Figure S11: 3D flow between t_0 and t_{10} from dataset 1 (camera 1) estimated by CPD method.

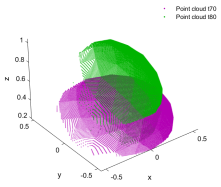


Figure S12: Point clouds for t_{70} and t_{80} from dataset 1 (camera 1).

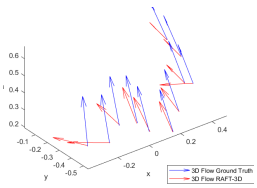


Figure S13: 3D flow between t_{70} and t_{80} from dataset 1 (camera 1) estimated by RAFT-3D method.

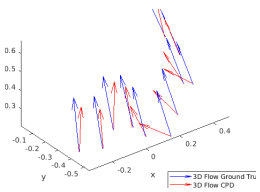


Figure S14: 3D flow between t_{70} and t_{80} from dataset 1 (camera 1) estimated by CPD method.

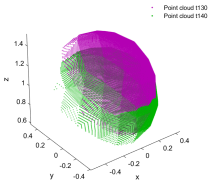


Figure S15: Point clouds for t_{130} and t_{140} from dataset 1 (camera 1).

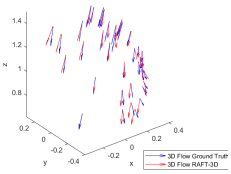


Figure S16: 3D flow between t_{130} and t_{140} from dataset 1 (camera 1) estimated by RAFT-3D method.

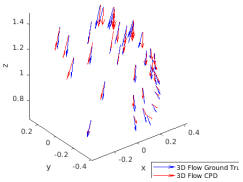


Figure S17: 3D flow between t_{130} and t_{140} from dataset 1 (camera 1) estimated by CPD method.

S4.2 Dataset 2, $\Delta = 10$

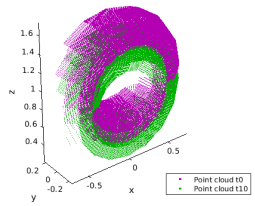


Figure S18: Point clouds for t_0 and t_{10} from dataset 2 (camera 1).

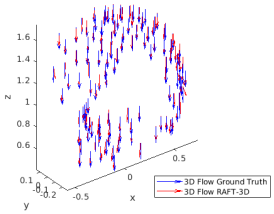


Figure S19: 3D flow between t_0 and t_{10} from dataset 2 (camera 1) estimated by RAFT-3D method.

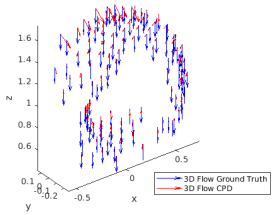


Figure S20: 3D flow between t_0 and t_{10} from dataset 2 (camera 1) estimated by CPD method.

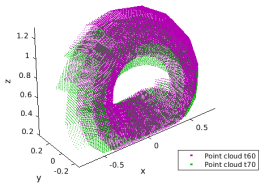


Figure S21: Point clouds for t_{60} and t_{70} from dataset 2 (camera 1).

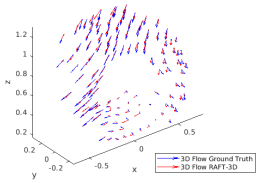


Figure S22: 3D flow between t_{60} and t_{70} from dataset 2 (camera 1) estimated by RAFT-3D method.

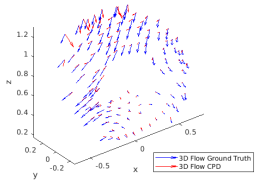


Figure S23: 3D flow between t_{60} and t_{70} from dataset 2 (camera 1) estimated by CPD method.

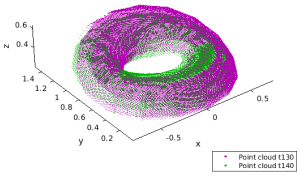


Figure S24: Point clouds for t_{130} and t_{140} from dataset 2 (camera 1).

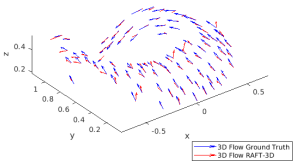


Figure S25: 3D flow between t_{130} and t_{140} from dataset 2 (camera 1) estimated by RAFT-3D method.

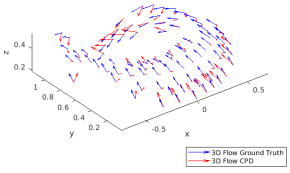


Figure S26: 3D flow between t_{130} and t_{140} from dataset 2 (camera 1) estimated by CPD method.

S4.3 Dataset 3, $\Delta = 10$

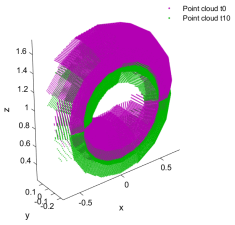


Figure S27: Point clouds for t_0 and t_{10} from dataset 3 (camera 1).

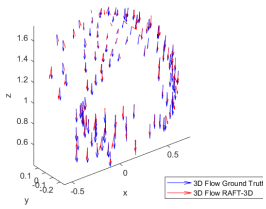


Figure S28: 3D flow between t_0 and t_{10} from dataset 3 (camera 1) estimated by RAFT-3D method.

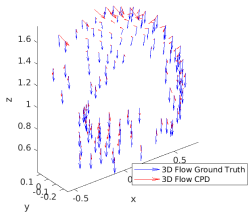


Figure S29: 3D flow between t_0 and t_{10} from dataset 3 (camera 1) estimated by CPD method.

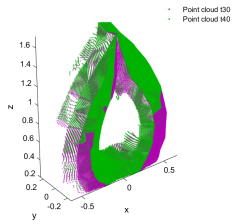


Figure S30: Point clouds for t_{30} and t_{40} from dataset 3 (camera 1).

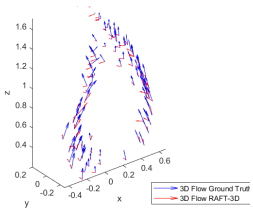


Figure S31: 3D flow between t_{30} and t_{40} from dataset 3 (camera 1) estimated by RAFT-3D method.

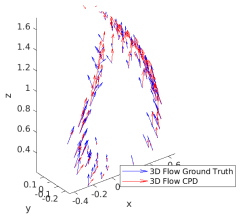


Figure S32: 3D flow between t_{30} and t_{40} from dataset 3 (camera 1) estimated by CPD method.

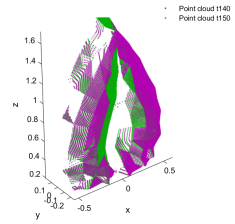


Figure S33: Point clouds for t_{140} and t_{150} from dataset 3 (camera 1).

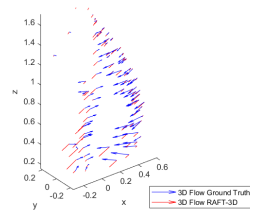


Figure S34: 3D flow between t_{140} and t_{150} from dataset 3 (camera 1) estimated by RAFT-3D method.

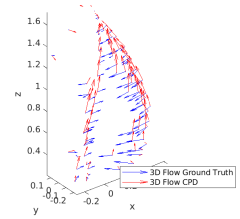


Figure S35: 3D flow between t_{140} and t_{150} from dataset 3 (camera 1) estimated by CPD method.