Supplemental Material

The Method of Moving Frames for Surface Global Parametrization

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1 INFLUENCE OF INITIALIZATION AND DISTORTION OVER THE FINAL RESULT

In this section, we extend the analysis of Fig. 9 and Section 8.3 to the other distortion metrics optimized through our work. For both $\mathcal{D}_{\text{ARAP}}$ and $\mathcal{D}_{\text{LSCM}}$, the optimization converges to a very similar cone distribution, provided a reasonable initialization. On the other hand, $\mathcal{D}_{\text{AREA}}$ only has a limited impact on the final cone distribution. This is due to the fact that the class of area-preserving deformation is not constraining enough for the topology to evolve during optimization.

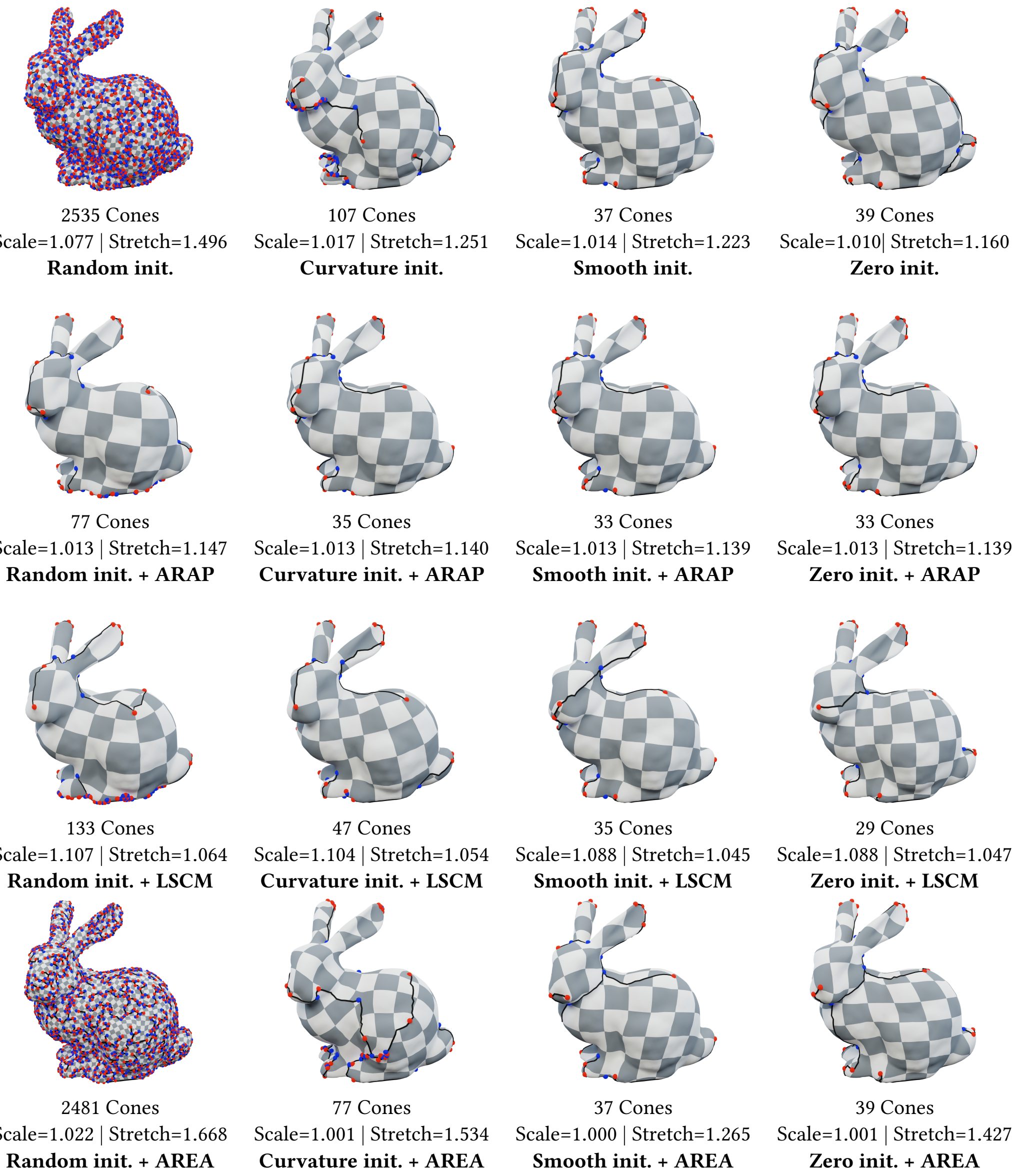


Fig. 1. Parametrization of the Stanford Bunny with different frame field initializations. From left to right: random frame per vertex, principal curvature direction, smooth frame field [Viertel and Osting 2019] and zero except on boundary vertices. Rows are optimized respectively : without distortion, along $\mathcal{D}_{\text{ARAP}}$, along $\mathcal{D}_{\text{LSCM}}$ and along $\mathcal{D}_{\text{AREA}}$.

2 COMPARISON OF QUAD MESHES

Here, we compare global statistics over quadmeshes obtained by computing an integer grid map using [Bommes et al. 2013] and by then extracting quads with [Ebke et al. 2013]. Our parametrization was obtained without optimizing for a distortion, and initialized with curvature directions. According to the histograms plotted for the angle distribution and the stretch distortion, our method leads to less stretched and more rectangular quads.

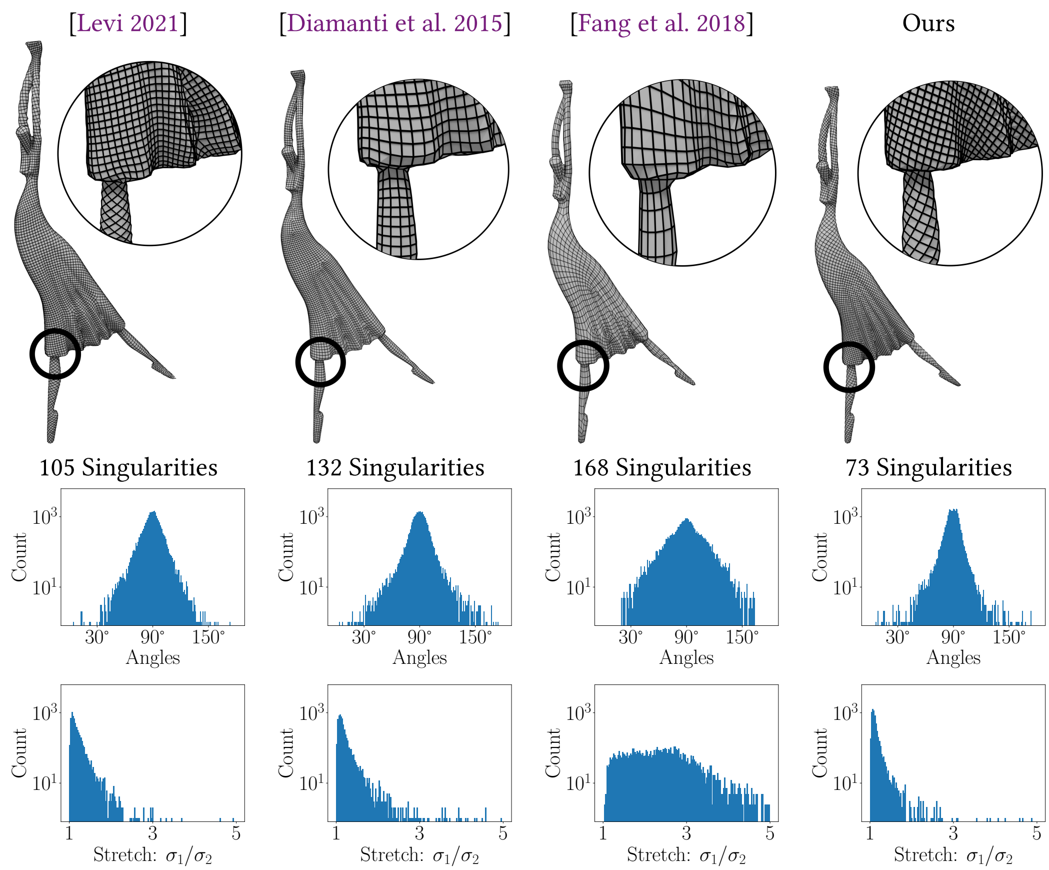


Fig. 2. Comparison of quadmeshes obtained by three concurrent algorithms with ours on the dancer model. Top row: quad meshes. Second row: angle distribution over the model. Third row: histograms of stretch distortion over elements. Our method yields minimal stretch and most orthogonal quads.

3 COMPARISON WITH DIRECT SEAMLESS PARAMETRIZATION

In this experiment, we compare the stretch distortion over all triangles on 12 common models with the Direct Seamless Parametrization (DSP) method [Levi 2021]. DSP aim at minimizing the maximal stretch distortion over triangle, while our method minimizes the mean value. Overall, while the maximal stretch is higher for us in every cases (for a limited amount of triangles around singularities), we obtain a lower value of stretch distortion for a majority of the triangles.

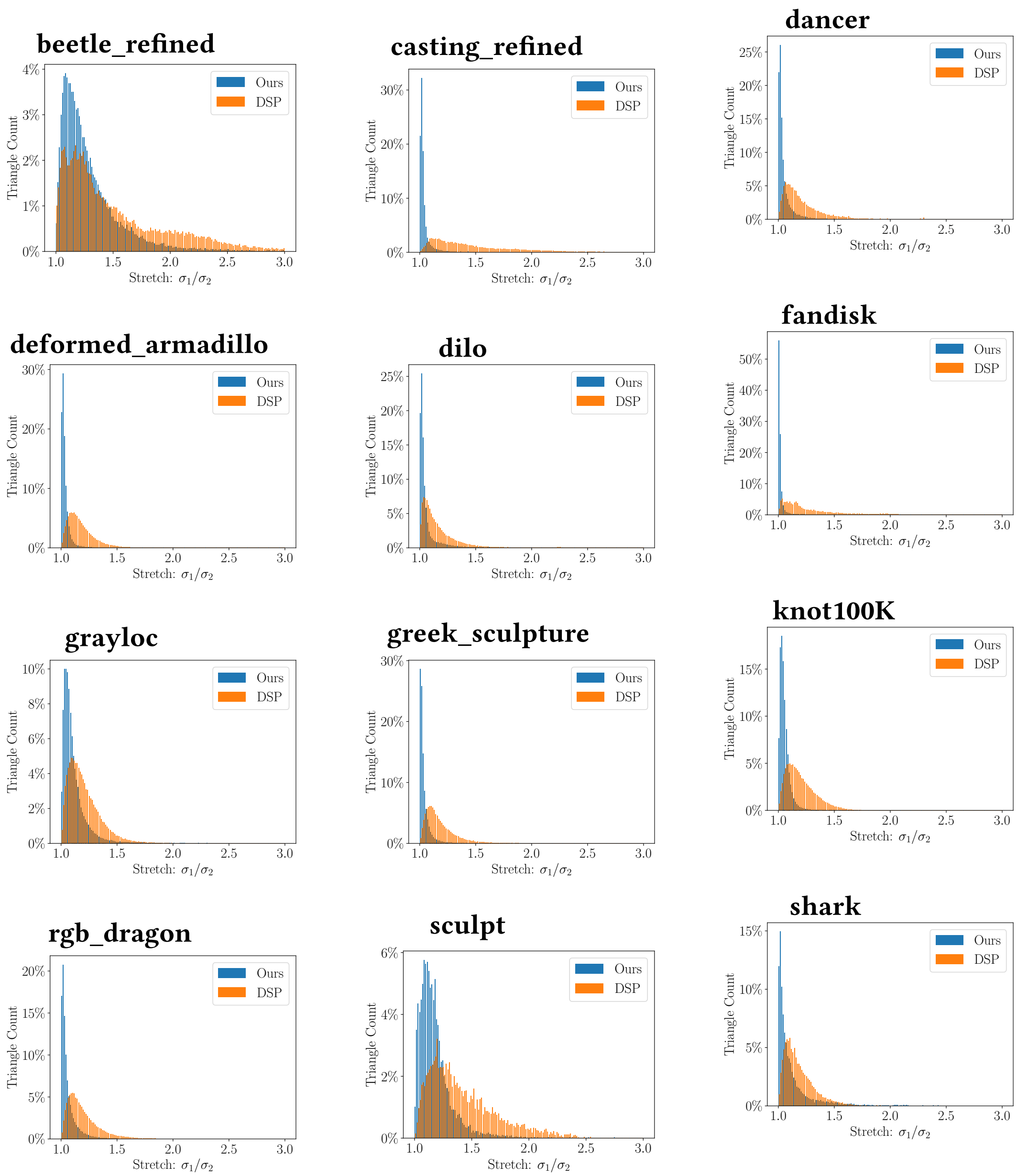
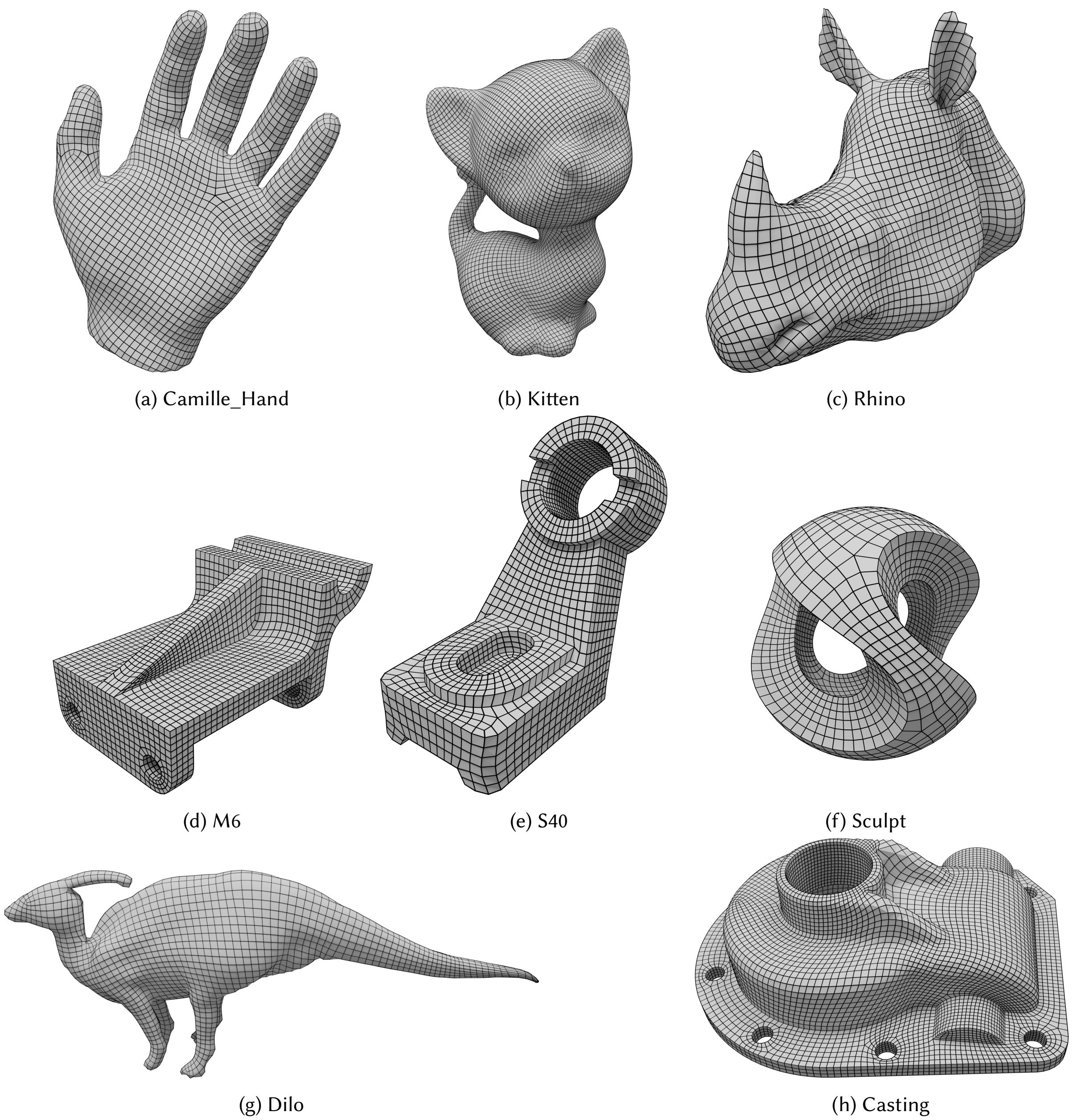


Fig. 3. Stretch distortion histograms for 12 common models with [Levi 2021]. While our maximal value of stretch over triangles is greater for every model, a majority of triangles present less distortion with our method.

4 QUADMESH GALLERY



(a) Camille_Hand (b) Kitten (c) Rhino

(d) M6 (e) S40 (f) Sculpt

(g) Dilo (h) Casting

Fig. 4. Render of some quad models extracted from our parameterizations.

5 MODEL GALLERY

In this section, we provide statistics and renders for the 276 models of our database. For each test case, we provide :

- the triangle count,
- the final value of our objective function (a value >1e-4 is considered a failed optimization),
- the number of cones,
- the mean *scale* and *stretch* distortion over all triangles

for two cases of optimization. The first case is the one described in the result section of the article : simple optimization without distortion. The second case is the minimization of $\mathcal{D}_{\text{LSCM}}$.

Additionally, we display a render of the model with its parametrization as a checker texture, seams and feature edges as black lines and singularity cones as blue (for $-\pi/2$) or red (for index $\pi/2$) points.

On the left column, we show an histogram of the stretch distortion over all triangles.

5.1 Failure cases

Over a total of 274 models, 19 failed to produce a valid seamless parametrization without distortion. Statistics for these models as well as the broken parameterization are still presented below.

On the database without features (131 models), 8 models failed due to bad geometry : *ramses*, *femur*, *block*, *twirl*, *focal-octa*, *mannequin-devil*, *robocat-deci*, *sharp-sphere*. For the models *ramses* and *femur*, we provide correct results on a remeshing with a similar number of triangles and level of details (*ramses_r* and *femur_r*). For the models *sharp-sphere*, *block* and *focal-octa*, it is worth mentioning that our algorithm still converges when $\mathcal{D}_{\text{LSCM}}$ is minimized.

On the database with feature edges (143 models), the 11 failed results are : *metatron*, *S22*, *S24*, *S25*, *S26*, *abca_00004035*, *vis*, *B21* and *B49*. The two latter are the two failure cases due to a limit cycle, and did not output any parametrization. 3 other models (*block*, *sharp-sphere* and *twirl*) were already counted in the no feature case and are still failing here.

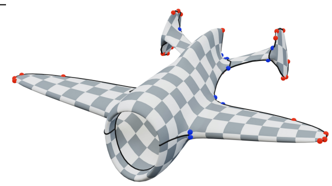
For the *S24* model, we provide correct results for a remeshing of the model (*S24r*). A similar remeshing operation fixes at least models *S22*, *S25* and *S26*.

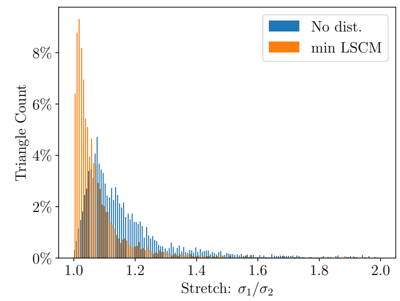
The case where a model provides a valid parametrization without distortion but fails when optimized for $\mathcal{D}_{\text{LSCM}}$ also happens 8 times for some high triangle count models, namely *brain100K*, *grayloc*, *igea100k*, *rgb_dragon*, *B31*, *M7*, *M9* and *S9*. This is due to the triggering of one of the early stopping of the optimization : either the maximal number of iterations was reached, or the energy gained in the last few iterations was too small.

5.2 Models without feature edges

aircraft
Triangles: 4760

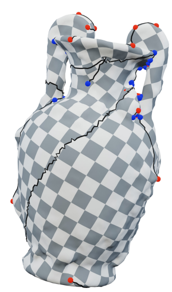
	No dist.	min LSCM
Energy:	3.046E-08	4.125E-07
Time:	31s	85s
#Singus:	46	52
Scale:	1.015	1.027
Stretch:	1.158	1.08

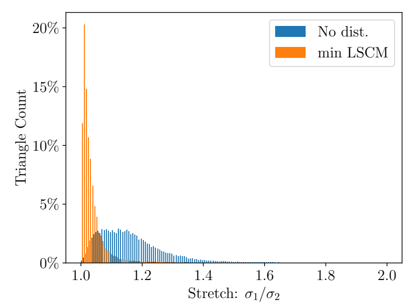




amphora
Triangles: 27119

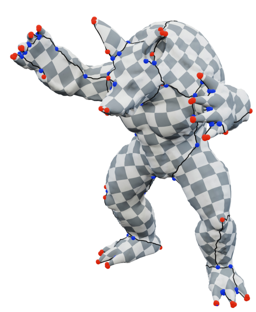
	No dist.	min LSCM
Energy:	4.165E-08	8.451E-06
Time:	331s	810s
#Singus:	88	88
Scale:	1.012	1.058
Stretch:	1.167	1.034

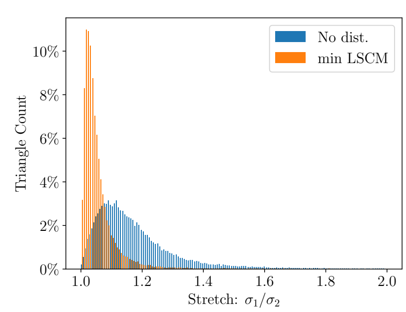




armadillo
Triangles: 43420

	No dist.	min LSCM
Energy:	5.010E-08	1.993E-07
Time:	868s	1572s
#Singus:	138	130
Scale:	1.011	1.084
Stretch:	1.185	1.06

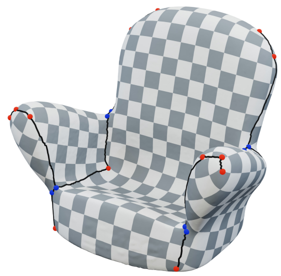


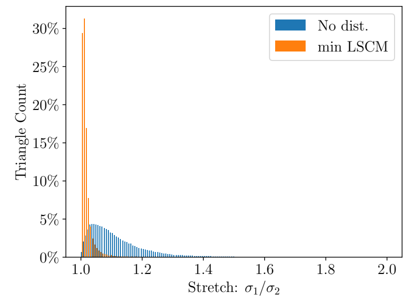


armchair

Triangles: 100056

	No dist.	min LSCM
Energy:	4.269E-09	1.730E-05
Time:	3304s	5317s
#Singus:	26	28
Scale:	1.007	1.07
Stretch:	1.111	1.018

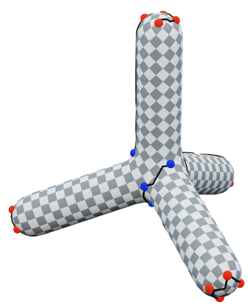


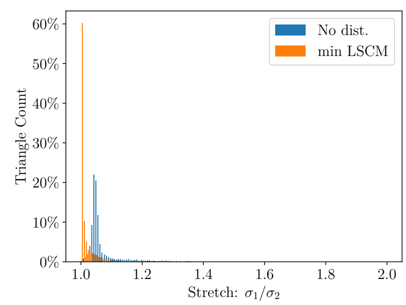


axes

Triangles: 7514

	No dist.	min LSCM
Energy:	1.991E-08	1.195E-05
Time:	37s	127s
#Singus:	24	24
Scale:	1.007	1.021
Stretch:	1.08	1.029

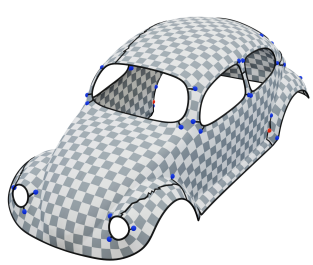


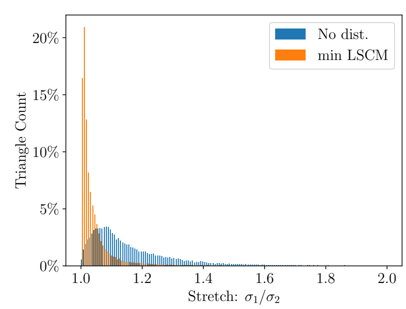


beetle_refined

Triangles: 38814

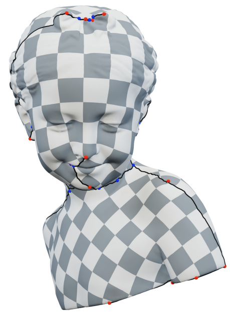
	No dist.	min LSCM
Energy:	2.380E-08	5.339E-08
Time:	442s	1228s
#Singus:	58	58
Scale:	1.008	1.032
Stretch:	1.149	1.04

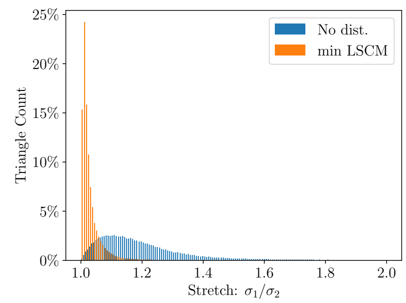




bimba100K
Triangles: 100136

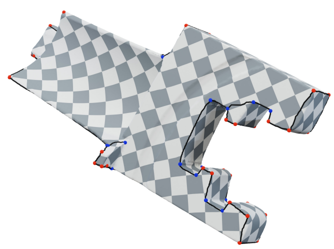
	No dist.	min LSCM
Energy:	1.298E-08	3.697E-06
Time:	2003s	4538s
#Singus:	74	68
Scale:	1.013	1.065
Stretch:	1.176	1.023

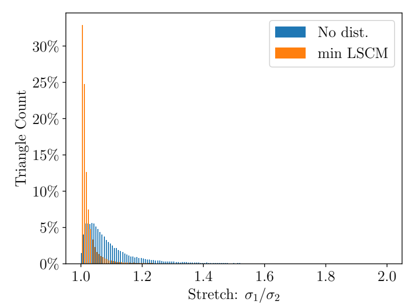




blade
Triangles: 58662

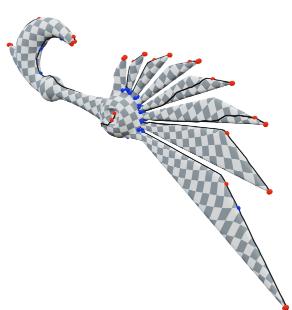
	No dist.	min LSCM
Energy:	8.137E-09	1.412E-07
Time:	1205s	2085s
#Singus:	62	58
Scale:	1.004	1.012
Stretch:	1.079	1.02

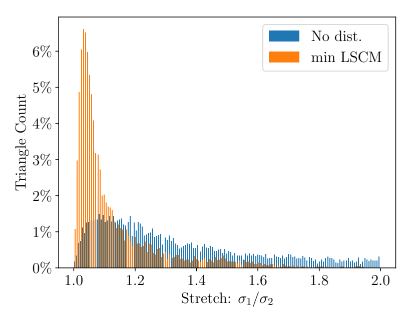




blade_earing_5000
Triangles: 10218

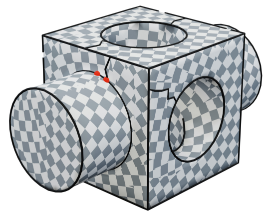
	No dist.	min LSCM
Energy:	2.248E-08	3.599E-07
Time:	102s	255s
#Singus:	92	92
Scale:	1.058	1.293
Stretch:	1.462	1.133

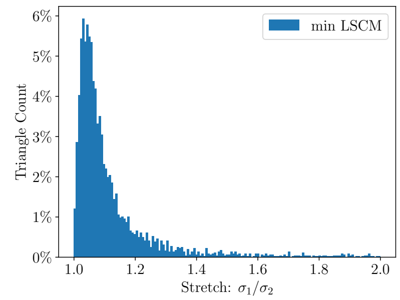




block
Triangles: 4360

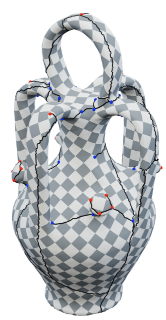
	No dist.	min LSCM
Energy:	3.060E+01	5.324E-07
Time:	77s	590s
#Singus:	40	44
Scale:	1.007	1.033
Stretch:	1.052	1.109

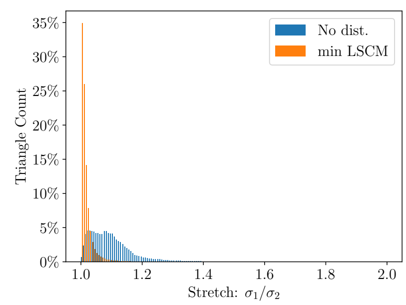




botijo
Triangles: 82492

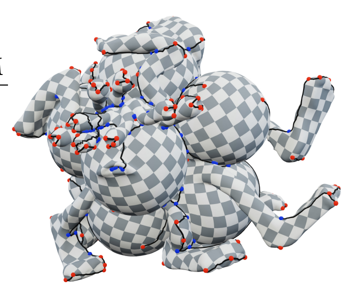
	No dist.	min LSCM
Energy:	1.000E-08	2.860E-07
Time:	1300s	3077s
#Singus:	80	80
Scale:	1.005	1.043
Stretch:	1.104	1.021

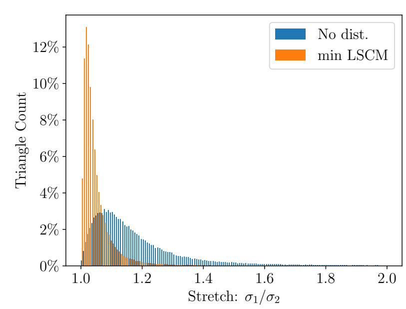




bozbezbozzel100K
Triangles: 100776

	No dist.	min LSCM
Energy:	5.842E-08	6.057E-07
Time:	2642s	4125s
#Singus:	388	388
Scale:	1.011	1.067
Stretch:	1.159	1.047

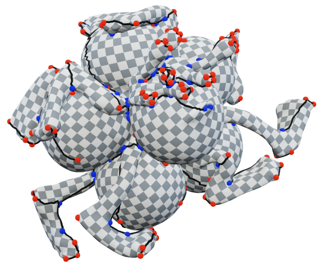


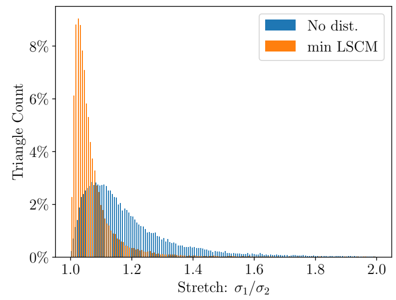


bozbezbozzel50K

Triangles: 50752

	No dist.	min LSCM
Energy:	2.353E-09	2.927E-06
Time:	852s	1669s
#Singus:	372	376
Scale:	1.011	1.048
Stretch:	1.167	1.064

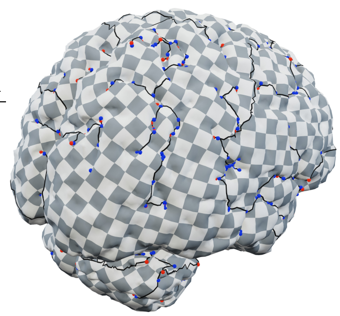


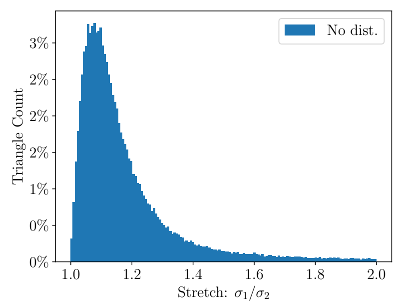


brain100k

Triangles: 104952

	No dist.	min LSCM
Energy:	3.355E-09	1.646E-02
Time:	5136s	7820s
#Singus:	2460	2476
Scale:	1.01	1.031
Stretch:	1.163	1.097

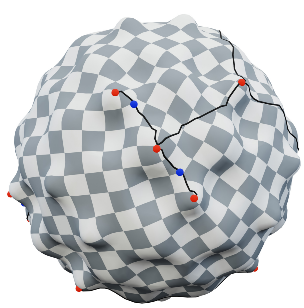


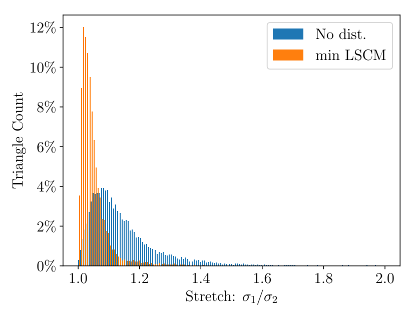


bumpy_sphere

Triangles: 11492

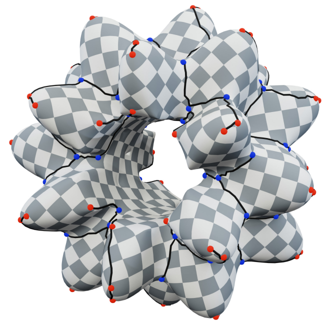
	No dist.	min LSCM
Energy:	4.995E-08	4.495E-06
Time:	68s	208s
#Singus:	24	24
Scale:	1.008	1.028
Stretch:	1.129	1.051

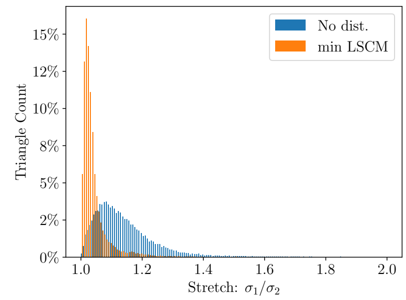




bumpy_torus
Triangles: 33918

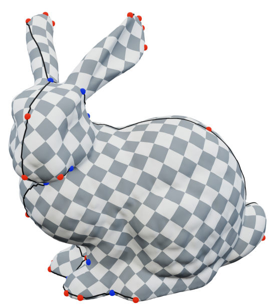
	No dist.	min LSCM
Energy:	5.592E-08	1.029E-05
Time:	363s	829s
#Singus:	142	144
Scale:	1.009	1.034
Stretch:	1.13	1.045

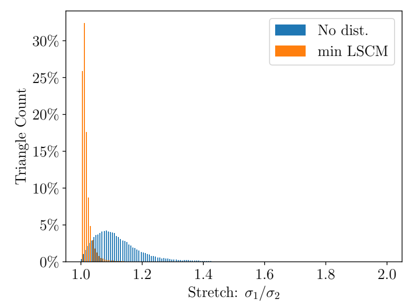




bunny
Triangles: 69706

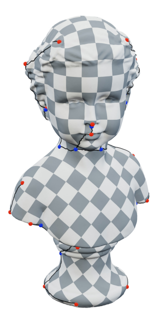
	No dist.	min LSCM
Energy:	2.290E-08	1.353E-07
Time:	777s	2259s
#Singus:	38	38
Scale:	1.007	1.032
Stretch:	1.125	1.02

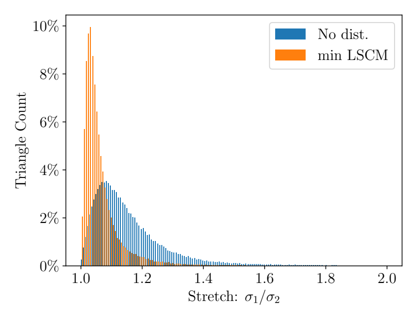




buste
Triangles: 100088

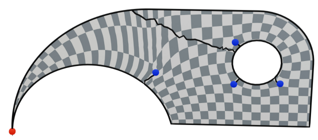
	No dist.	min LSCM
Energy:	2.888E-08	4.781E-08
Time:	2077s	4934s
#Singus:	50	44
Scale:	1.01	1.075
Stretch:	1.144	1.065

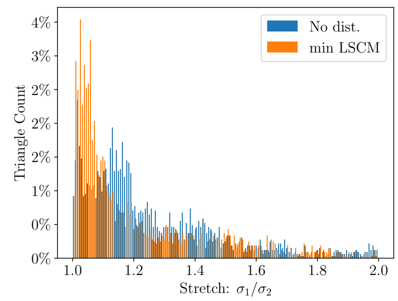




cad_cut0
Triangles: 3247

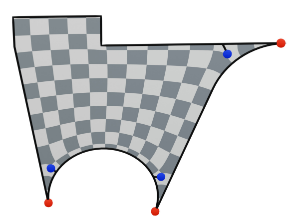
	No dist.	min LSCM
Energy:	6.741E-08	2.530E-08
Time:	28s	68s
#Singus:	8	8
Scale:	1.085	1.079
Stretch:	2.34	2.571

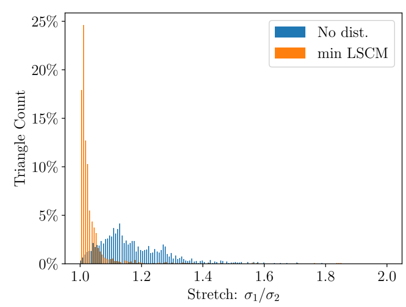




cad_cut1
Triangles: 2152

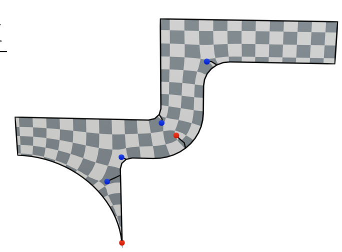
	No dist.	min LSCM
Energy:	5.047E-08	1.013E-06
Time:	12s	55s
#Singus:	12	12
Scale:	1.024	1.09
Stretch:	1.256	1.185

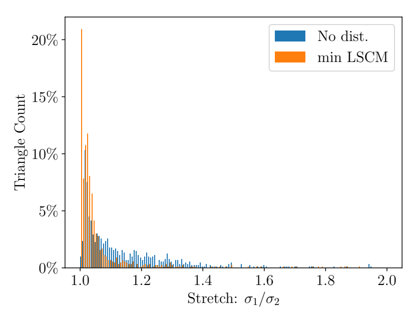




cad_cut2
Triangles: 893

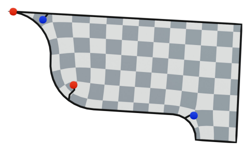
	No dist.	min LSCM
Energy:	2.864E-08	1.585E-06
Time:	8s	29s
#Singus:	12	12
Scale:	1.027	1.105
Stretch:	1.23	1.222

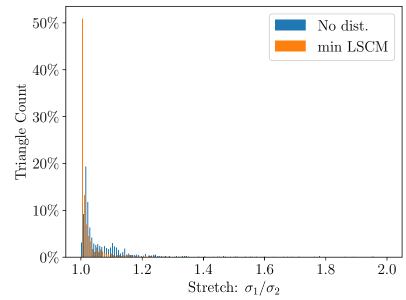




cad_cut3
Triangles: 979

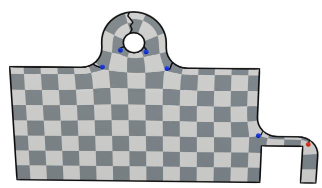
	No dist.	min LSCM
Energy:	6.514E-08	1.049E-06
Time:	6s	27s
#Singus:	8	8
Scale:	1.008	1.022
Stretch:	1.084	1.057

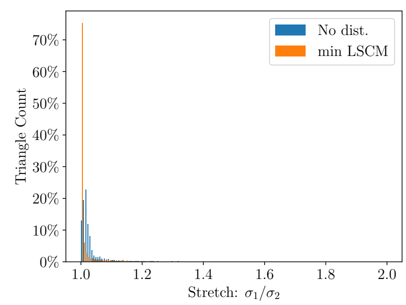




cad_cut4
Triangles: 4604

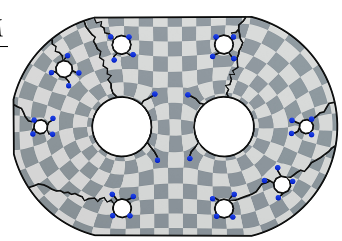
	No dist.	min LSCM
Energy:	4.334E-08	5.632E-06
Time:	18s	105s
#Singus:	14	14
Scale:	1.001	1.014
Stretch:	1.058	1.021

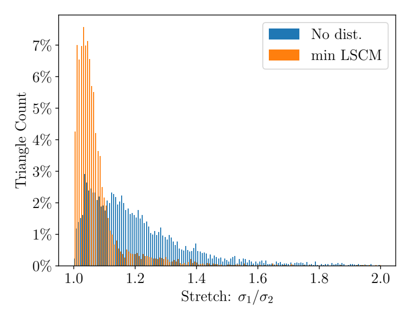




cad_cut5
Triangles: 5610

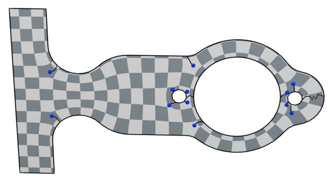
	No dist.	min LSCM
Energy:	3.873E-08	5.893E-06
Time:	35s	95s
#Singus:	36	36
Scale:	1.022	1.115
Stretch:	1.256	1.081

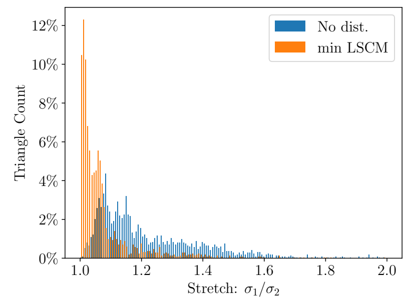




cad_cut6
Triangles: 2127

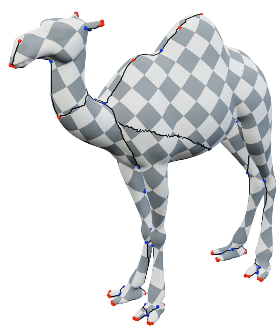
	No dist.	min LSCM
Energy:	7.350E-08	6.106E-06
Time:	12s	44s
#Singus:	16	16
Scale:	1.024	1.11
Stretch:	1.236	1.076

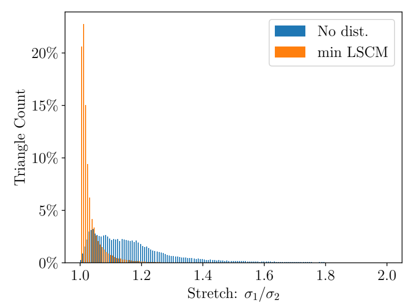




camel
Triangles: 60198

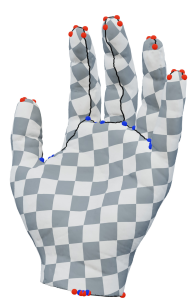
	No dist.	min LSCM
Energy:	3.603E-08	2.663E-07
Time:	910s	1956s
#Singus:	102	100
Scale:	1.013	1.132
Stretch:	1.175	1.025

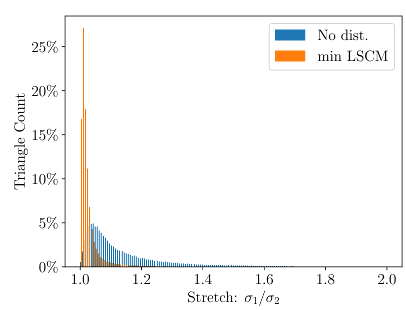




camille_hand100K
Triangles: 100132

	No dist.	min LSCM
Energy:	1.120E-08	1.012E-07
Time:	2363s	4172s
#Singus:	56	66
Scale:	1.012	1.042
Stretch:	1.142	1.029

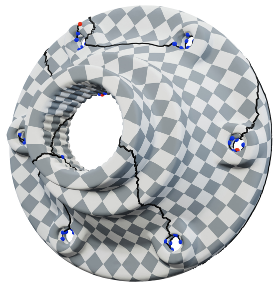


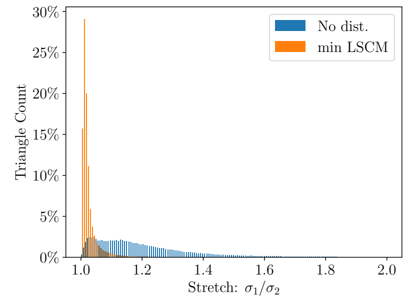


carter100K

Triangles: 100128

	No dist.	min LSCM
Energy:	2.586E-08	1.796E-08
Time:	1874s	4710s
#Singus:	64	64
Scale:	1.014	1.053
Stretch:	1.19	1.023

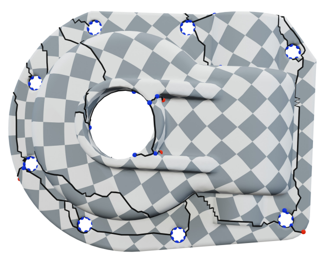


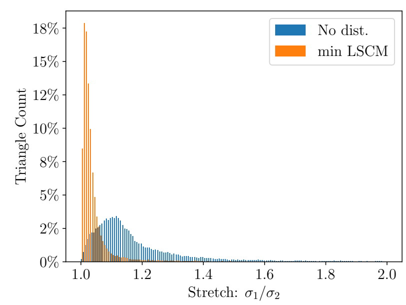


casting_refined

Triangles: 37044

	No dist.	min LSCM
Energy:	4.998E-08	8.883E-07
Time:	488s	1102s
#Singus:	92	96
Scale:	1.01	1.049
Stretch:	1.162	1.038

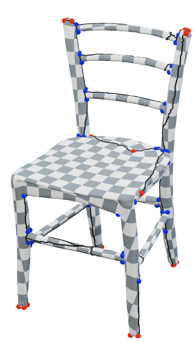


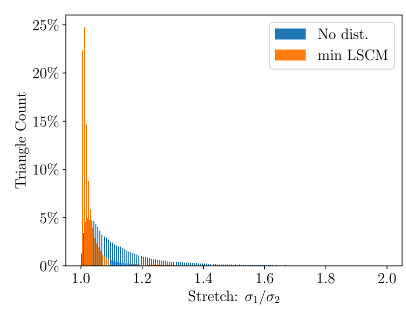


chair

Triangles: 100220

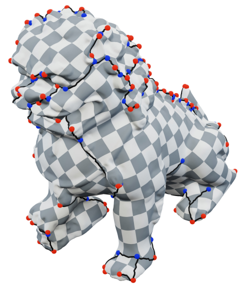
	No dist.	min LSCM
Energy:	4.071E-08	9.117E-08
Time:	2045s	4869s
#Singus:	110	110
Scale:	1.007	1.101
Stretch:	1.133	1.03

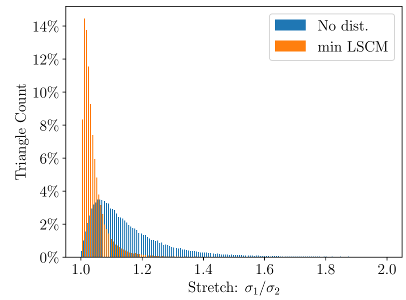




chinese_lion100K
Triangles: 100490

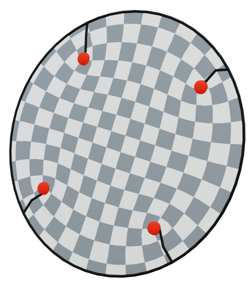
	No dist.	min LSCM
Energy:	4.007E-09	2.879E-07
Time:	2356s	4414s
#Singus:	251	251
Scale:	1.015	1.051
Stretch:	1.173	1.039

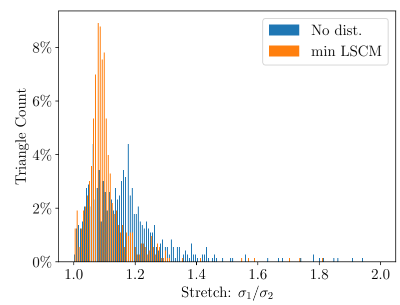




circle
Triangles: 729

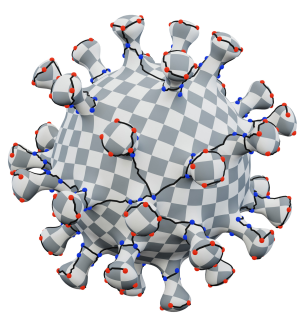
	No dist.	min LSCM
Energy:	1.364E-09	9.486E-06
Time:	3s	22s
#Singus:	4	4
Scale:	1.014	1.217
Stretch:	1.16	1.107

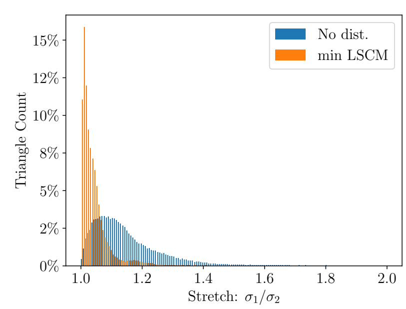




coronavirus
Triangles: 63926

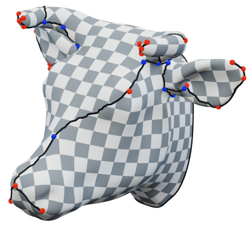
	No dist.	min LSCM
Energy:	2.418E-08	1.102E-05
Time:	945s	1955s
#Singus:	338	338
Scale:	1.01	1.142
Stretch:	1.158	1.043

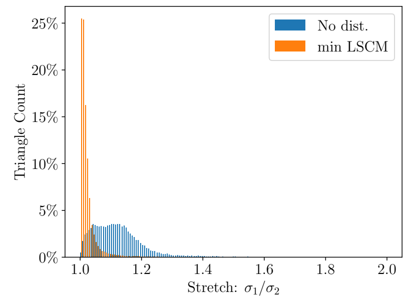




cow
Triangles: 30087

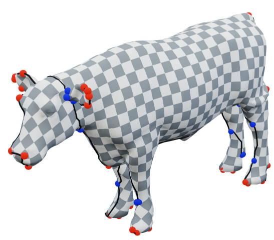
	No dist.	min LSCM
Energy:	1.091E-08	1.204E-06
Time:	272s	750s
#Singus:	44	44
Scale:	1.007	1.053
Stretch:	1.117	1.021

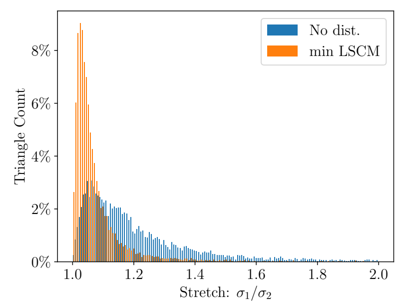




cow2
Triangles: 8758

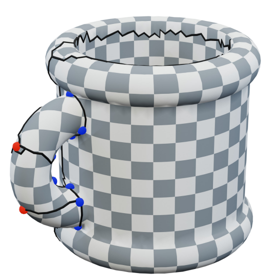
	No dist.	min LSCM
Energy:	8.866E-08	9.421E-08
Time:	90s	215s
#Singus:	66	66
Scale:	1.012	1.054
Stretch:	1.167	1.067

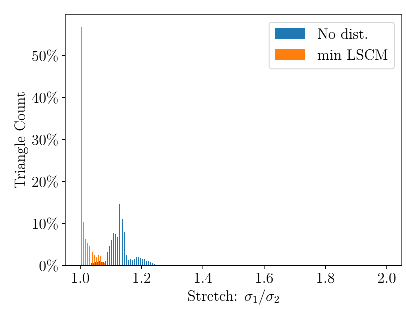




cup
Triangles: 11364

	No dist.	min LSCM
Energy:	1.475E-08	1.612E-08
Time:	82s	266s
#Singus:	12	12
Scale:	1.008	1.037
Stretch:	1.133	1.019

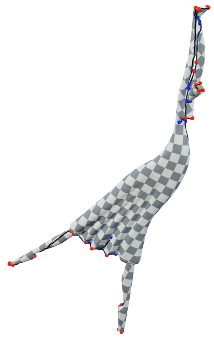


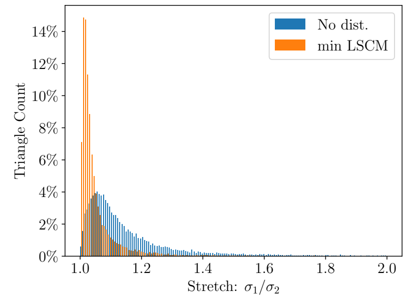


dancer2

Triangles: 18440

	No dist.	min LSCM
Energy:	1.069E-08	3.212E-05
Time:	292s	581s
#Singus:	74	74
Scale:	1.014	1.044
Stretch:	1.179	1.055

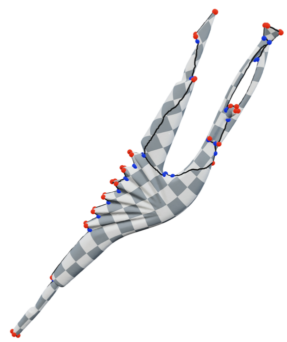


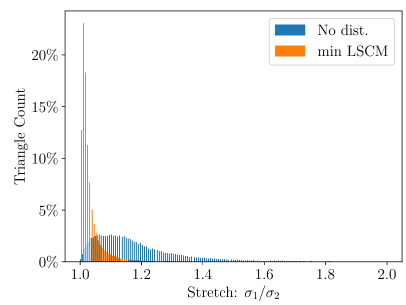


dancer_25k

Triangles: 50164

	No dist.	min LSCM
Energy:	3.525E-08	1.678E-07
Time:	982s	1906s
#Singus:	84	84
Scale:	1.015	1.106
Stretch:	1.188	1.035

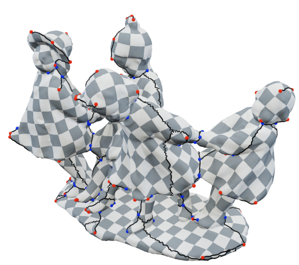


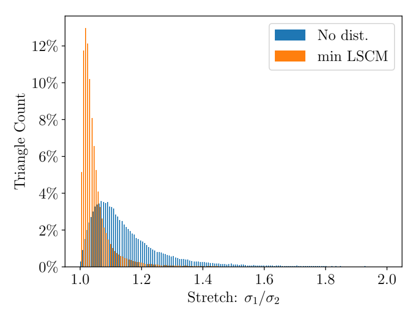


dancing_children100K

Triangles: 100434

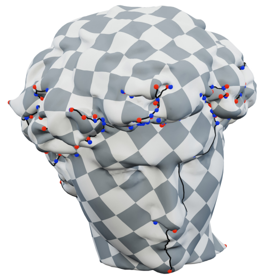
	No dist.	min LSCM
Energy:	6.176E-08	3.740E-07
Time:	4503s	5514s
#Singus:	215	217
Scale:	1.009	1.063
Stretch:	1.143	1.053

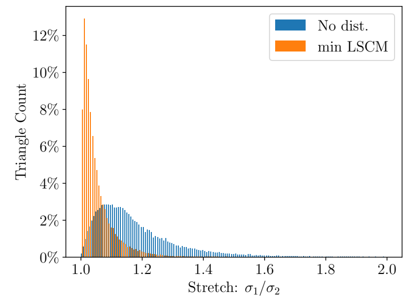




david
Triangles: 51336

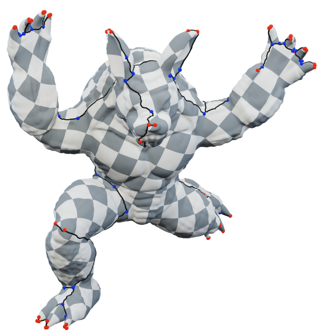
	No dist.	min LSCM
Energy:	3.200E-09	3.047E-07
Time:	833s	1733s
#Singus:	234	236
Scale:	1.011	1.038
Stretch:	1.163	1.048

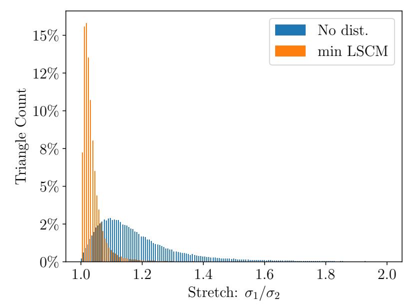




deformed_armadillo
Triangles: 100384

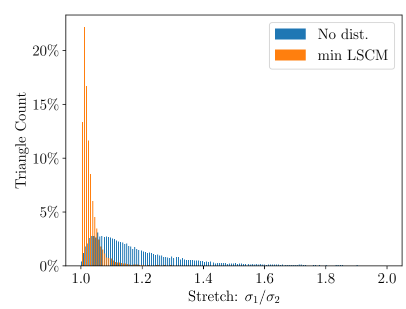
	No dist.	min LSCM
Energy:	4.224E-09	7.079E-07
Time:	2279s	4207s
#Singus:	190	192
Scale:	1.014	1.048
Stretch:	1.185	1.038





dente
Triangles: 18722

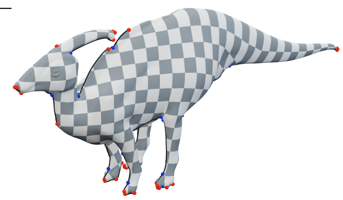
	No dist.	min LSCM
Energy:	7.450E-08	2.221E-07
Time:	354s	547s
#Singus:	26	26
Scale:	1.01	1.038
Stretch:	1.188	1.034

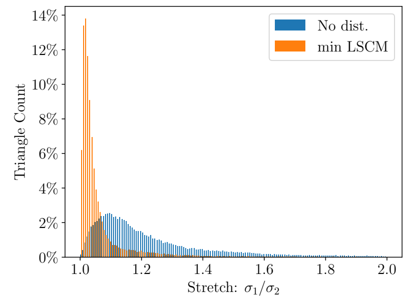


dilo

Triangles: 54500

	No dist.	min LSCM
Energy:	5.873E-08	4.949E-08
Time:	1115s	3492s
#Singus:	78	78
Scale:	1.039	1.073
Stretch:	1.332	1.225

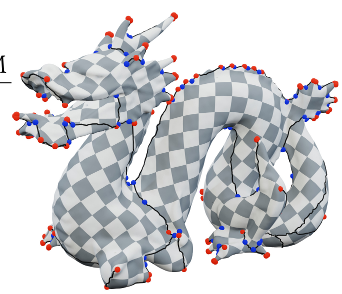


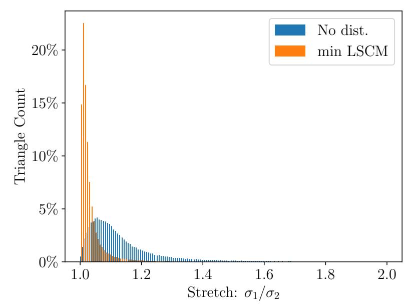


dragonstand_recon100K

Triangles: 104898

	No dist.	min LSCM
Energy:	6.310E-08	3.692E-07
Time:	2276s	4759s
#Singus:	282	270
Scale:	1.009	1.06
Stretch:	1.134	1.033

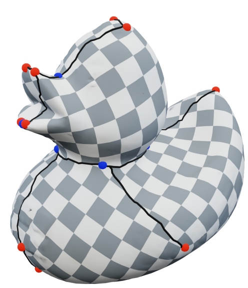


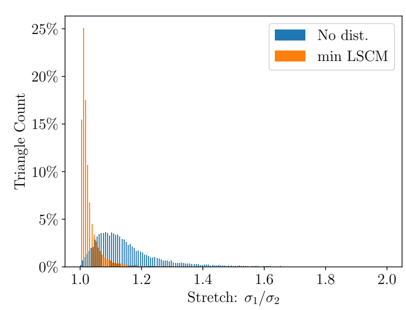


duck

Triangles: 19324

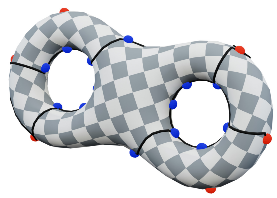
	No dist.	min LSCM
Energy:	2.175E-08	4.352E-07
Time:	345s	598s
#Singus:	24	24
Scale:	1.01	1.034
Stretch:	1.144	1.03

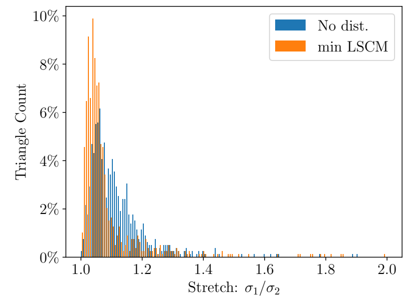




eight
Triangles: 1576

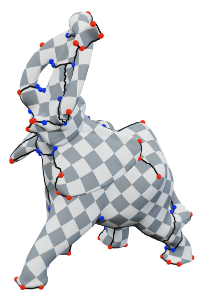
	No dist.	min LSCM
Energy:	2.709E-08	9.399E-07
Time:	12s	34s
#Singus:	20	20
Scale:	1.011	1.022
Stretch:	1.131	1.085

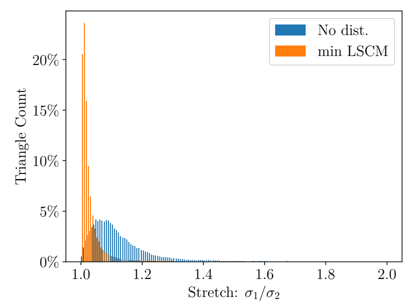




elephant
Triangles: 60228

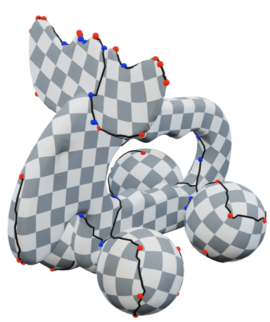
	No dist.	min LSCM
Energy:	1.551E-08	1.292E-06
Time:	908s	1827s
#Singus:	104	110
Scale:	1.007	1.06
Stretch:	1.12	1.026

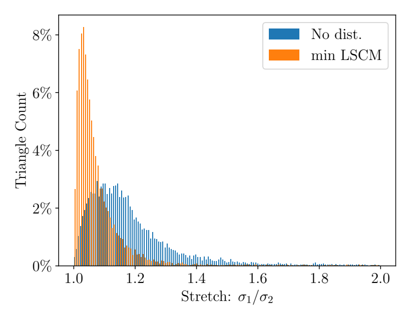




elk
Triangles: 10564

	No dist.	min LSCM
Energy:	6.122E-09	2.668E-06
Time:	83s	198s
#Singus:	88	88
Scale:	1.011	1.043
Stretch:	1.147	1.096

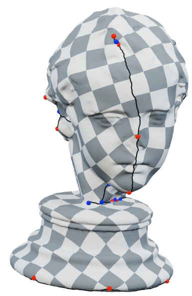


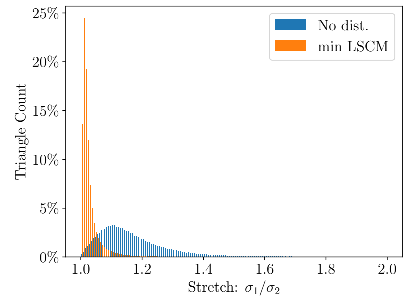


eros100K

Triangles: 100100

	No dist.	min LSCM
Energy:	7.766E-08	8.553E-06
Time:	1846s	4455s
#Singus:	50	50
Scale:	1.01	1.057
Stretch:	1.15	1.026

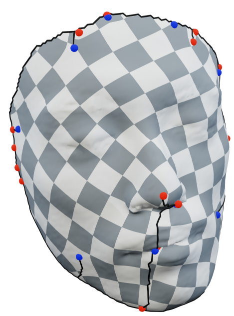


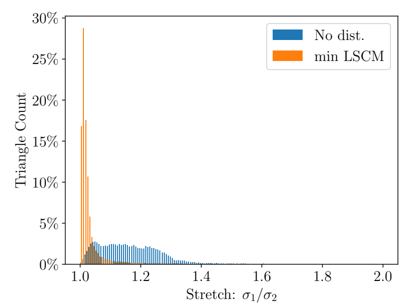


face-YO

Triangles: 27196

	No dist.	min LSCM
Energy:	2.213E-08	8.004E-08
Time:	241s	683s
#Singus:	174	174
Scale:	1.01	1.049
Stretch:	1.186	1.041

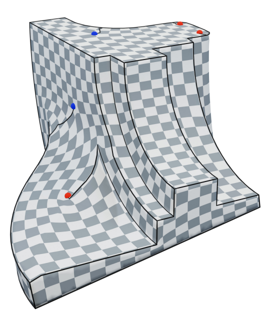


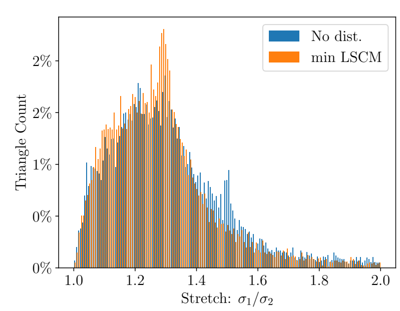


fandisk

Triangles: 14514

	No dist.	min LSCM
Energy:	9.327E-08	9.127E-06
Time:	94s	362s
#Singus:	30	30
Scale:	1.008	1.041
Stretch:	1.126	1.023

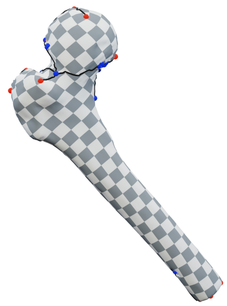


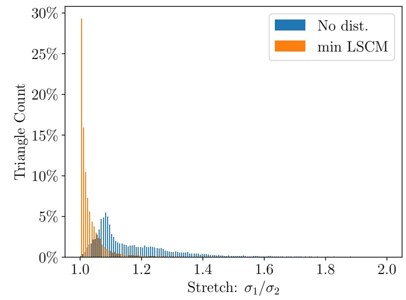


femur_r

Triangles: 20156

	No dist.	min LSCM
Energy:	3.553E-08	7.768E-08
Time:	168s	927s
#Singus:	120	120
Scale:	1.011	1.152
Stretch:	1.179	1.032

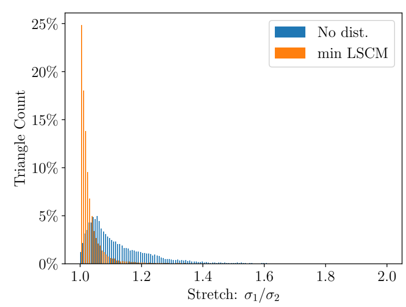




fertility_tri

Triangles: 28062

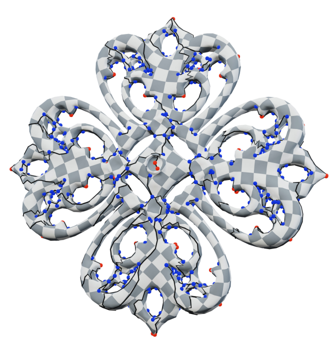
	No dist.	min LSCM
Energy:	2.185E-08	2.083E-07
Time:	239s	720s
#Singus:	54	54
Scale:	1.007	1.088
Stretch:	1.13	1.036

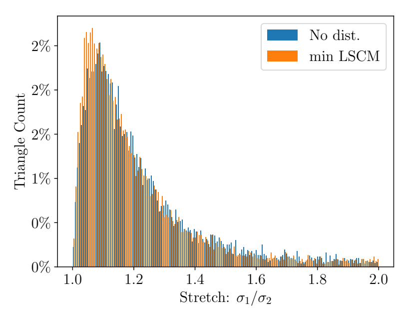


filigree_5k

Triangles: 11218

	No dist.	min LSCM
Energy:	5.801E-08	6.844E-07
Time:	195s	263s
#Singus:	518	506
Scale:	1.052	1.026
Stretch:	1.295	1.194

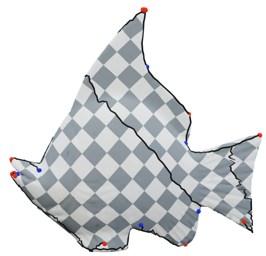


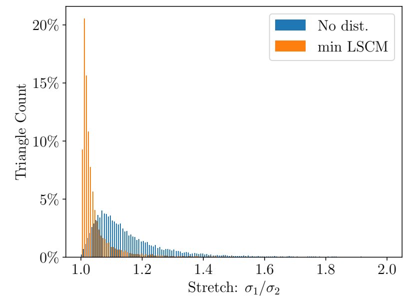


fish

Triangles: 13531

	No dist.	min LSCM
Energy:	3.786E-08	5.710E-07
Time:	124s	326s
#Singus:	82	82
Scale:	1.007	1.039
Stretch:	1.159	1.05

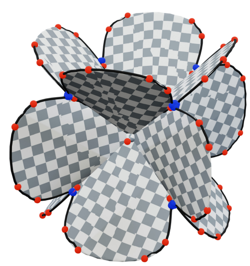


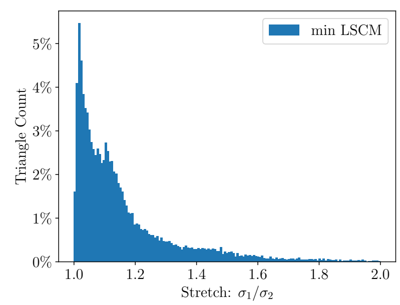


focal-octa

Triangles: 20496

	No dist.	min LSCM
Energy:	1.028E+00	5.517E-08
Time:	1191s	2210s
#Singus:	168	170
Scale:	1.004	1.01
Stretch:	1.06	1.108

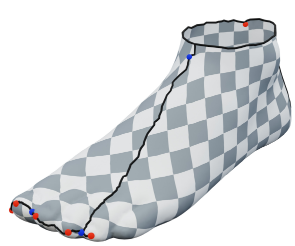


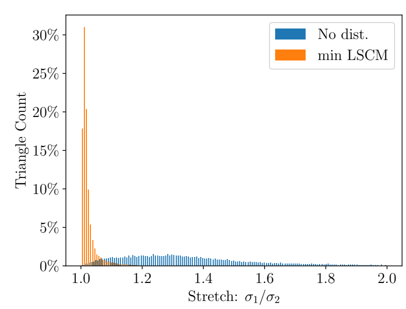


foot

Triangles: 19996

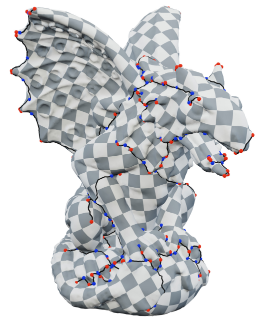
	No dist.	min LSCM
Energy:	3.215E-08	7.174E-08
Time:	223s	501s
#Singus:	12	12
Scale:	1.038	1.194
Stretch:	1.303	1.022

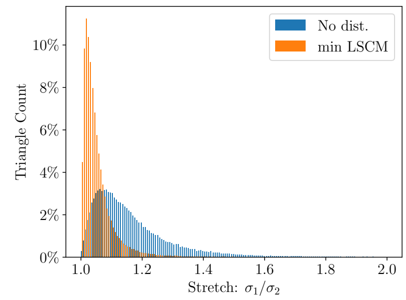




gargoyle100K
Triangles: 100620

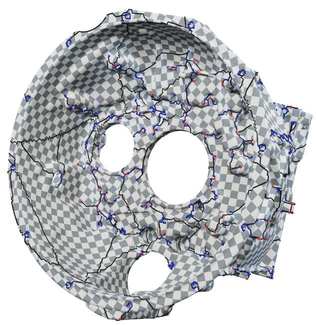
	No dist.	min LSCM
Energy:	3.631E-08	5.186E-07
Time:	2165s	4335s
#Singus:	322	310
Scale:	1.009	1.043
Stretch:	1.137	1.053

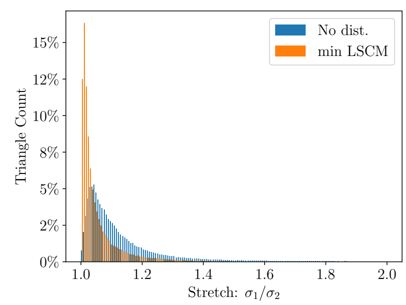




gearbox
Triangles: 131142

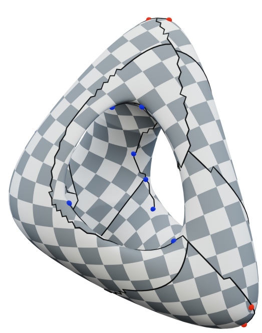
	No dist.	min LSCM
Energy:	5.609E-08	5.991E-06
Time:	4966s	7308s
#Singus:	1274	1268
Scale:	1.012	1.03
Stretch:	1.16	1.063

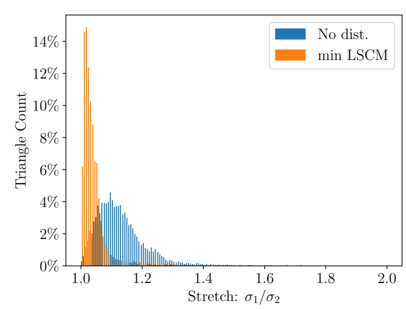




genus3
Triangles: 13368

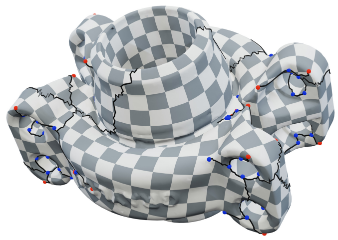
	No dist.	min LSCM
Energy:	1.052E-08	5.149E-07
Time:	119s	286s
#Singus:	28	28
Scale:	1.009	1.028
Stretch:	1.138	1.043

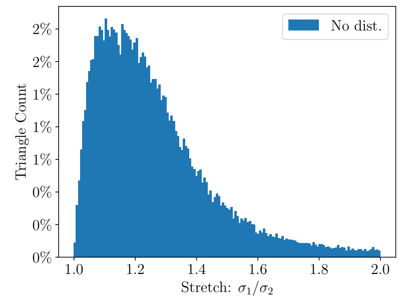




grayloc
Triangles: 68902

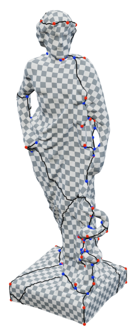
	No dist.	min LSCM
Energy:	9.351E-07	7.585E-02
Time:	3551s	3187s
#Singus:	155	161
Scale:	1.022	1.017
Stretch:	1.254	1.1

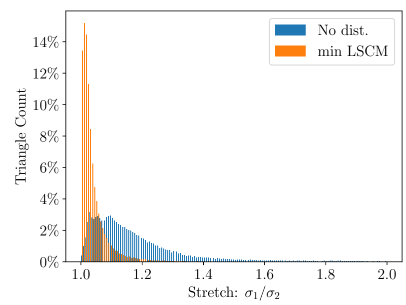




greek_sculpture
Triangles: 60378

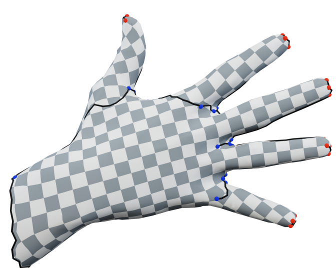
	No dist.	min LSCM
Energy:	2.499E-08	1.855E-07
Time:	1961s	3228s
#Singus:	126	128
Scale:	1.01	1.085
Stretch:	1.158	1.035

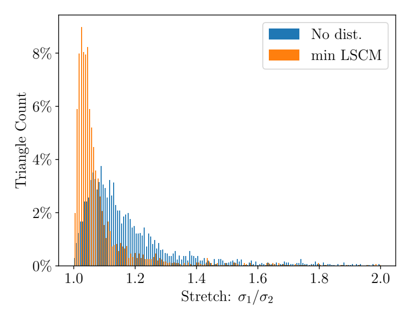




hand
Triangles: 3072

	No dist.	min LSCM
Energy:	8.654E-08	4.849E-07
Time:	23s	55s
#Singus:	42	42
Scale:	1.016	1.039
Stretch:	1.176	1.085

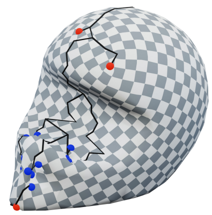


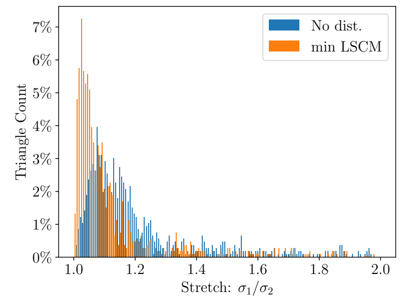


helmet

Triangles: 1060

	No dist.	min LSCM
Energy:	5.763E-08	5.860E-07
Time:	10s	25s
#Singus:	30	30
Scale:	1.029	1.04
Stretch:	1.246	1.176

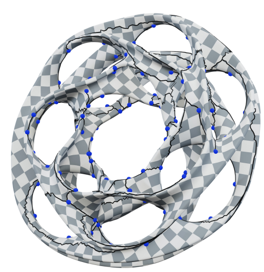


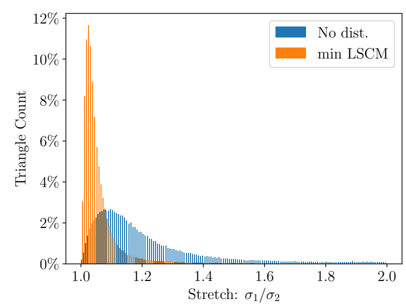


heptoroid100k

Triangles: 100356

	No dist.	min LSCM
Energy:	6.205E-09	7.353E-07
Time:	2592s	4321s
#Singus:	168	178
Scale:	1.02	1.033
Stretch:	1.218	1.063

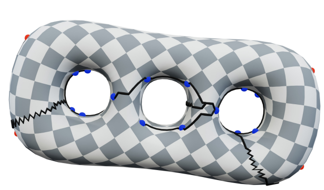


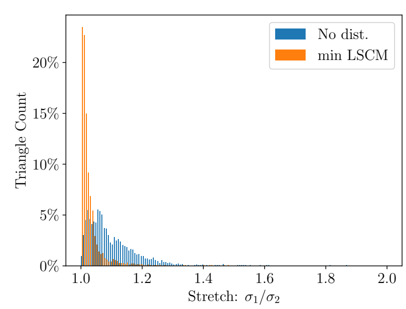


holes3

Triangles: 11824

	No dist.	min LSCM
Energy:	1.525E-08	1.853E-07
Time:	72s	217s
#Singus:	24	24
Scale:	1.035	1.018
Stretch:	1.16	1.032

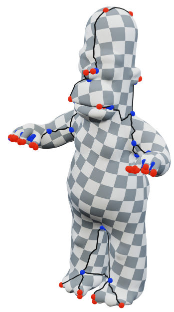


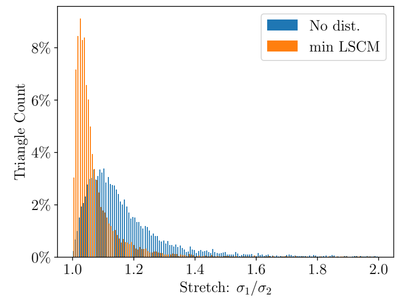


homer

Triangles: 10390

	No dist.	min LSCM
Energy:	3.011E-08	5.713E-07
Time:	74s	233s
#Singus:	94	94
Scale:	1.011	1.032
Stretch:	1.149	1.062

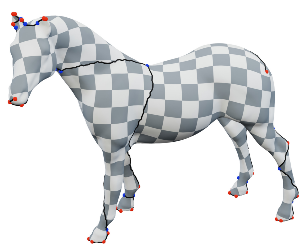


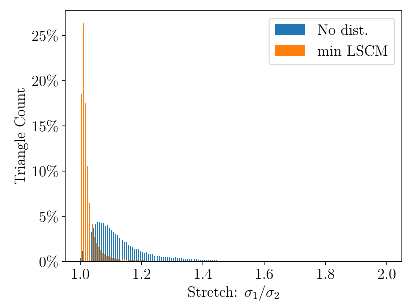


horse

Triangles: 39834

	No dist.	min LSCM
Energy:	2.389E-08	3.278E-07
Time:	511s	1155s
#Singus:	66	68
Scale:	1.008	1.043
Stretch:	1.123	1.028

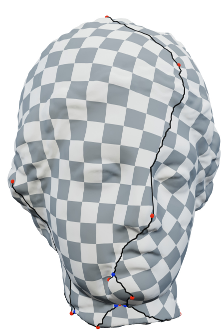


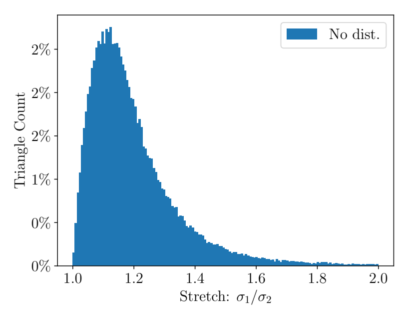


igea100k

Triangles: 100036

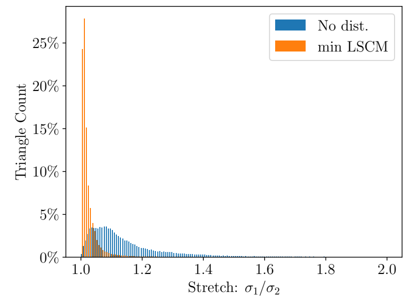
	No dist.	min LSCM
Energy:	7.663E-09	3.480E-03
Time:	1896s	4694s
#Singus:	16	18
Scale:	1.015	1.128
Stretch:	1.189	1.015





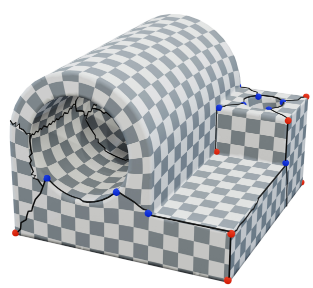
isidore_horse
Triangles: 120134

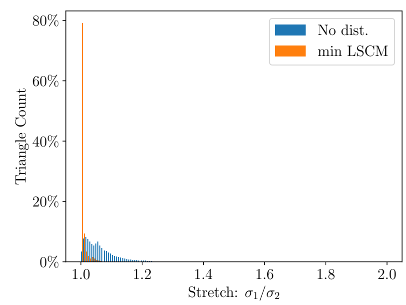
	No dist.	min LSCM
Energy:	1.478E-08	1.930E-08
Time:	4907s	6984s
#Singus:	76	76
Scale:	1.01	1.041
Stretch:	1.145	1.02



joint
Triangles: 41856

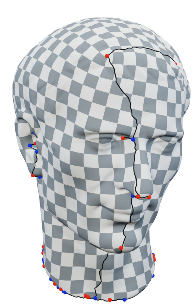
	No dist.	min LSCM
Energy:	5.018E-08	2.622E-07
Time:	380s	1489s
#Singus:	24	24
Scale:	1.004	1.015
Stretch:	1.07	1.009

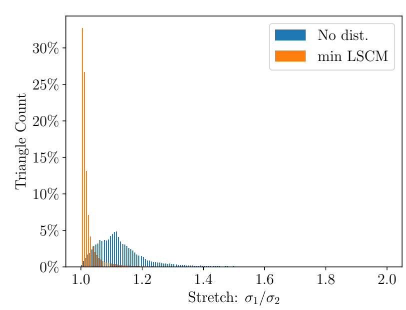




julius
Triangles: 85303

	No dist.	min LSCM
Energy:	5.069E-08	1.356E-07
Time:	1351s	3518s
#Singus:	226	226
Scale:	1.007	1.049
Stretch:	1.13	1.022

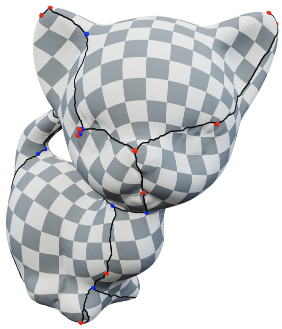


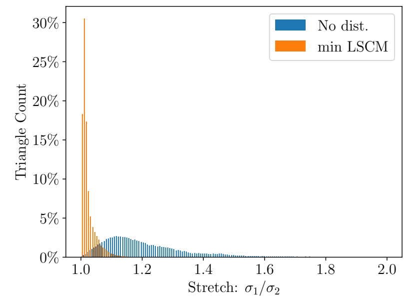


kitten100K

Triangles: 120060

	No dist.	min LSCM
Energy:	5.815E-08	2.651E-07
Time:	2856s	8148s
#Singus:	30	30
Scale:	1.015	1.179
Stretch:	1.22	1.023

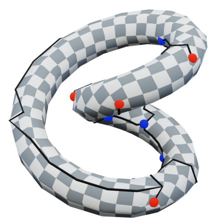


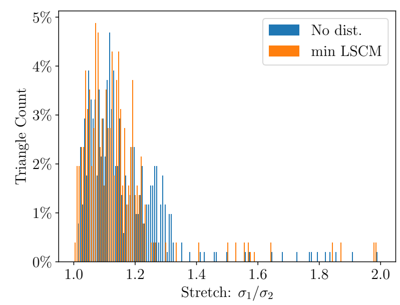


knot1

Triangles: 512

	No dist.	min LSCM
Energy:	3.677E-08	2.387E-06
Time:	4s	14s
#Singus:	16	16
Scale:	1.019	1.022
Stretch:	1.177	1.145

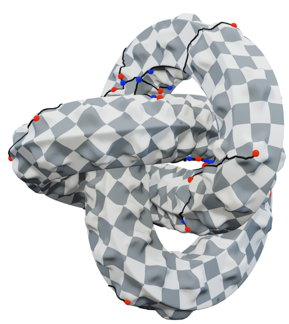


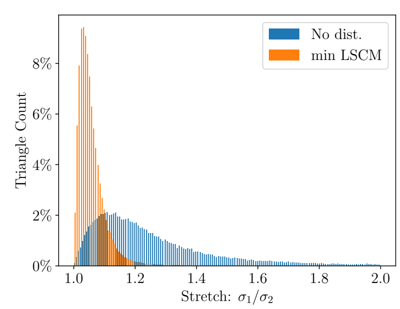


knot100K

Triangles: 100176

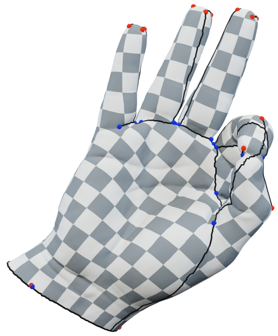
	No dist.	min LSCM
Energy:	6.912E-09	2.535E-07
Time:	3205s	3976s
#Singus:	82	88
Scale:	1.021	1.064
Stretch:	1.262	1.059

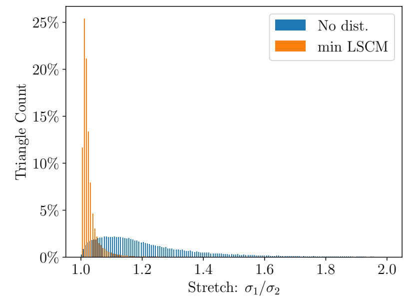




laurent_hand
Triangles: 100097

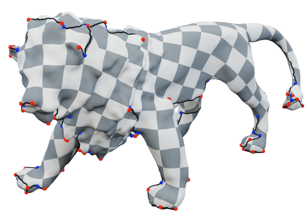
	No dist.	min LSCM
Energy:	2.062E-06	4.036E-05
Time:	13385s	6306s
#Singus:	60	60
Scale:	1.021	1.081
Stretch:	1.213	1.028

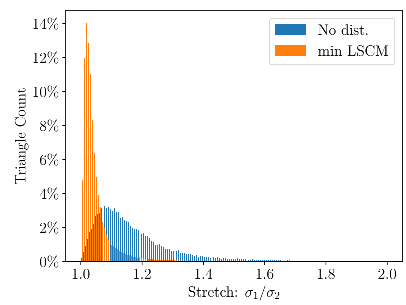




lion_recon_50K
Triangles: 56022

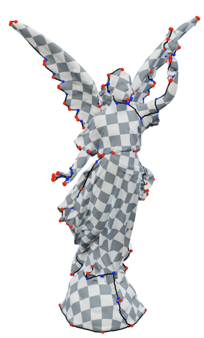
	No dist.	min LSCM
Energy:	9.048E-09	4.310E-08
Time:	979s	2188s
#Singus:	114	114
Scale:	1.01	1.097
Stretch:	1.171	1.046

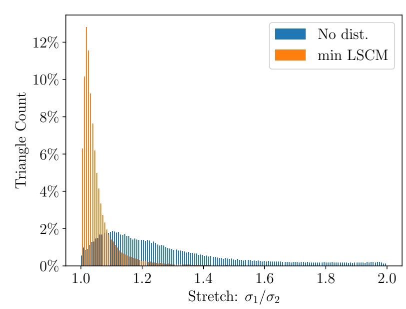




lucy100k
Triangles: 140208

	No dist.	min LSCM
Energy:	1.250E-08	6.373E-08
Time:	4654s	7294s
#Singus:	240	244
Scale:	1.023	1.22
Stretch:	1.247	1.043

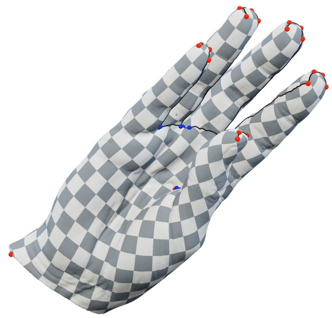


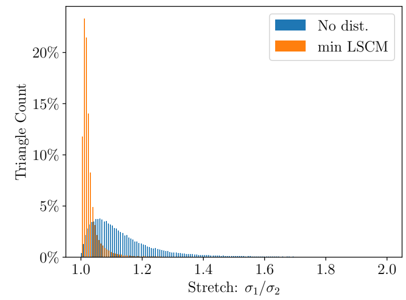


magalie_hand100K

Triangles: 100104

	No dist.	min LSCM
Energy:	6.287E-08	3.176E-08
Time:	2037s	4296s
#Singus:	48	52
Scale:	1.014	1.086
Stretch:	1.161	1.031

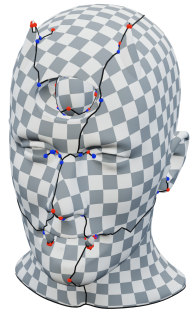


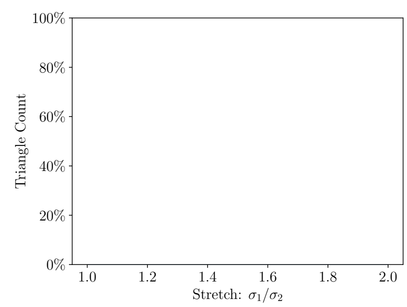


mannequin-devil

Triangles: 26268

	No dist.	min LSCM
Energy:	5.202E-04	4.204E+01
Time:	1385s	2048s
#Singus:	190	190
Scale:	1.01	0.995
Stretch:	1.154	1.071

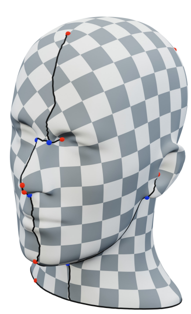


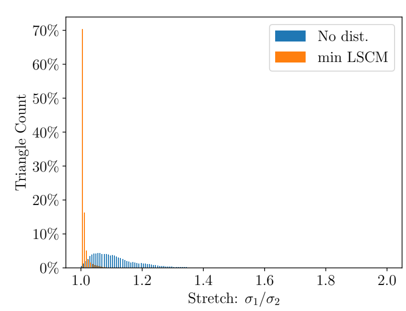


mannequin_mc

Triangles: 99769

	No dist.	min LSCM
Energy:	2.965E-08	4.742E-05
Time:	1868s	4002s
#Singus:	20	20
Scale:	1.007	1.044
Stretch:	1.119	1.008

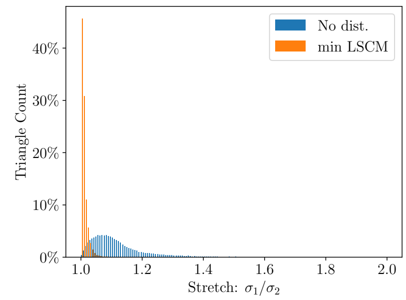




mask

Triangles: 62475

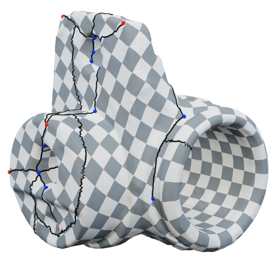
	No dist.	min LSCM
Energy:	7.424E-08	3.541E-07
Time:	1299s	2626s
#Singus:	4	4
Scale:	1.01	1.036
Stretch:	1.131	1.011

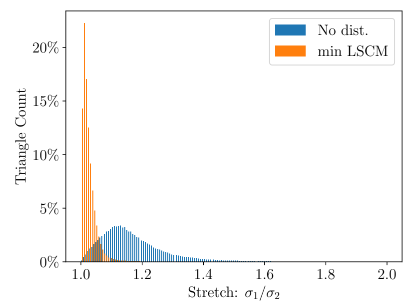


master_cylinder100K

Triangles: 100044

	No dist.	min LSCM
Energy:	8.708E-08	1.394E-07
Time:	1836s	4745s
#Singus:	26	22
Scale:	1.011	1.084
Stretch:	1.162	1.027

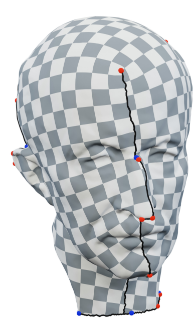


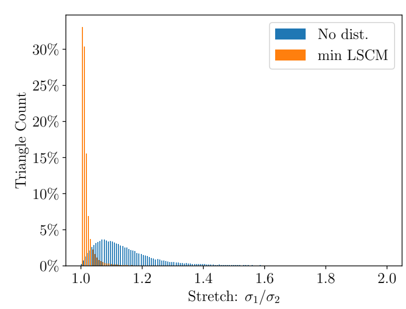


max-planck

Triangles: 100072

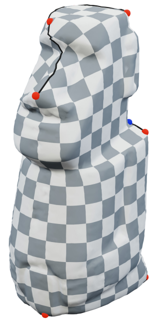
	No dist.	min LSCM
Energy:	1.055E-08	6.089E-08
Time:	2542s	4544s
#Singus:	200	200
Scale:	1.008	1.033
Stretch:	1.139	1.017

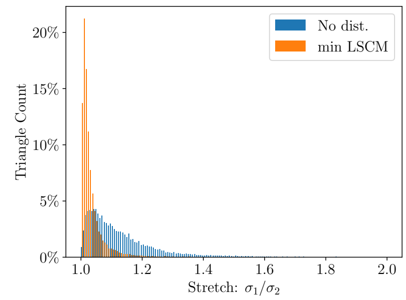




moai
Triangles: 20028

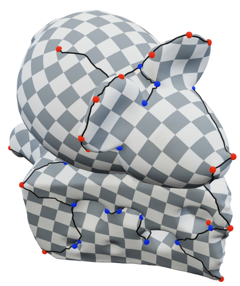
	No dist.	min LSCM
Energy:	1.697E-08	1.786E-06
Time:	269s	500s
#Singus:	14	14
Scale:	1.007	1.021
Stretch:	1.123	1.032

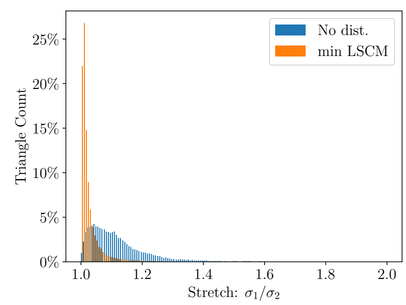




mouse
Triangles: 40124

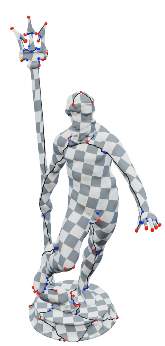
	No dist.	min LSCM
Energy:	4.613E-08	1.612E-06
Time:	554s	1069s
#Singus:	66	66
Scale:	1.008	1.032
Stretch:	1.117	1.025

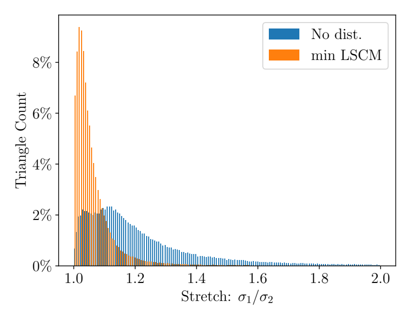




neptune0
Triangles: 140372

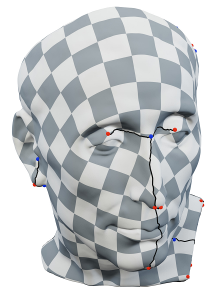
	No dist.	min LSCM
Energy:	6.988E-09	5.892E-07
Time:	4075s	7269s
#Singus:	194	188
Scale:	1.012	1.081
Stretch:	1.176	1.054

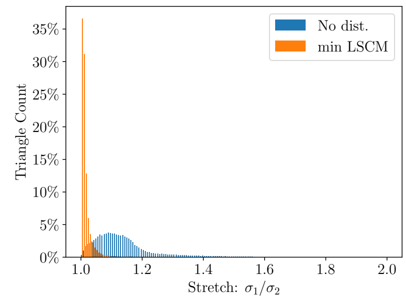




nicolo_da_uzzano
Triangles: 119383

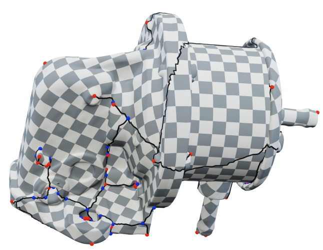
	No dist.	min LSCM
Energy:	8.865E-09	1.873E-08
Time:	2603s	5267s
#Singus:	86	86
Scale:	1.008	1.06
Stretch:	1.138	1.015

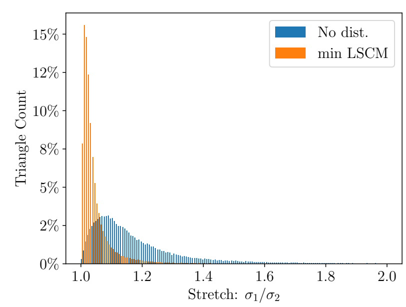




oil_pump100K
Triangles: 100408

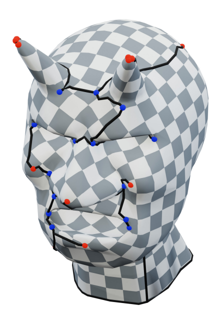
	No dist.	min LSCM
Energy:	7.670E-08	8.557E-08
Time:	2699s	5310s
#Singus:	216	204
Scale:	1.01	1.065
Stretch:	1.15	1.042

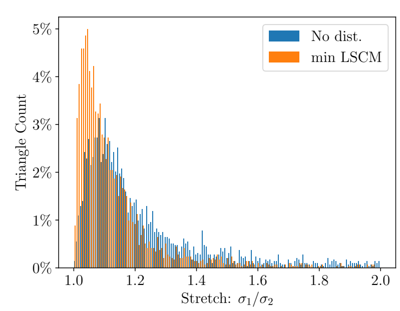




oni
Triangles: 2941

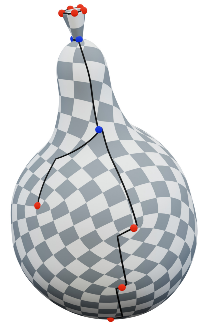
	No dist.	min LSCM
Energy:	2.476E-08	2.152E-07
Time:	25s	65s
#Singus:	46	48
Scale:	1.014	1.028
Stretch:	1.159	1.116

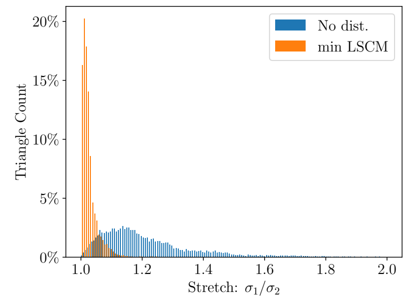




pear
Triangles: 21532

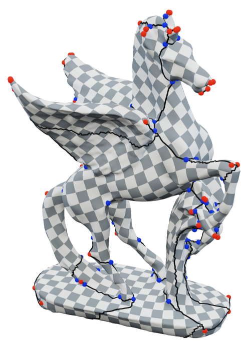
	No dist.	min LSCM
Energy:	5.872E-09	1.321E-08
Time:	478s	824s
#Singus:	18	14
Scale:	1.026	1.051
Stretch:	1.235	1.027

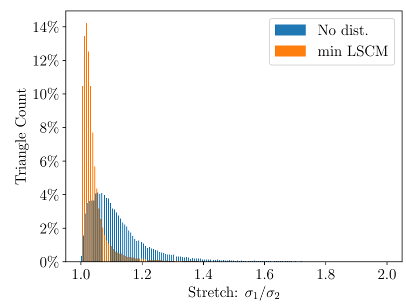




pegaso
Triangles: 60300

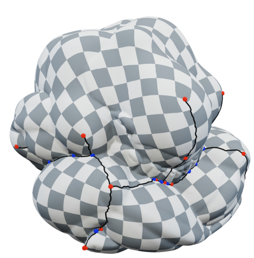
	No dist.	min LSCM
Energy:	2.262E-08	2.406E-06
Time:	618s	1811s
#Singus:	148	144
Scale:	1.009	1.06
Stretch:	1.126	1.038

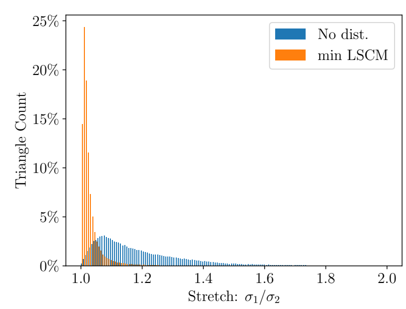




pensatore
Triangles: 100096

	No dist.	min LSCM
Energy:	6.366E-08	1.136E-07
Time:	1840s	4086s
#Singus:	52	48
Scale:	1.015	1.089
Stretch:	1.18	1.027

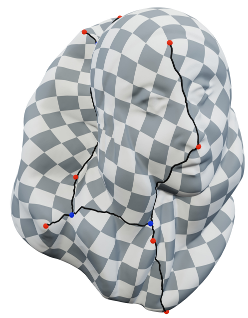


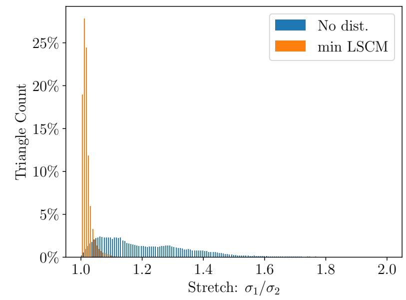


pierrot100k

Triangles: 120044

	No dist.	min LSCM
Energy:	2.363E-09	2.249E-07
Time:	2790s	5408s
#Singus:	20	24
Scale:	1.02	1.119
Stretch:	1.222	1.018

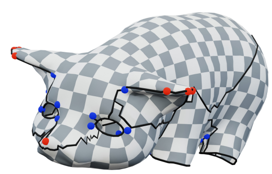


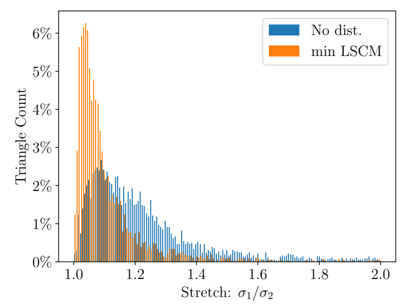


pig

Triangles: 3636

	No dist.	min LSCM
Energy:	2.091E-08	3.808E-06
Time:	27s	64s
#Singus:	38	38
Scale:	1.018	1.064
Stretch:	1.204	1.095

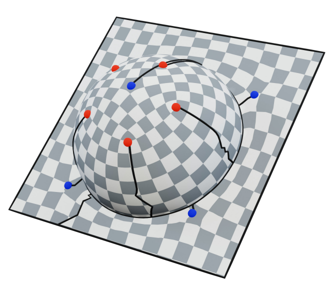


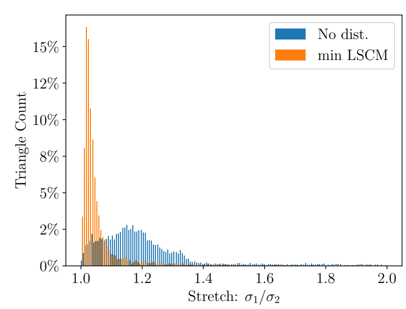


plane-sphere

Triangles: 6826

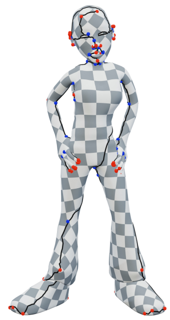
	No dist.	min LSCM
Energy:	2.226E-10	3.756E-06
Time:	27s	114s
#Singus:	4	4
Scale:	1.026	1.128
Stretch:	1.214	1.011

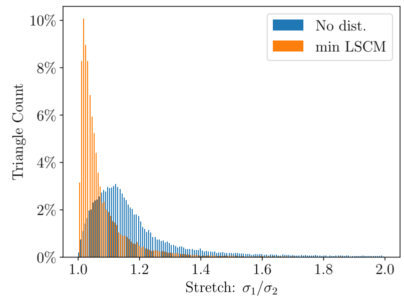




polygirl
Triangles: 40412

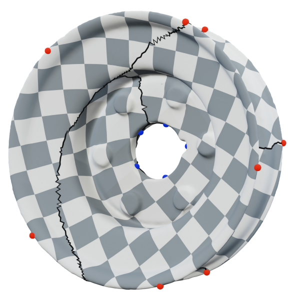
	No dist.	min LSCM
Energy:	9.795E-08	1.482E-07
Time:	997s	1501s
#Singus:	174	174
Scale:	1.012	1.083
Stretch:	1.179	1.068

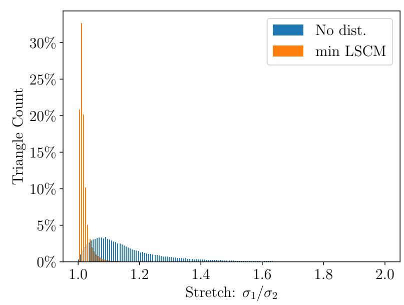




pulley100K
Triangles: 100044

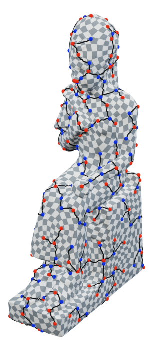
	No dist.	min LSCM
Energy:	2.948E-08	5.028E-07
Time:	2008s	4312s
#Singus:	28	22
Scale:	1.012	1.044
Stretch:	1.149	1.019

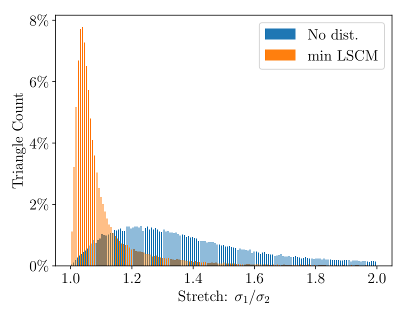




ramses_r
Triangles: 100728

	No dist.	min LSCM
Energy:	5.995E-08	1.067E-06
Time:	1458s	4047s
#Singus:	366	366
Scale:	1.038	1.363
Stretch:	1.417	1.108

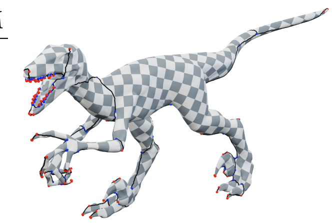


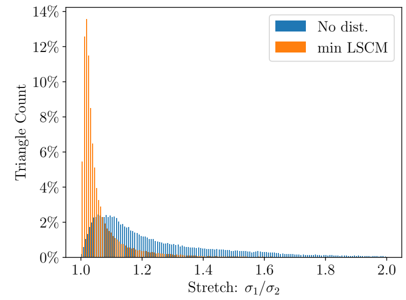


raptor50K

Triangles: 90600

	No dist.	min LSCM
Energy:	4.835E-08	1.901E-07
Time:	3464s	4243s
#Singus:	296	296
Scale:	1.021	1.204
Stretch:	1.232	1.054

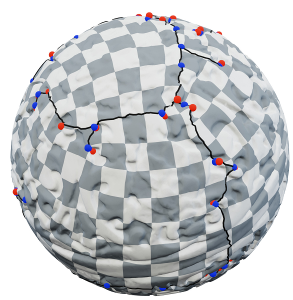


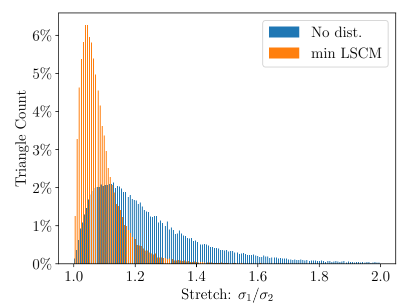


red_circular_box100K

Triangles: 100276

	No dist.	min LSCM
Energy:	5.921E-08	9.154E-07
Time:	2139s	4924s
#Singus:	100	138
Scale:	1.019	1.2
Stretch:	1.227	1.082

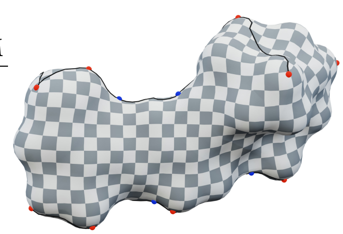


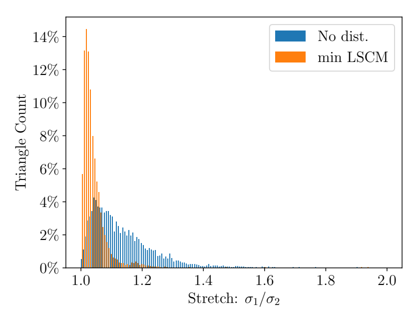


retinal

Triangles: 7322

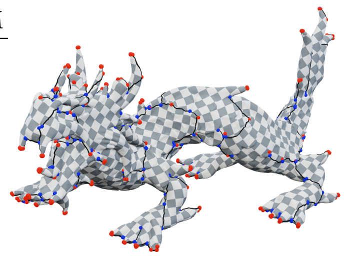
	No dist.	min LSCM
Energy:	1.414E-08	4.092E-06
Time:	47s	127s
#Singus:	20	20
Scale:	1.01	1.032
Stretch:	1.133	1.044

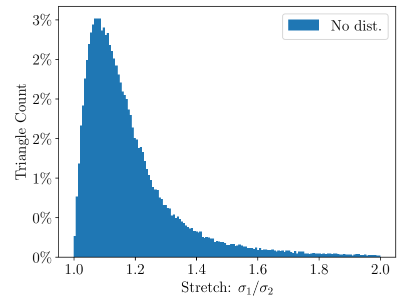




rgb_dragon
Triangles: 106190

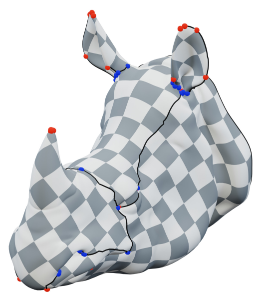
	No dist.	min LSCM
Energy:	1.861E-08	1.696E-02
Time:	5074s	5219s
#Singus:	584	584
Scale:	1.014	1.052
Stretch:	1.187	1.067

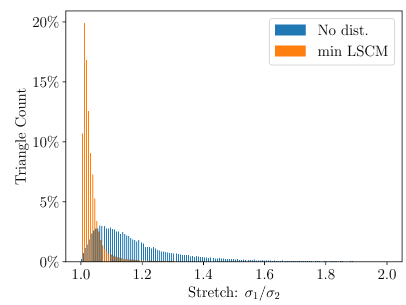




rhino
Triangles: 40464

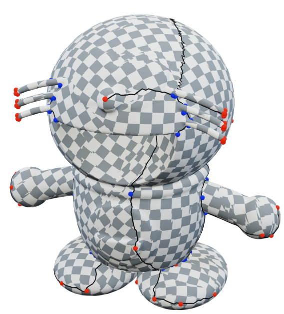
	No dist.	min LSCM
Energy:	8.079E-09	2.199E-08
Time:	579s	1184s
#Singus:	80	80
Scale:	1.012	1.066
Stretch:	1.177	1.031

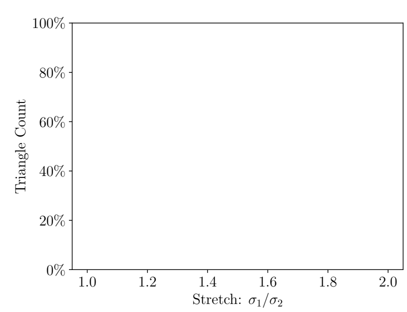




robocat_deci
Triangles: 60822

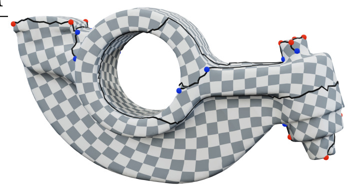
	No dist.	min LSCM
Energy:	2.162E+02	5.751E-02
Time:	1827s	4206s
#Singus:	232	237
Scale:	0.999	1.053
Stretch:	1.014	1.027

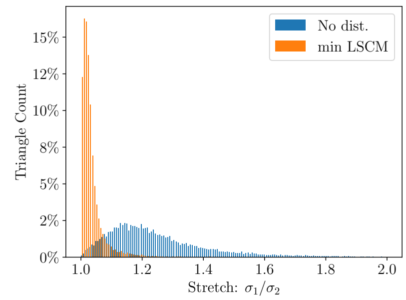




rocker_arm
Triangles: 20136

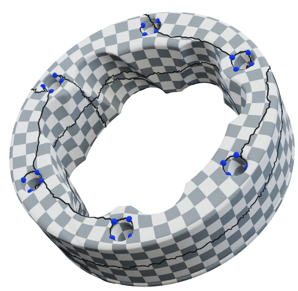
	No dist.	min LSCM
Energy:	1.069E-08	9.285E-09
Time:	197s	501s
#Singus:	26	24
Scale:	1.018	1.166
Stretch:	1.235	1.039

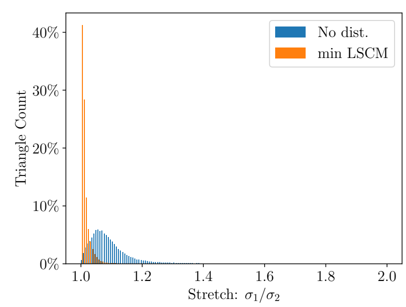




rolling_stage100K
Triangles: 100096

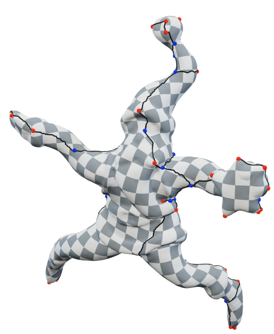
	No dist.	min LSCM
Energy:	4.218E-08	7.481E-08
Time:	1856s	4287s
#Singus:	48	48
Scale:	1.004	1.019
Stretch:	1.092	1.015

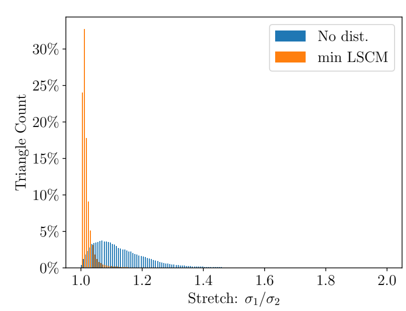




santa
Triangles: 151702

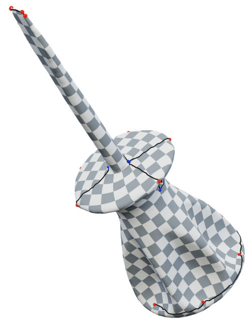
	No dist.	min LSCM
Energy:	8.710E-09	3.820E-08
Time:	3420s	7025s
#Singus:	68	72
Scale:	1.008	1.071
Stretch:	1.136	1.02

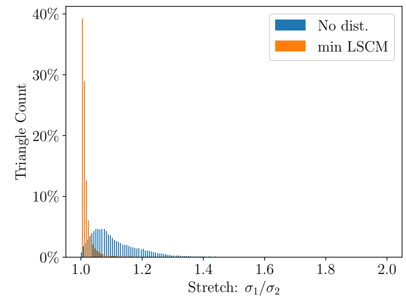




screwdriver
Triangles: 54344

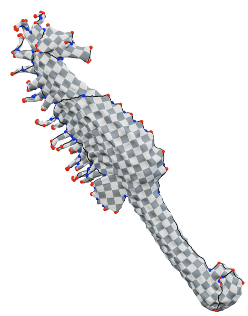
	No dist.	min LSCM
Energy:	1.160E-08	4.472E-07
Time:	627s	1648s
#Singus:	22	22
Scale:	1.006	1.036
Stretch:	1.118	1.017

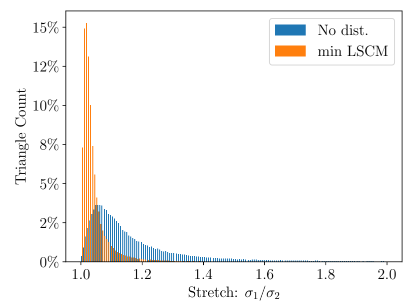




seahorse2_100K
Triangles: 120494

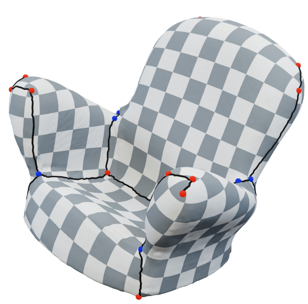
	No dist.	min LSCM
Energy:	1.243E-08	2.293E-07
Time:	2528s	5057s
#Singus:	258	256
Scale:	1.01	1.042
Stretch:	1.139	1.033

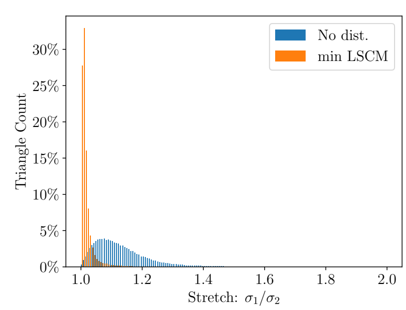




sediapatch1_100K
Triangles: 100016

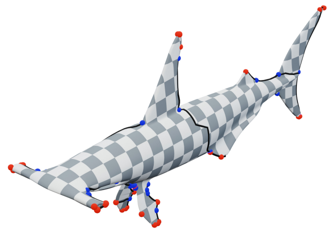
	No dist.	min LSCM
Energy:	1.380E-08	1.920E-07
Time:	1862s	4381s
#Singus:	22	24
Scale:	1.007	1.07
Stretch:	1.13	1.018

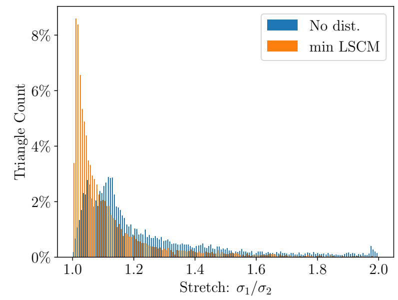




shark
Triangles: 20264

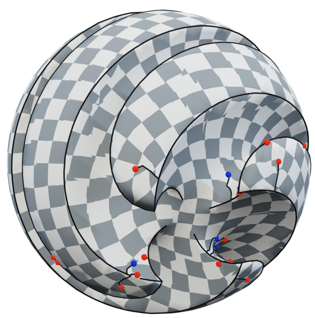
	No dist.	min LSCM
Energy:	1.837E-08	1.351E-07
Time:	614s	1064s
#Singus:	78	80
Scale:	1.033	1.049
Stretch:	1.259	1.147

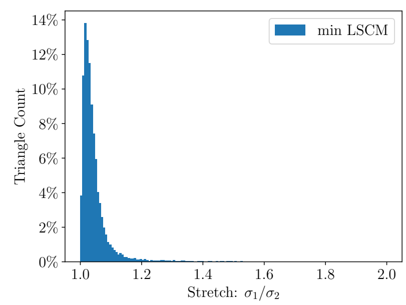




sharp_sphere
Triangles: 20994

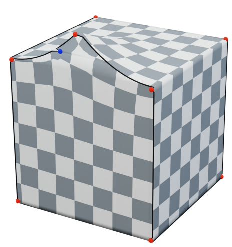
	No dist.	min LSCM
Energy:	1.413E+02	9.300E-07
Time:	977s	1405s
#Singus:	60	56
Scale:	1.008	1.071
Stretch:	1.038	1.054

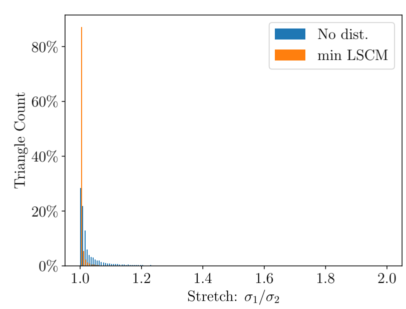




smooth-feature
Triangles: 12370

	No dist.	min LSCM
Energy:	2.181E-08	9.009E-08
Time:	91s	441s
#Singus:	10	10
Scale:	1.003	1.005
Stretch:	1.049	1.012

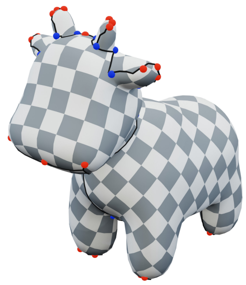


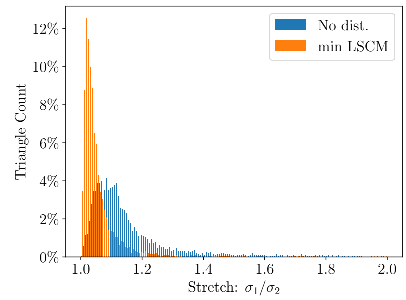


spot_triangulated

Triangles: 5956

	No dist.	min LSCM
Energy:	1.929E-08	5.077E-06
Time:	41s	104s
#Singus:	50	50
Scale:	1.01	1.032
Stretch:	1.136	1.055

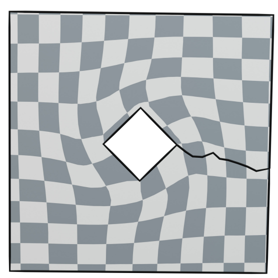


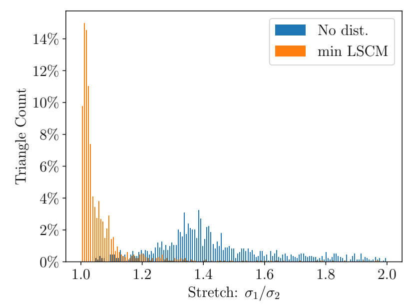


square_myles

Triangles: 1340

	No dist.	min LSCM
Energy:	1.827E-08	4.941E-06
Time:	11s	27s
#Singus:	8	14
Scale:	1.006	1.046
Stretch:	1.454	1.058

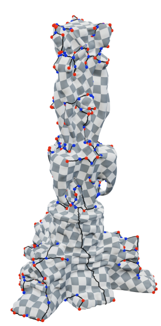


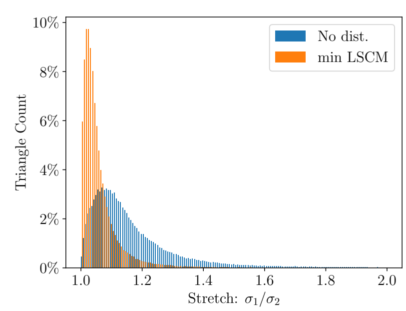


thai_statue

Triangles: 160696

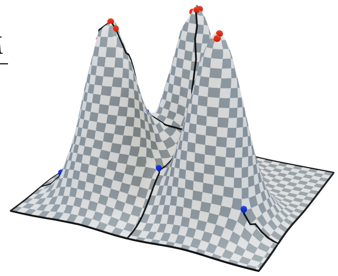
	No dist.	min LSCM
Energy:	6.124E-08	2.416E-07
Time:	4925s	7920s
#Singus:	422	350
Scale:	1.009	1.097
Stretch:	1.142	1.053

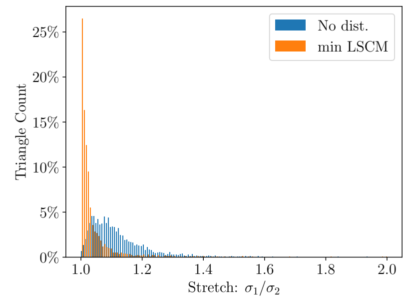




three_peaks
Triangles: 3711

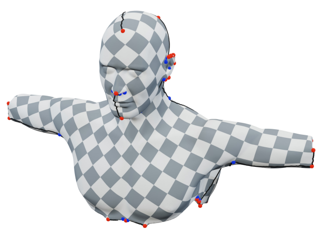
	No dist.	min LSCM
Energy:	1.989E-08	2.241E-08
Time:	25s	68s
#Singus:	22	24
Scale:	1.016	1.053
Stretch:	1.152	1.075

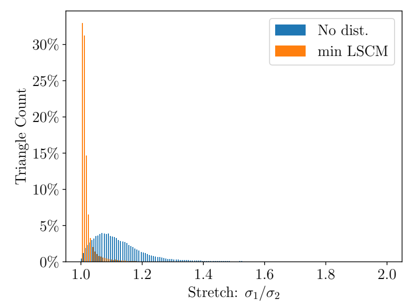




torso
Triangles: 100128

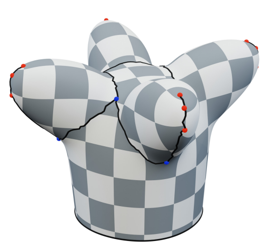
	No dist.	min LSCM
Energy:	5.379E-08	2.838E-07
Time:	2588s	4935s
#Singus:	66	64
Scale:	1.007	1.174
Stretch:	1.122	1.017

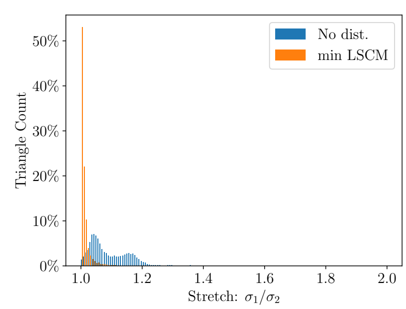




tree
Triangles: 33632

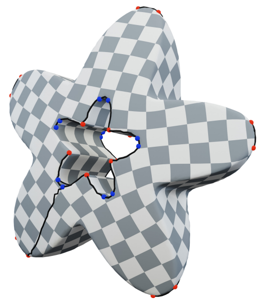
	No dist.	min LSCM
Energy:	2.441E-08	1.601E-06
Time:	353s	1051s
#Singus:	20	20
Scale:	1.006	1.024
Stretch:	1.097	1.016

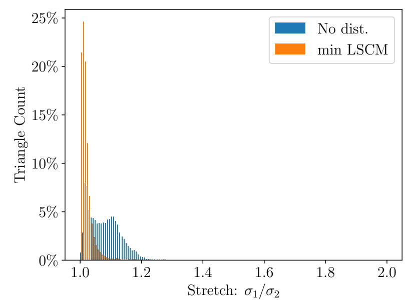




trim-star
Triangles: 20080

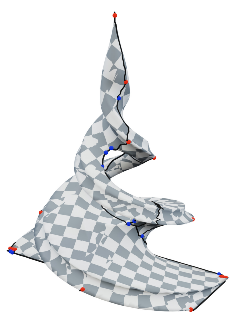
	No dist.	min LSCM
Energy:	2.123E-08	1.330E-05
Time:	142s	341s
#Singus:	40	40
Scale:	1.004	1.014
Stretch:	1.082	1.022

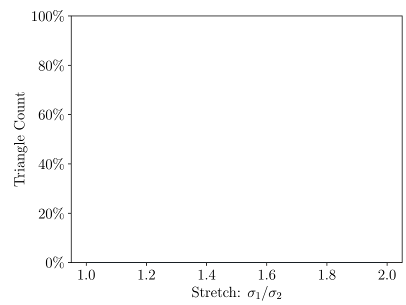




twirl
Triangles: 10484

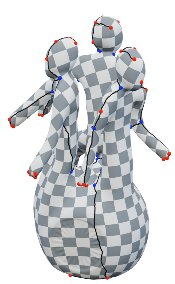
	No dist.	min LSCM
Energy:	2.299E+02	5.159E-03
Time:	125s	534s
#Singus:	39	41
Scale:	0.998	1.031
Stretch:	1.048	1.073

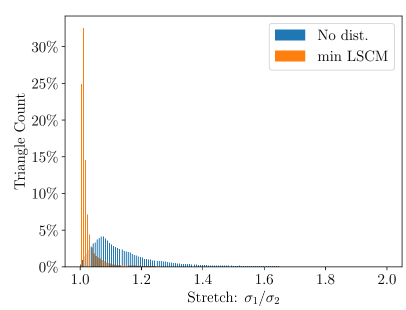




uu-memento100k
Triangles: 200182

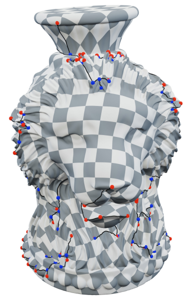
	No dist.	min LSCM
Energy:	4.459E-08	1.198E-07
Time:	7323s	12176s
#Singus:	98	98
Scale:	1.013	1.064
Stretch:	1.162	1.025

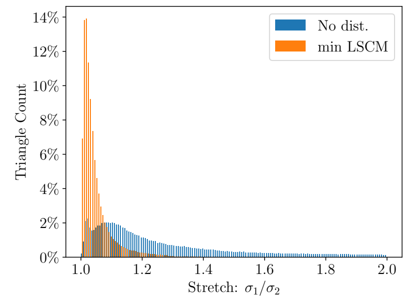




vase-lion100K
Triangles: 200242

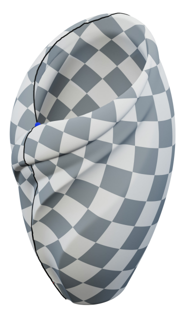
	No dist.	min LSCM
Energy:	2.655E-08	2.400E-07
Time:	7666s	12134s
#Singus:	178	194
Scale:	1.027	1.215
Stretch:	1.251	1.043

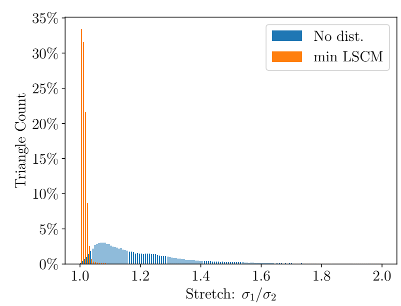




vase100K
Triangles: 100022

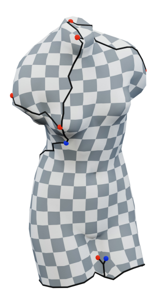
	No dist.	min LSCM
Energy:	9.081E-09	1.712E-07
Time:	2669s	4028s
#Singus:	10	12
Scale:	1.019	1.076
Stretch:	1.202	1.012

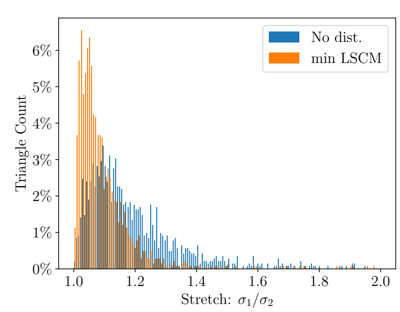




venus
Triangles: 1418

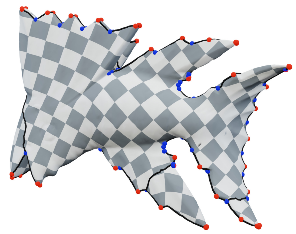
	No dist.	min LSCM
Energy:	9.448E-09	2.373E-06
Time:	7s	28s
#Singus:	14	14
Scale:	1.018	1.062
Stretch:	1.177	1.095

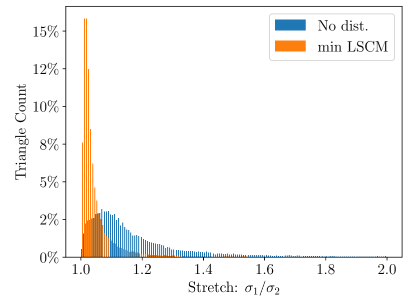




woodenfish
Triangles: 35130

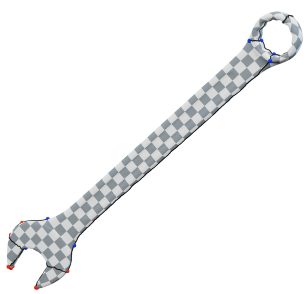
	No dist.	min LSCM
Energy:	4.515E-08	1.571E-06
Time:	582s	1298s
#Singus:	107	110
Scale:	1.011	1.093
Stretch:	1.175	1.054

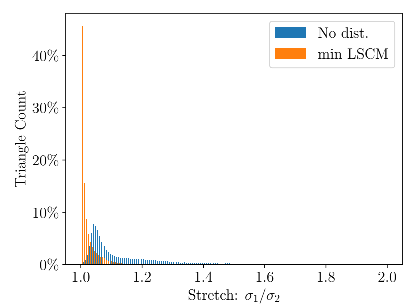




wrench50K
Triangles: 50044

	No dist.	min LSCM
Energy:	1.146E-08	1.012E-06
Time:	604s	1567s
#Singus:	18	22
Scale:	1.007	1.019
Stretch:	1.14	1.021

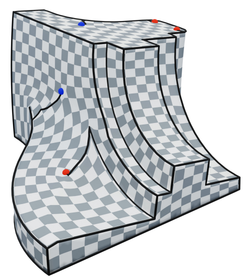


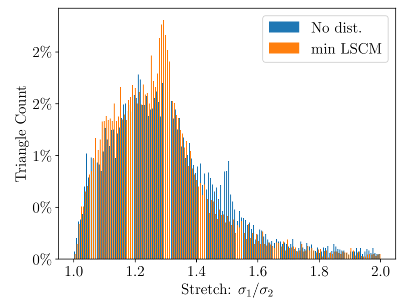


5.3 Models with feature edges

03_fandisk
Triangles: 14472

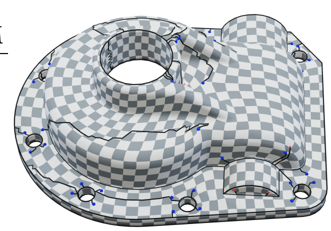
	No dist.	min LSCM
Energy:	2.978E-08	4.680E-07
Time:	165s	372s
#Singus:	9	9
Scale:	1.034	1.048
Stretch:	1.356	1.332

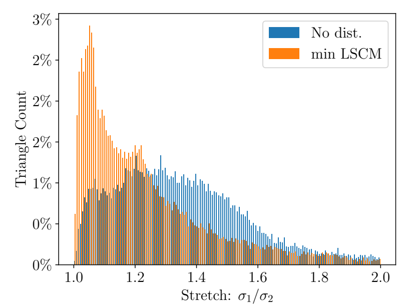




04_casting_refined
Triangles: 37020

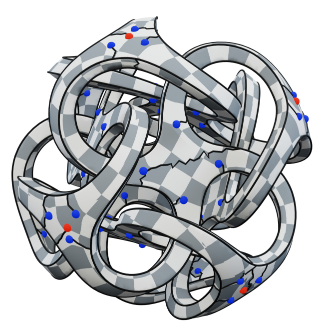
	No dist.	min LSCM
Energy:	5.616E-08	3.357E-07
Time:	668s	1209s
#Singus:	102	84
Scale:	1.028	1.157
Stretch:	1.385	1.259

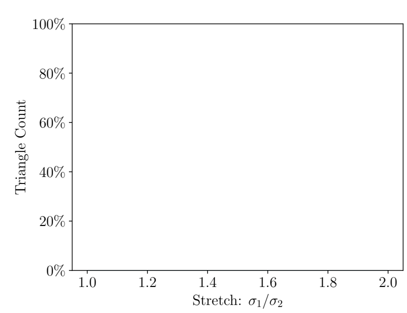




05_metatron
Triangles: 50214

	No dist.	min LSCM
Energy:	5.762E-01	1.627E-01
Time:	1873s	20856s
#Singus:	112	106
Scale:	1.022	1.051
Stretch:	1.249	1.416

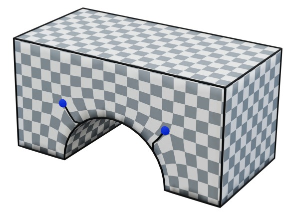


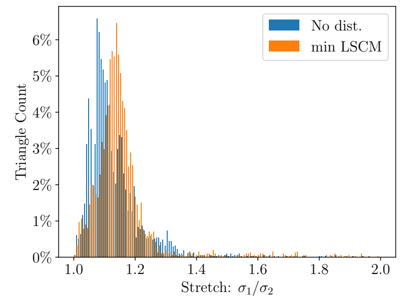


B0

Triangles: 3110

	No dist.	min LSCM
Energy:	4.753E-08	7.725E-08
Time:	20s	47s
#Singus:	4	4
Scale:	0.996	1.016
Stretch:	1.184	1.159

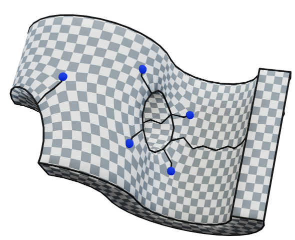


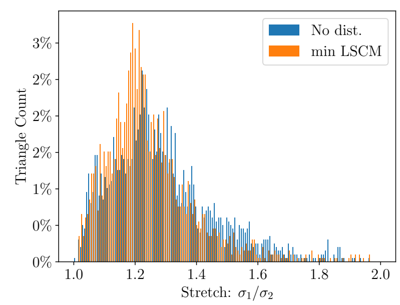


B1

Triangles: 1984

	No dist.	min LSCM
Energy:	2.130E-08	3.535E-07
Time:	15s	40s
#Singus:	10	10
Scale:	1.031	1.116
Stretch:	1.318	1.268

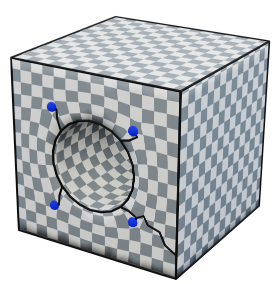


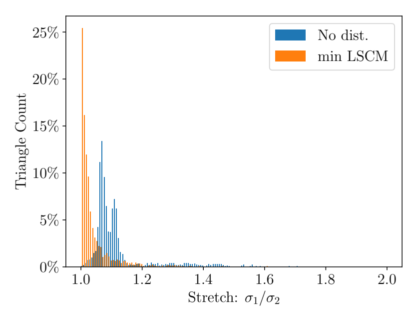


B10

Triangles: 4262

	No dist.	min LSCM
Energy:	2.190E-08	2.013E-06
Time:	27s	73s
#Singus:	8	8
Scale:	1.006	1.084
Stretch:	1.133	1.046

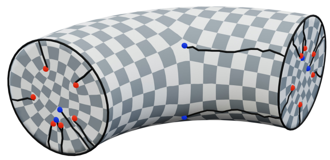


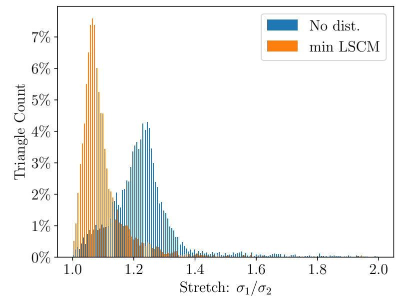


B11

Triangles: 6124

	No dist.	min LSCM
Energy:	8.078E-09	3.967E-07
Time:	58s	129s
#Singus:	20	12
Scale:	1.03	1.175
Stretch:	1.236	1.099

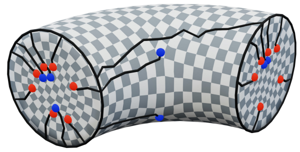


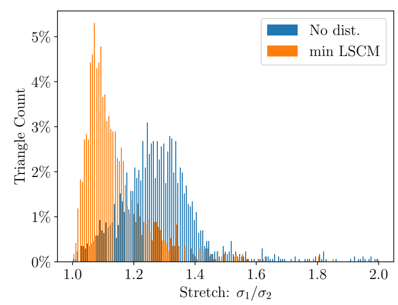


B12

Triangles: 1696

	No dist.	min LSCM
Energy:	1.547E-08	4.037E-06
Time:	17s	34s
#Singus:	22	12
Scale:	1.043	1.167
Stretch:	1.303	1.144

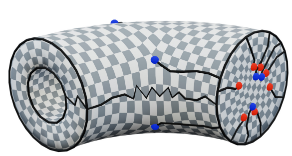


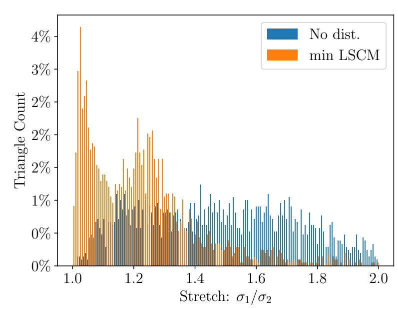


B13

Triangles: 2086

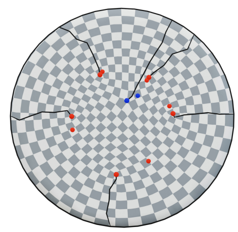
	No dist.	min LSCM
Energy:	4.543E-08	6.820E-07
Time:	19s	35s
#Singus:	16	10
Scale:	1.057	1.244
Stretch:	1.51	1.241

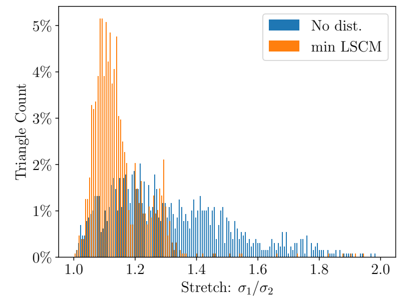




B14
Triangles: 1280

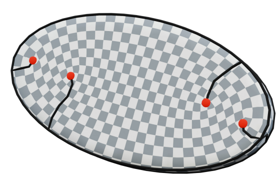
	No dist.	min LSCM
Energy:	3.845E-08	1.569E-05
Time:	13s	27s
#Singus:	12	8
Scale:	1.061	1.342
Stretch:	1.328	1.138

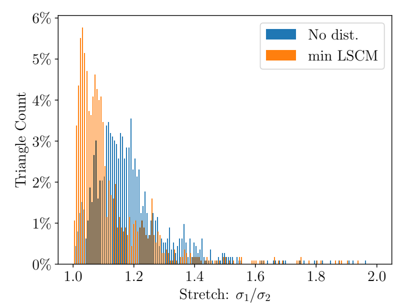




B15
Triangles: 1126

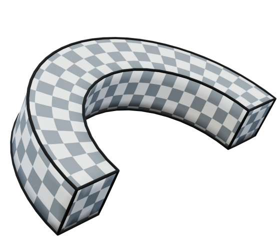
	No dist.	min LSCM
Energy:	1.878E-09	5.235E-06
Time:	6s	30s
#Singus:	8	8
Scale:	1.021	1.061
Stretch:	1.179	1.12

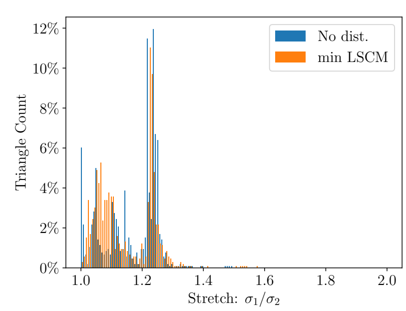




B16
Triangles: 1062

	No dist.	min LSCM
Energy:	3.476E-10	1.264E-06
Time:	4s	26s
#Singus:	0	0
Scale:	1.013	1.022
Stretch:	1.17	1.154

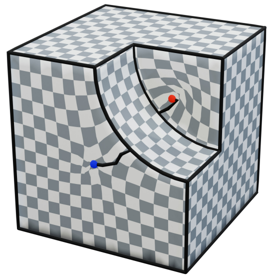


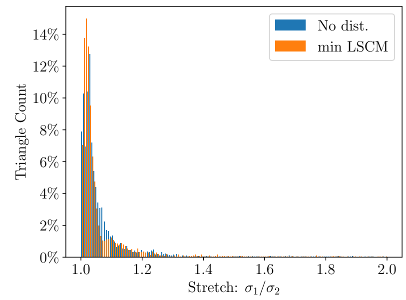


B17

Triangles: 3546

	No dist.	min LSCM
Energy:	9.454E-09	2.016E-07
Time:	25s	63s
#Singus:	2	2
Scale:	1.005	1.004
Stretch:	1.106	1.1

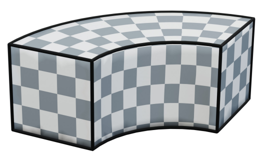


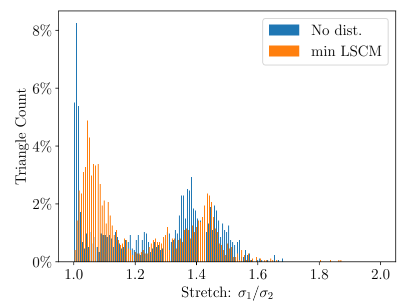


B18

Triangles: 1744

	No dist.	min LSCM
Energy:	1.987E-10	4.323E-06
Time:	7s	31s
#Singus:	0	0
Scale:	1.033	1.044
Stretch:	1.275	1.233

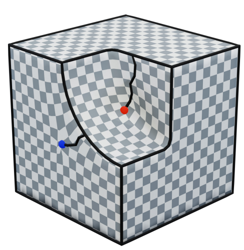


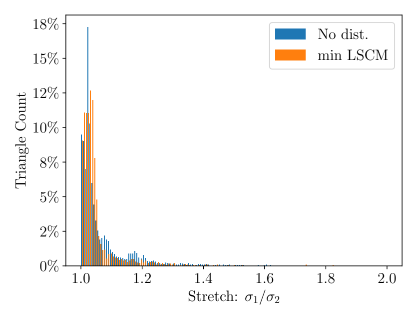


B19

Triangles: 3788

	No dist.	min LSCM
Energy:	9.130E-09	6.985E-08
Time:	29s	64s
#Singus:	2	2
Scale:	1.005	1.008
Stretch:	1.079	1.071

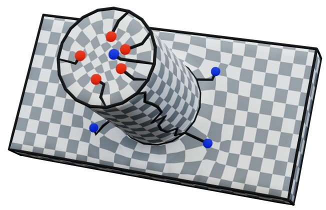


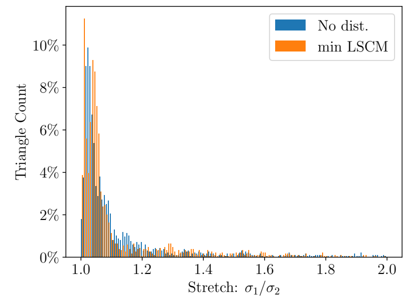


B2

Triangles: 1838

	No dist.	min LSCM
Energy:	5.897E-08	1.844E-07
Time:	15s	30s
#Singus:	10	8
Scale:	1.019	1.14
Stretch:	1.154	1.127

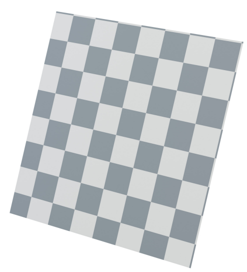


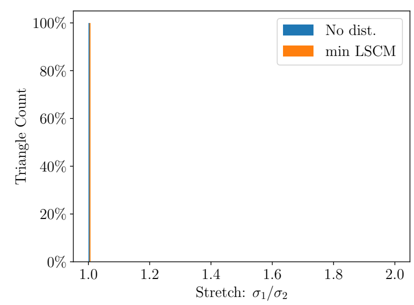


B20

Triangles: 872

	No dist.	min LSCM
Energy:	2.959E-13	9.397E-08
Time:	5s	4s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

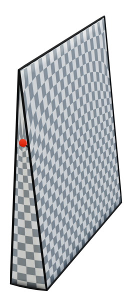


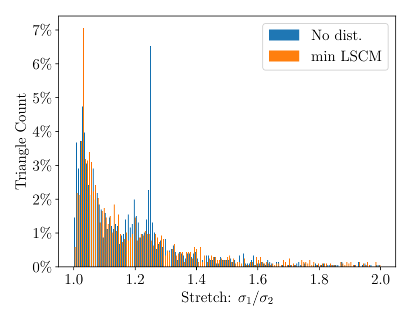


B23

Triangles: 2068

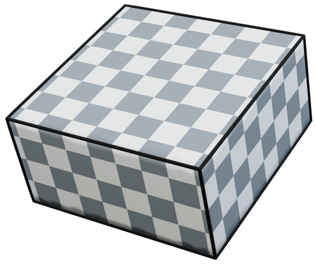
	No dist.	min LSCM
Energy:	2.183E-08	5.043E-07
Time:	16s	37s
#Singus:	2	2
Scale:	1.026	1.039
Stretch:	1.33	1.571

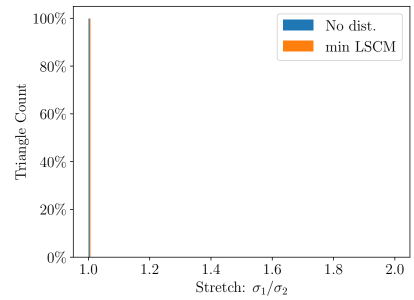




B24
Triangles: 3262

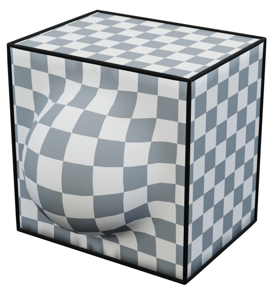
	No dist.	min LSCM
Energy:	1.507E-09	2.998E-17
Time:	11s	10s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

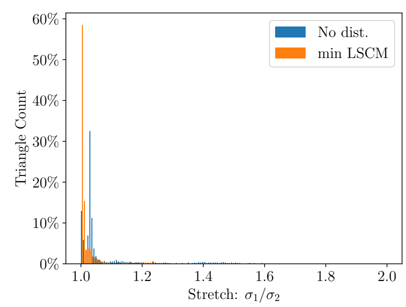




B25
Triangles: 2430

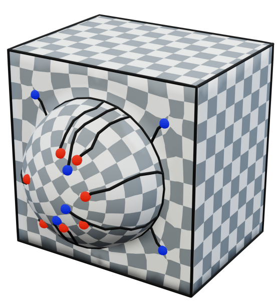
	No dist.	min LSCM
Energy:	6.345E-09	9.234E-06
Time:	13s	30s
#Singus:	0	0
Scale:	1.01	1.024
Stretch:	1.073	1.024

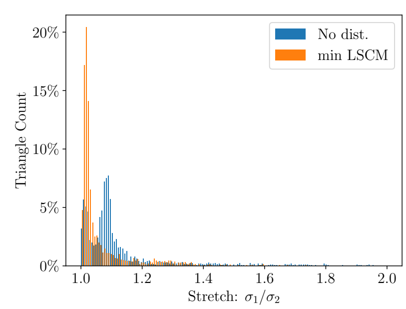




B27
Triangles: 2798

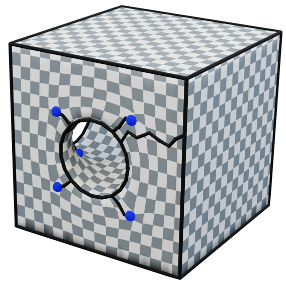
	No dist.	min LSCM
Energy:	1.391E-07	6.911E-07
Time:	24s	57s
#Singus:	14	8
Scale:	1.017	1.131
Stretch:	1.211	1.074

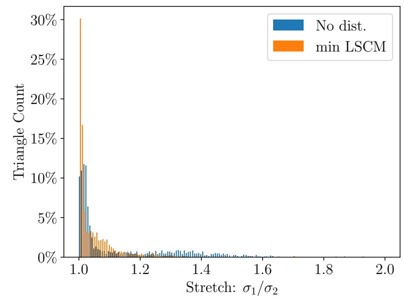




B28
Triangles: 4060

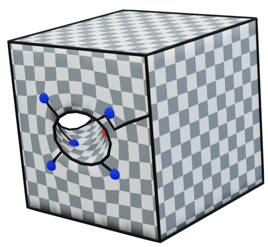
	No dist.	min LSCM
Energy:	6.873E-08	5.948E-06
Time:	26s	77s
#Singus:	12	12
Scale:	1.008	1.094
Stretch:	1.128	1.058

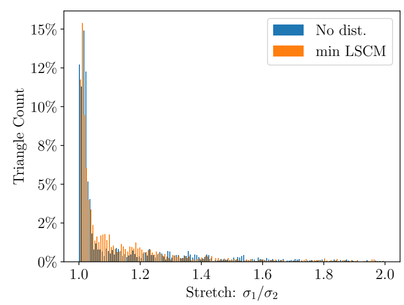




B29
Triangles: 2922

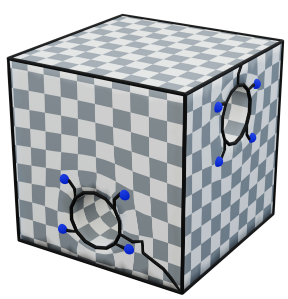
	No dist.	min LSCM
Energy:	2.541E-08	3.571E-06
Time:	19s	59s
#Singus:	12	12
Scale:	1.051	1.1
Stretch:	1.277	1.138

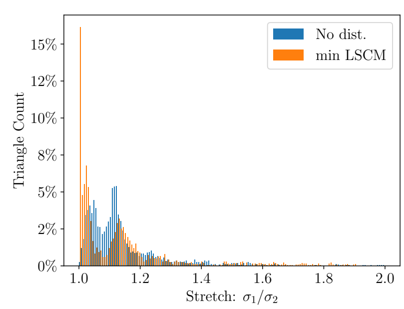




B3
Triangles: 4624

	No dist.	min LSCM
Energy:	2.907E-08	1.930E-06
Time:	32s	87s
#Singus:	16	16
Scale:	1.004	1.18
Stretch:	1.162	1.167

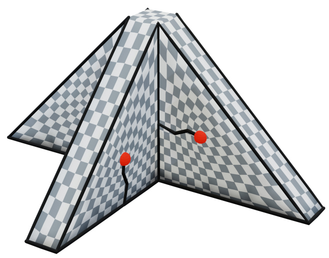


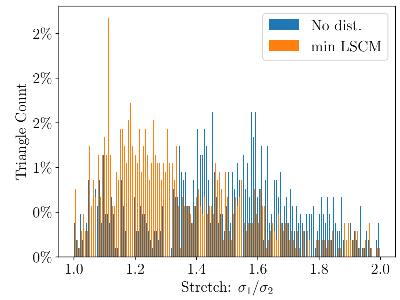


B30

Triangles: 1048

	No dist.	min LSCM
Energy:	1.704E-07	1.567E-06
Time:	8s	28s
#Singus:	8	8
Scale:	1.061	1.153
Stretch:	1.611	1.478

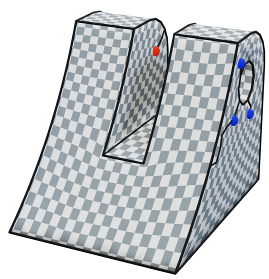


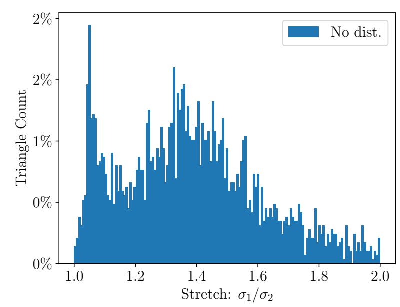


B31

Triangles: 2874

	No dist.	min LSCM
Energy:	4.459E-08	1.347E+00
Time:	19s	133s
#Singus:	8	8
Scale:	1.035	1.027
Stretch:	1.475	1.467

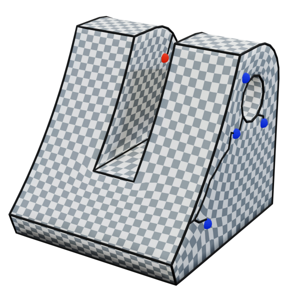


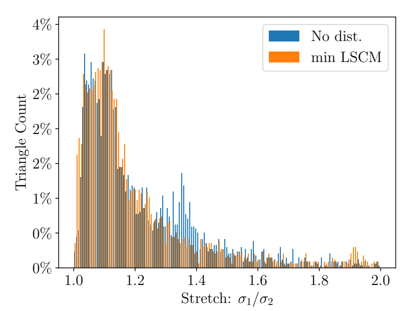


B32

Triangles: 3378

	No dist.	min LSCM
Energy:	4.944E-08	5.511E-07
Time:	25s	81s
#Singus:	10	10
Scale:	1.023	1.063
Stretch:	1.328	1.305

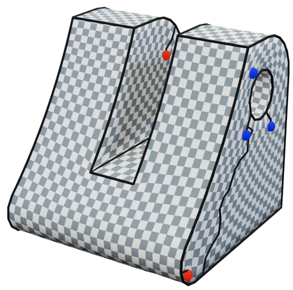


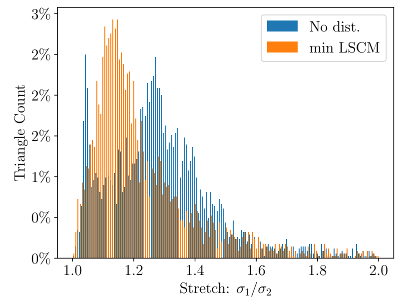


B33

Triangles: 3446

	No dist.	min LSCM
Energy:	2.152E-08	3.572E-07
Time:	21s	70s
#Singus:	10	10
Scale:	1.019	1.077
Stretch:	1.334	1.325

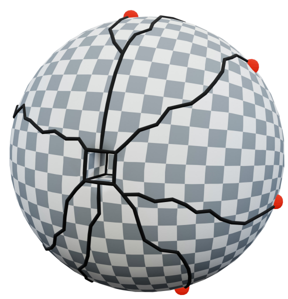


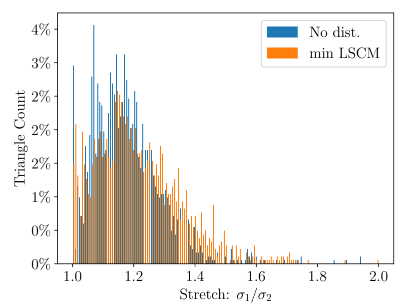


B34

Triangles: 1824

	No dist.	min LSCM
Energy:	6.465E-09	7.507E-07
Time:	20s	61s
#Singus:	8	8
Scale:	1.034	2.142
Stretch:	1.184	1.222

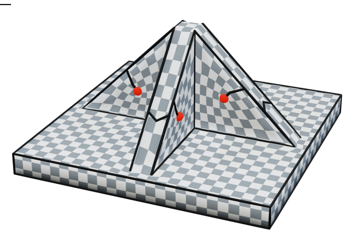


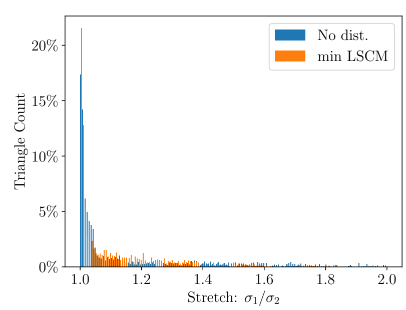


B35

Triangles: 2458

	No dist.	min LSCM
Energy:	3.724E-07	7.734E-07
Time:	12s	41s
#Singus:	8	8
Scale:	1.021	1.043
Stretch:	1.231	1.206

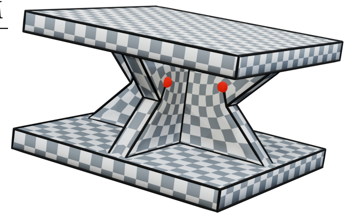


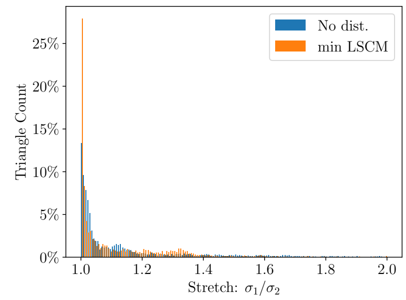


B36

Triangles: 4412

	No dist.	min LSCM
Energy:	2.378E-08	5.484E-07
Time:	26s	75s
#Singus:	8	8
Scale:	1.031	1.082
Stretch:	1.219	1.177

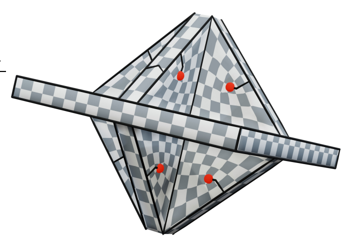


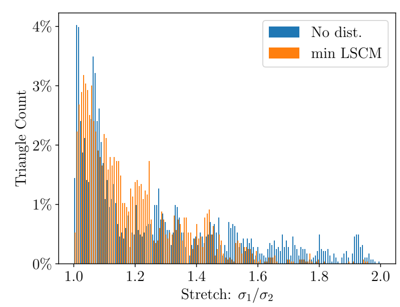


B37

Triangles: 2832

	No dist.	min LSCM
Energy:	9.292E-08	6.537E-06
Time:	15s	51s
#Singus:	16	16
Scale:	1.035	1.07
Stretch:	1.345	1.31

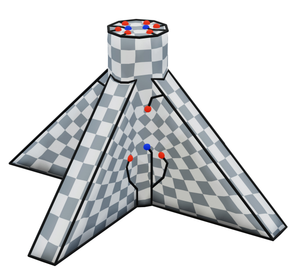


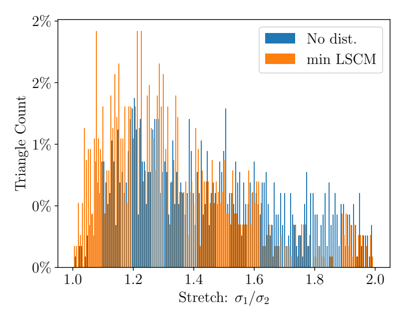


B38

Triangles: 1148

	No dist.	min LSCM
Energy:	9.162E-08	4.439E-07
Time:	11s	32s
#Singus:	24	16
Scale:	1.071	1.17
Stretch:	1.62	1.49

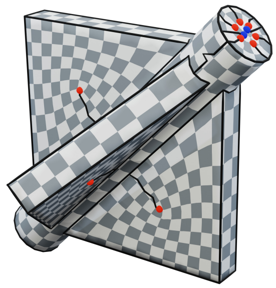


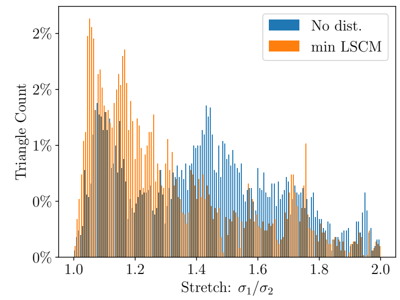


B39

Triangles: 5010

	No dist.	min LSCM
Energy:	3.577E-08	1.434E-06
Time:	37s	95s
#Singus:	24	24
Scale:	1.058	1.148
Stretch:	1.491	1.402

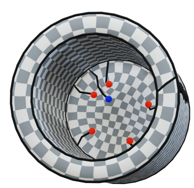


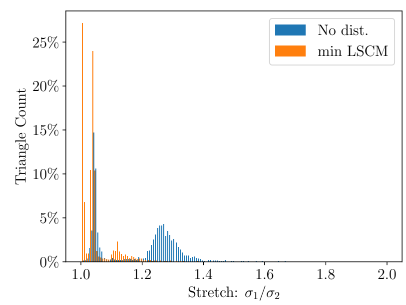


B4

Triangles: 3778

	No dist.	min LSCM
Energy:	3.247E-09	7.394E-06
Time:	22s	63s
#Singus:	16	8
Scale:	1.031	1.137
Stretch:	1.206	1.05

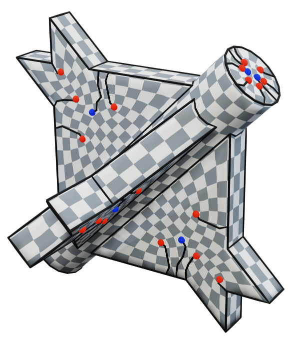


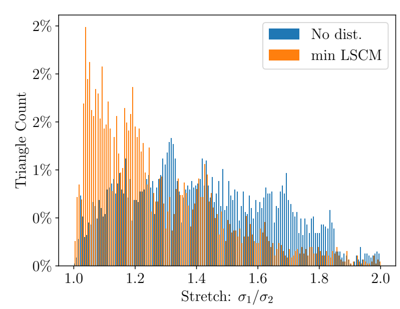


B40

Triangles: 4620

	No dist.	min LSCM
Energy:	1.029E-07	9.068E-07
Time:	32s	92s
#Singus:	54	36
Scale:	1.076	1.261
Stretch:	1.508	1.387

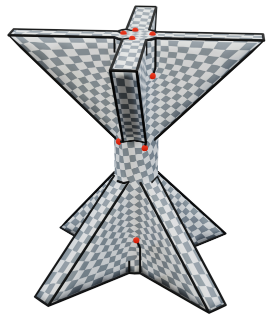


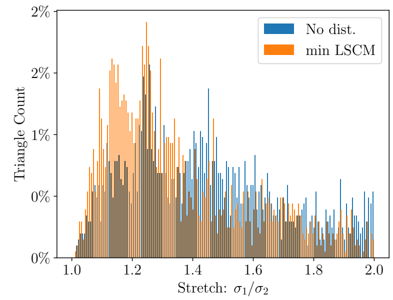


B41

Triangles: 2038

	No dist.	min LSCM
Energy:	2.148E-07	1.364E-06
Time:	13s	44s
#Singus:	20	20
Scale:	1.063	1.158
Stretch:	1.64	1.548

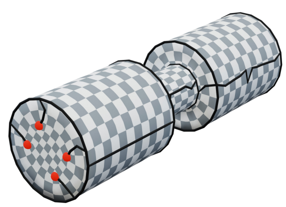


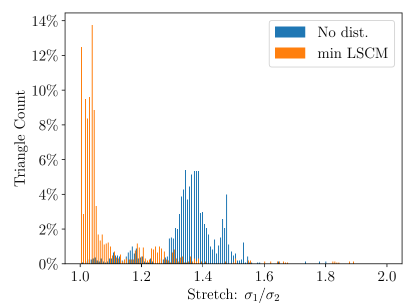


B42

Triangles: 1708

	No dist.	min LSCM
Energy:	1.370E-11	9.130E-06
Time:	7s	31s
#Singus:	8	8
Scale:	1.046	1.16
Stretch:	1.36	1.094

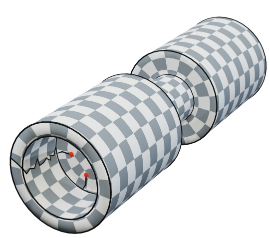


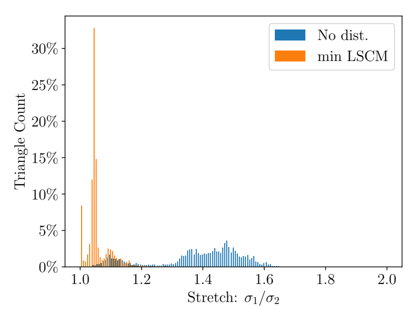


B43

Triangles: 7598

	No dist.	min LSCM
Energy:	3.037E-11	1.119E-07
Time:	43s	156s
#Singus:	10	8
Scale:	1.051	1.211
Stretch:	1.394	1.06

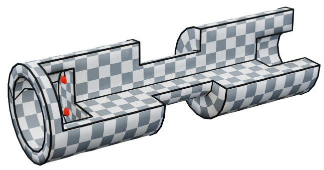


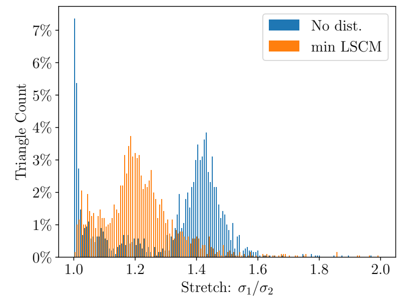


B44

Triangles: 1900

	No dist.	min LSCM
Energy:	1.023E-11	1.383E-06
Time:	9s	39s
#Singus:	6	6
Scale:	1.037	1.083
Stretch:	1.305	1.224

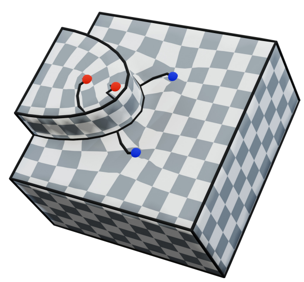


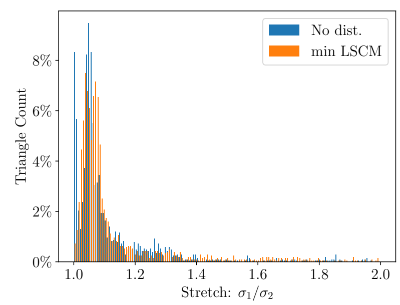


B45

Triangles: 2066

	No dist.	min LSCM
Energy:	9.142E-09	1.210E-07
Time:	17s	37s
#Singus:	4	4
Scale:	1.009	1.014
Stretch:	1.141	1.162

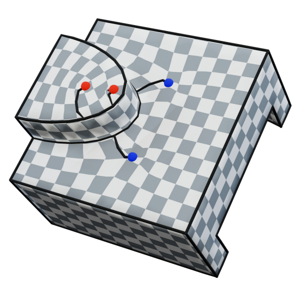


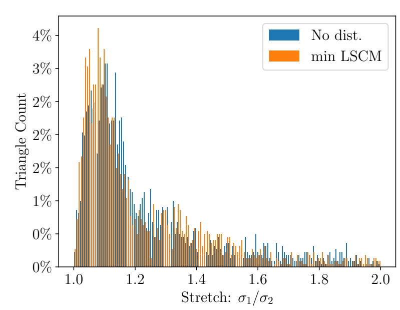


B46

Triangles: 2214

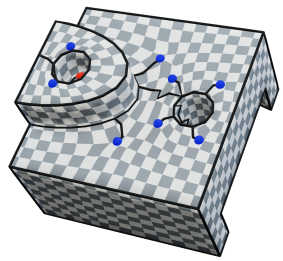
	No dist.	min LSCM
Energy:	5.592E-08	1.476E-07
Time:	19s	43s
#Singus:	8	8
Scale:	1.023	1.031
Stretch:	1.31	1.321

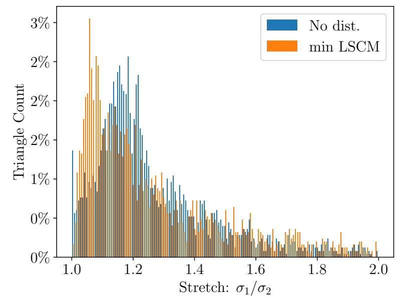




B47
Triangles: 2488

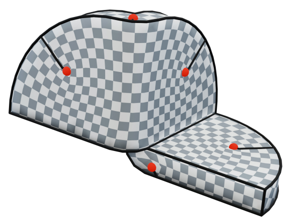
	No dist.	min LSCM
Energy:	1.389E-08	8.266E-08
Time:	20s	55s
#Singus:	18	16
Scale:	1.034	1.195
Stretch:	1.394	1.391

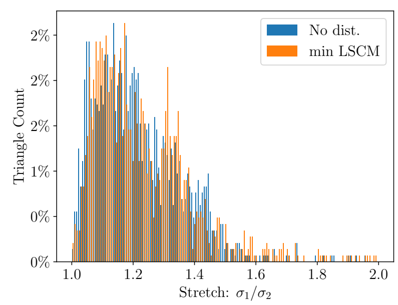




B48
Triangles: 1442

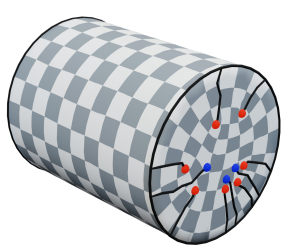
	No dist.	min LSCM
Energy:	1.568E-08	1.493E-06
Time:	10s	29s
#Singus:	10	10
Scale:	1.021	1.035
Stretch:	1.231	1.302

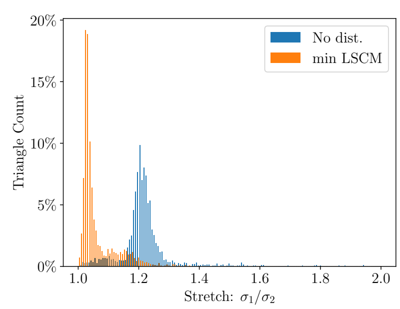




B5
Triangles: 2478

	No dist.	min LSCM
Energy:	1.722E-09	1.093E-05
Time:	16s	46s
#Singus:	16	8
Scale:	1.04	1.194
Stretch:	1.227	1.067

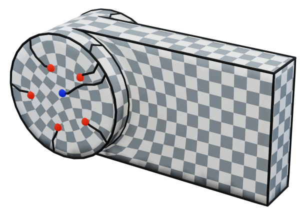


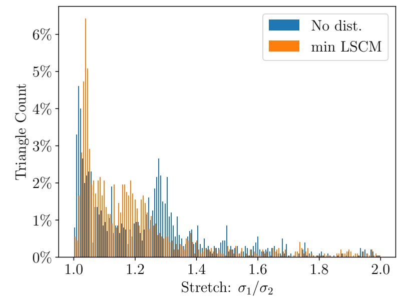


B50

Triangles: 1990

	No dist.	min LSCM
Energy:	1.821E-08	4.900E-07
Time:	21s	45s
#Singus:	12	8
Scale:	1.033	1.089
Stretch:	1.463	1.363

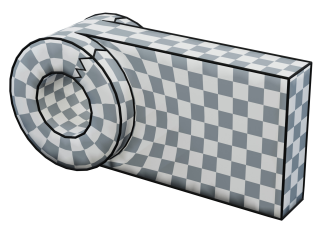


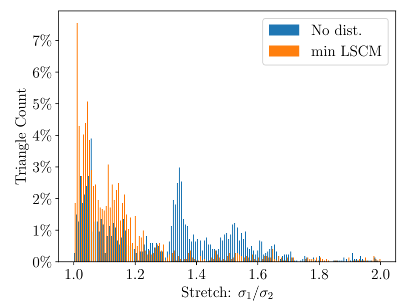


B51

Triangles: 2210

	No dist.	min LSCM
Energy:	1.296E-08	3.846E-07
Time:	18s	46s
#Singus:	0	0
Scale:	1.028	1.108
Stretch:	1.084	1.306

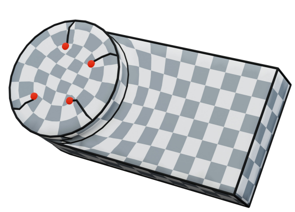


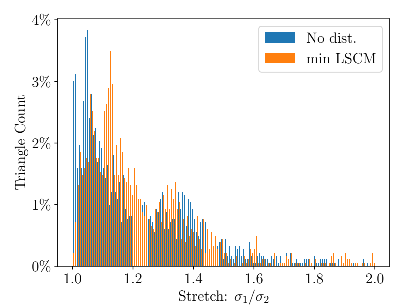


B52

Triangles: 1830

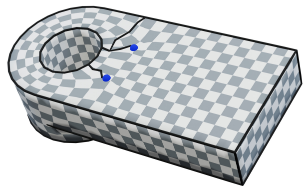
	No dist.	min LSCM
Energy:	7.989E-08	1.764E-08
Time:	20s	551s
#Singus:	6	6
Scale:	1.025	1.05
Stretch:	1.3	1.317

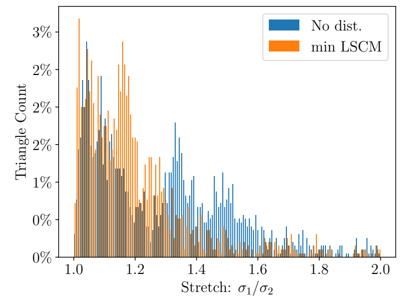




B53
Triangles: 1948

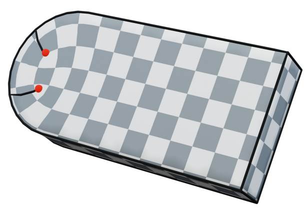
	No dist.	min LSCM
Energy:	9.600E-08	6.798E-08
Time:	19s	272s
#Singus:	2	2
Scale:	1.03	1.093
Stretch:	1.411	1.323

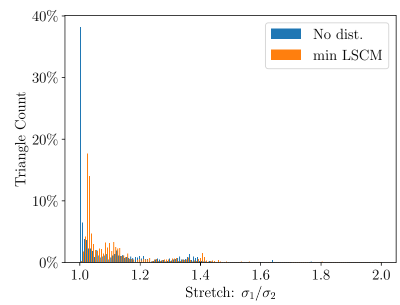




B54
Triangles: 1684

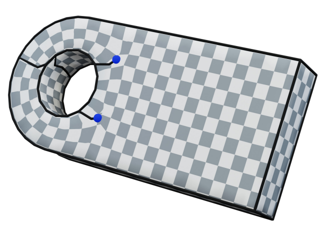
	No dist.	min LSCM
Energy:	7.656E-12	2.108E-06
Time:	9s	35s
#Singus:	4	4
Scale:	1.01	1.031
Stretch:	1.091	1.11

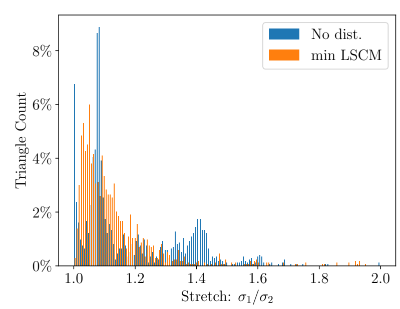




B55
Triangles: 1734

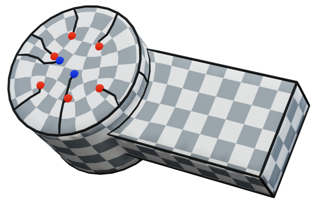
	No dist.	min LSCM
Energy:	5.153E-08	7.307E-06
Time:	10s	32s
#Singus:	4	4
Scale:	1.015	1.165
Stretch:	1.204	1.139

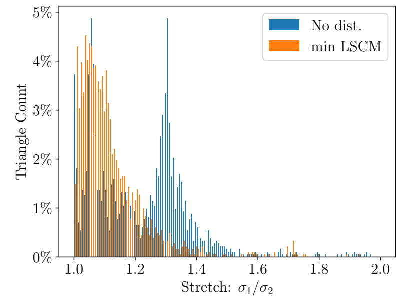




B56
Triangles: 1812

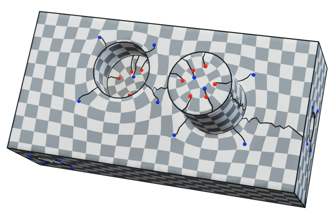
	No dist.	min LSCM
Energy:	1.392E-08	8.235E-07
Time:	14s	40s
#Singus:	14	8
Scale:	1.031	1.135
Stretch:	1.214	1.127

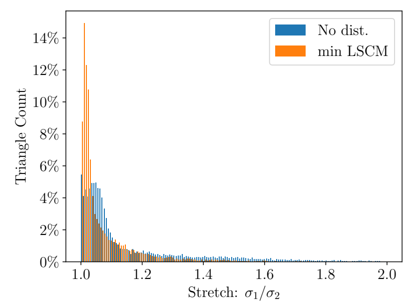




B57
Triangles: 17062

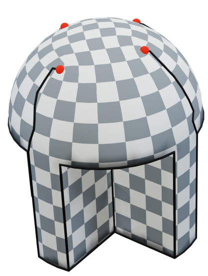
	No dist.	min LSCM
Energy:	1.372E-08	1.615E-07
Time:	168s	367s
#Singus:	50	42
Scale:	1.014	1.208
Stretch:	1.186	1.083

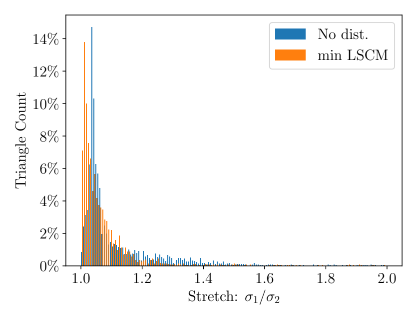




B58
Triangles: 2758

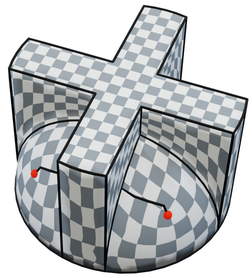
	No dist.	min LSCM
Energy:	3.786E-08	2.197E-07
Time:	16s	56s
#Singus:	8	8
Scale:	1.017	1.08
Stretch:	1.128	1.074

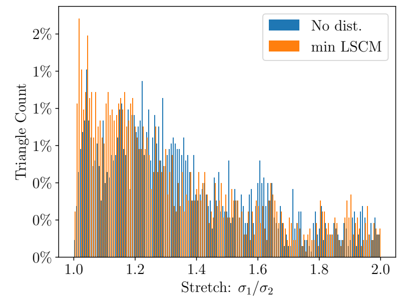




B59
Triangles: 2616

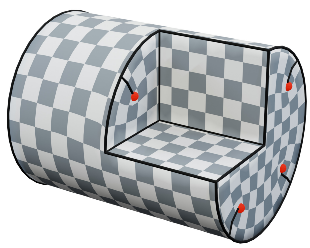
	No dist.	min LSCM
Energy:	1.709E-08	2.136E-07
Time:	22s	59s
#Singus:	8	8
Scale:	1.113	1.231
Stretch:	1.964	1.991

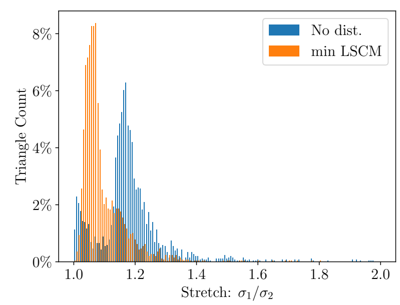




B6
Triangles: 2566

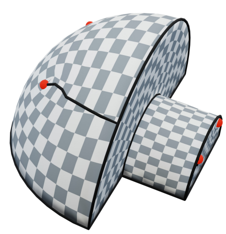
	No dist.	min LSCM
Energy:	3.036E-10	7.425E-07
Time:	15s	50s
#Singus:	12	8
Scale:	1.026	1.108
Stretch:	1.183	1.098

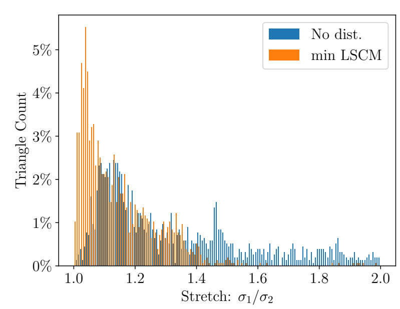




B60
Triangles: 1556

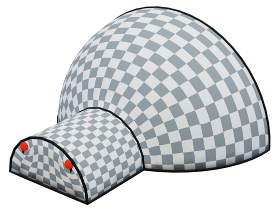
	No dist.	min LSCM
Energy:	9.709E-09	5.859E-07
Time:	15s	33s
#Singus:	6	6
Scale:	1.069	1.237
Stretch:	1.368	1.149

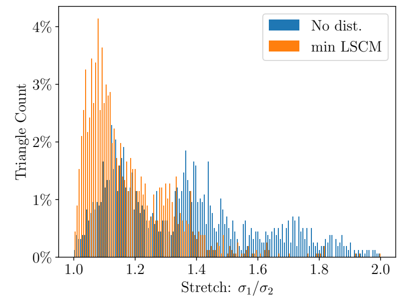




B61
Triangles: 1568

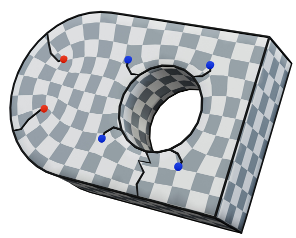
	No dist.	min LSCM
Energy:	6.226E-08	2.598E-07
Time:	10s	40s
#Singus:	6	6
Scale:	1.068	1.226
Stretch:	1.403	1.19

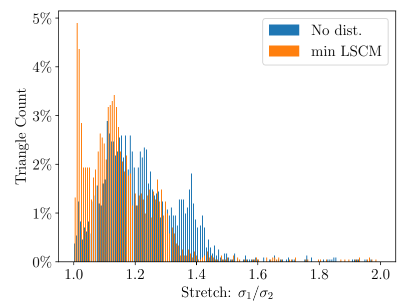




B62
Triangles: 2428

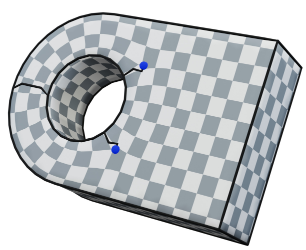
	No dist.	min LSCM
Energy:	1.206E-07	6.735E-06
Time:	16s	47s
#Singus:	12	12
Scale:	1.019	1.122
Stretch:	1.228	1.165

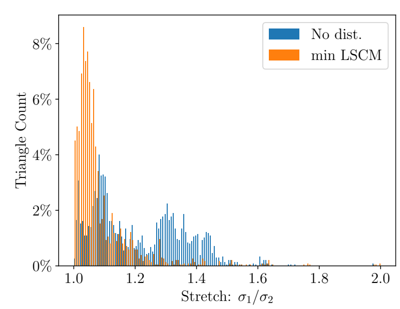




B63
Triangles: 2372

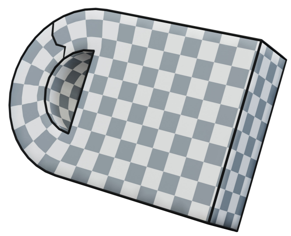
	No dist.	min LSCM
Energy:	2.514E-08	9.056E-06
Time:	14s	43s
#Singus:	4	4
Scale:	1.021	1.132
Stretch:	1.217	1.088

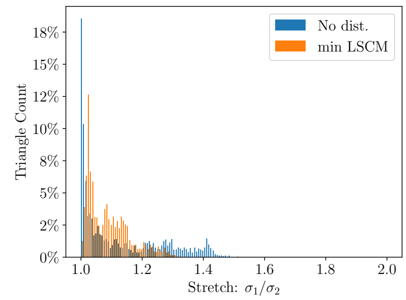




B64
Triangles: 2396

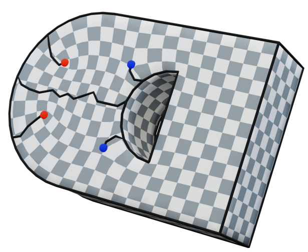
	No dist.	min LSCM
Energy:	8.021E-13	1.612E-06
Time:	8s	33s
#Singus:	0	0
Scale:	1.011	1.031
Stretch:	1.121	1.091

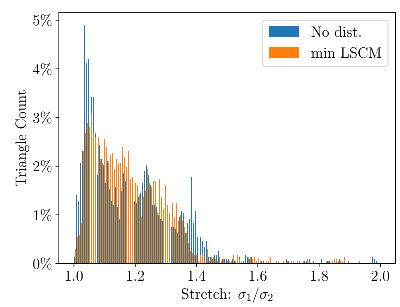




B65
Triangles: 2424

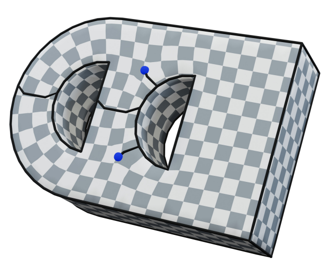
	No dist.	min LSCM
Energy:	7.057E-08	3.907E-07
Time:	16s	48s
#Singus:	8	8
Scale:	1.015	1.065
Stretch:	1.178	1.194

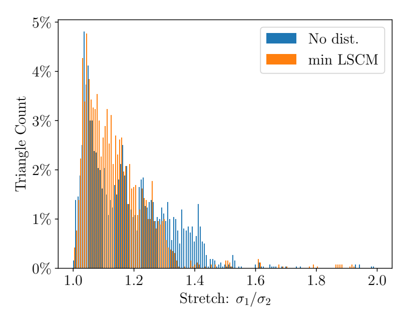




B66
Triangles: 2600

	No dist.	min LSCM
Energy:	4.930E-08	1.143E-06
Time:	18s	43s
#Singus:	4	4
Scale:	1.017	1.049
Stretch:	1.191	1.148

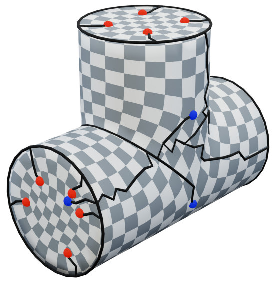


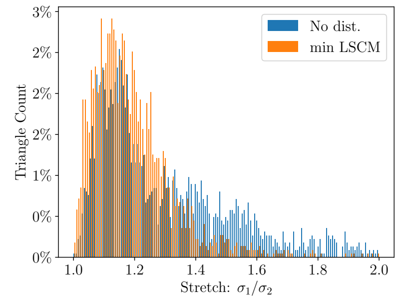


B67

Triangles: 2232

	No dist.	min LSCM
Energy:	4.416E-08	6.515E-06
Time:	22s	41s
#Singus:	22	16
Scale:	1.053	1.227
Stretch:	1.312	1.199

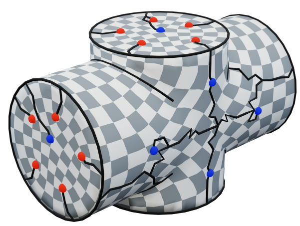


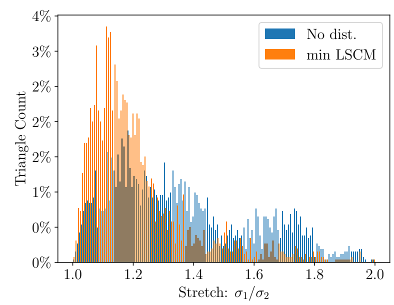


B68

Triangles: 2600

	No dist.	min LSCM
Energy:	3.795E-08	7.247E-07
Time:	22s	51s
#Singus:	32	24
Scale:	1.065	1.278
Stretch:	1.424	1.232

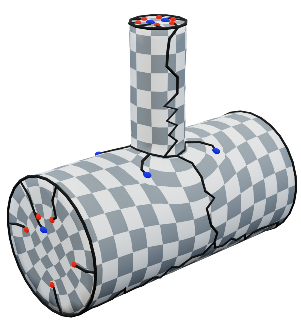


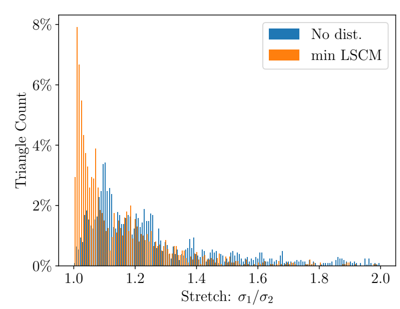


B69

Triangles: 2008

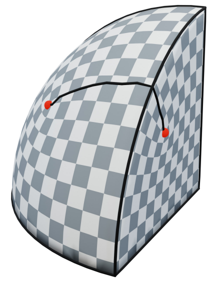
	No dist.	min LSCM
Energy:	5.093E-08	3.269E-06
Time:	18s	40s
#Singus:	24	18
Scale:	1.038	1.366
Stretch:	1.299	1.141

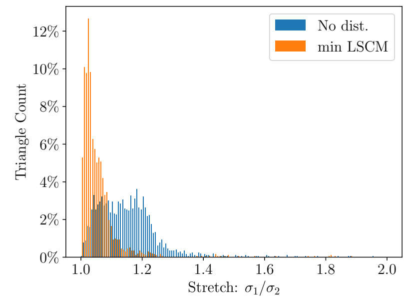




B7
Triangles: 1932

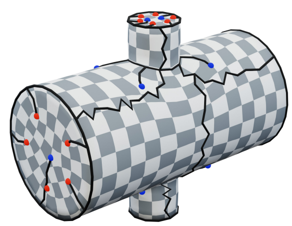
	No dist.	min LSCM
Energy:	1.379E-09	2.499E-06
Time:	11s	41s
#Singus:	4	4
Scale:	1.026	1.078
Stretch:	1.153	1.054

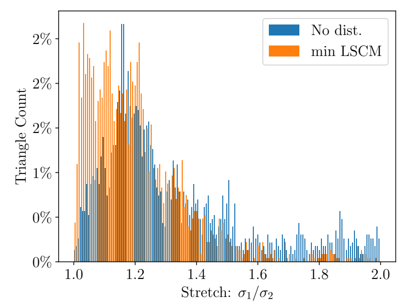




B70
Triangles: 2278

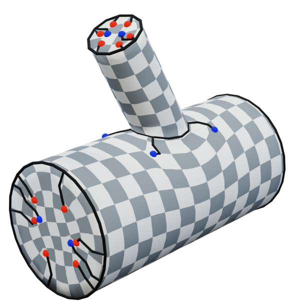
	No dist.	min LSCM
Energy:	8.189E-08	7.546E-06
Time:	18s	41s
#Singus:	32	26
Scale:	1.039	1.367
Stretch:	1.4	1.213

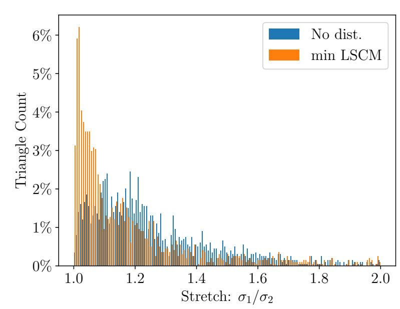




B71
Triangles: 1980

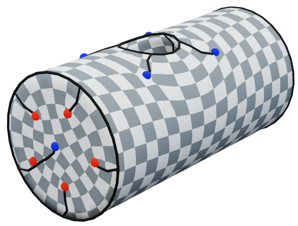
	No dist.	min LSCM
Energy:	1.097E-08	1.687E-06
Time:	20s	39s
#Singus:	26	18
Scale:	1.05	1.23
Stretch:	1.347	1.193

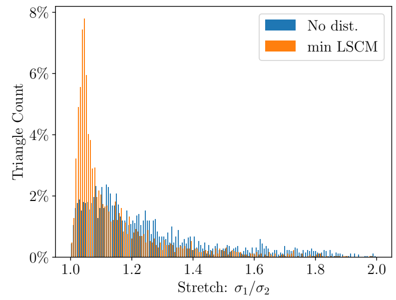




B72
Triangles: 2486

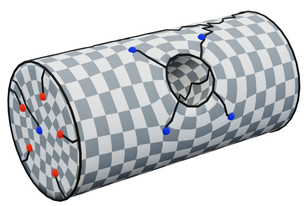
	No dist.	min LSCM
Energy:	6.223E-08	1.187E-06
Time:	18s	51s
#Singus:	20	16
Scale:	1.037	1.28
Stretch:	1.32	1.154

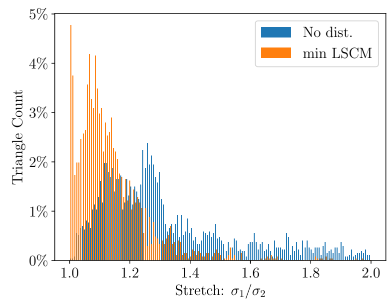




B73
Triangles: 2724

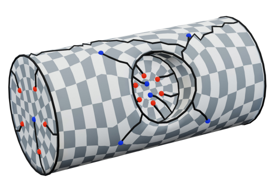
	No dist.	min LSCM
Energy:	8.415E-08	8.199E-06
Time:	19s	52s
#Singus:	20	16
Scale:	1.036	1.46
Stretch:	1.35	1.146

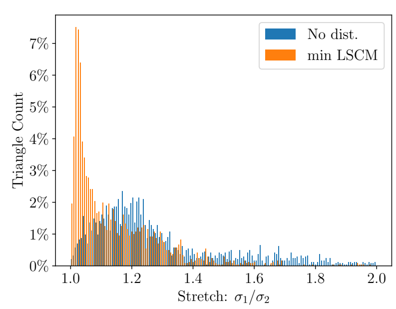




B74
Triangles: 2408

	No dist.	min LSCM
Energy:	3.720E-08	5.386E-06
Time:	19s	45s
#Singus:	24	16
Scale:	1.051	1.282
Stretch:	1.382	1.15

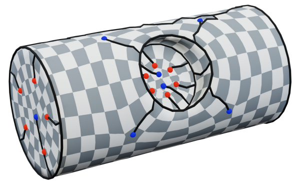


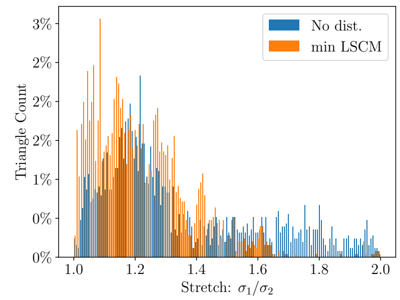


B75

Triangles: 2510

	No dist.	min LSCM
Energy:	9.976E-08	2.017E-06
Time:	19s	48s
#Singus:	36	26
Scale:	1.058	1.343
Stretch:	1.529	1.237

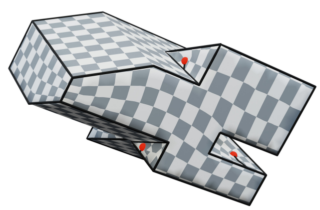


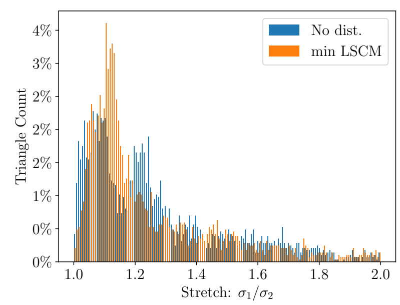


B76

Triangles: 2852

	No dist.	min LSCM
Energy:	1.511E-08	9.337E-08
Time:	16s	46s
#Singus:	5	5
Scale:	1.03	1.033
Stretch:	1.374	1.366

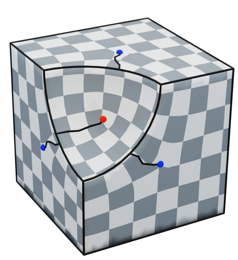


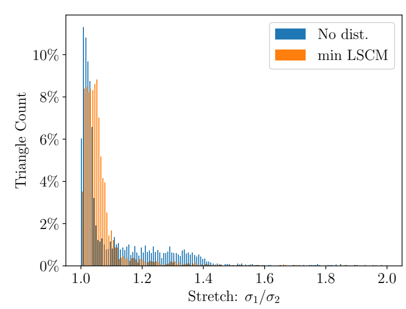


B8

Triangles: 3518

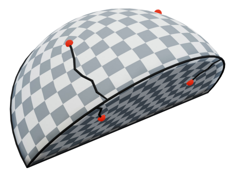
	No dist.	min LSCM
Energy:	8.192E-08	1.377E-07
Time:	24s	56s
#Singus:	4	4
Scale:	1.015	1.057
Stretch:	1.113	1.062

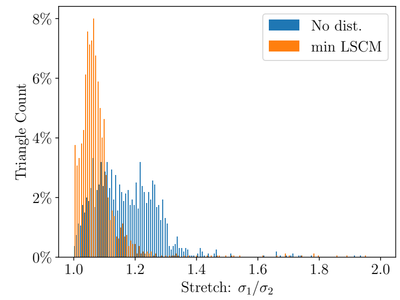




B9
Triangles: 1598

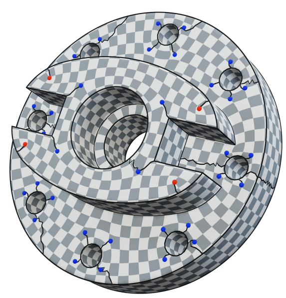
	No dist.	min LSCM
Energy:	2.353E-14	6.020E-06
Time:	8s	32s
#Singus:	6	6
Scale:	1.023	1.076
Stretch:	1.172	1.078

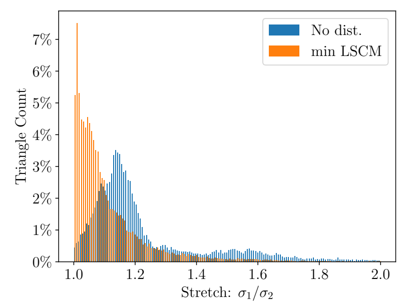




M1
Triangles: 35966

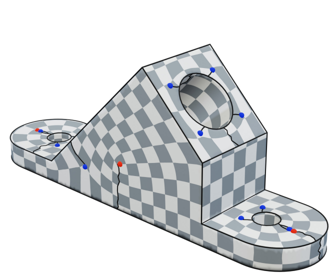
	No dist.	min LSCM
Energy:	1.932E-08	2.348E-06
Time:	454s	1075s
#Singus:	72	72
Scale:	1.032	1.202
Stretch:	1.314	1.121

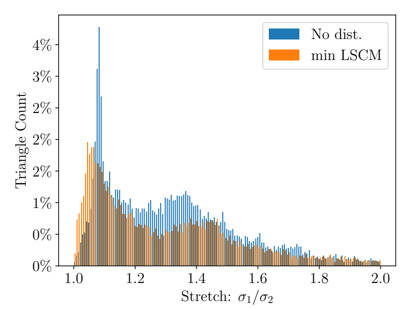




M2
Triangles: 22866

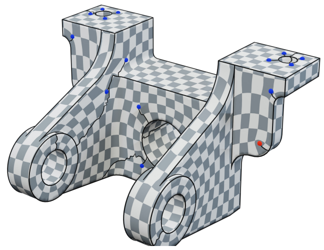
	No dist.	min LSCM
Energy:	4.200E-08	3.148E-07
Time:	303s	735s
#Singus:	40	18
Scale:	1.038	1.303
Stretch:	1.378	1.897

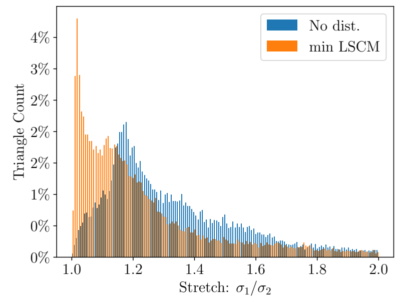




M3
Triangles: 36880

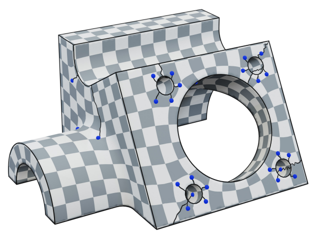
	No dist.	min LSCM
Energy:	7.238E-08	1.471E-07
Time:	668s	3463s
#Singus:	50	42
Scale:	1.032	1.117
Stretch:	1.461	1.37

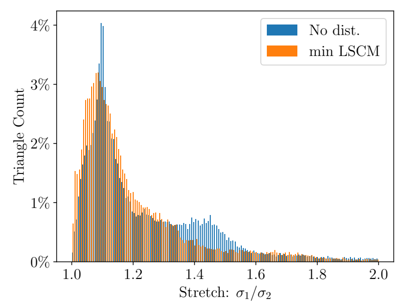




M4
Triangles: 40948

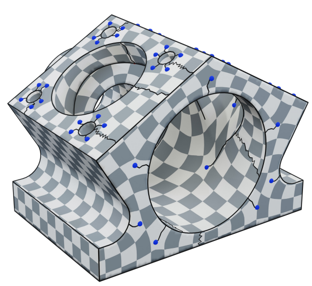
	No dist.	min LSCM
Energy:	8.366E-08	4.567E-07
Time:	672s	1494s
#Singus:	72	68
Scale:	1.033	1.13
Stretch:	1.324	1.258

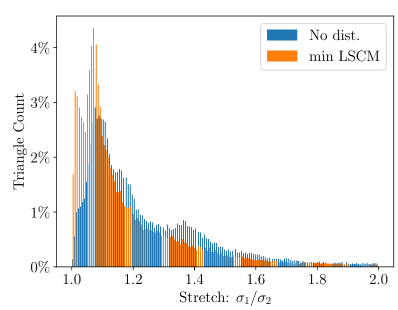




M5
Triangles: 57118

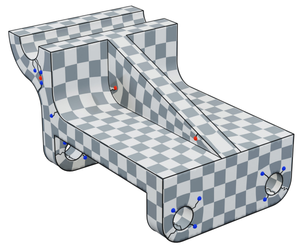
	No dist.	min LSCM
Energy:	1.378E-08	2.579E-06
Time:	1015s	2206s
#Singus:	120	116
Scale:	1.037	1.193
Stretch:	1.337	1.228

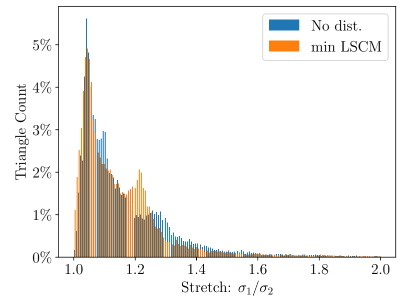




M6
Triangles: 40722

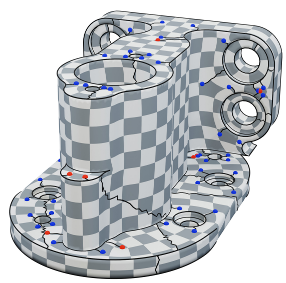
	No dist.	min LSCM
Energy:	1.201E-08	6.451E-07
Time:	568s	1213s
#Singus:	38	34
Scale:	1.019	1.074
Stretch:	1.22	1.179

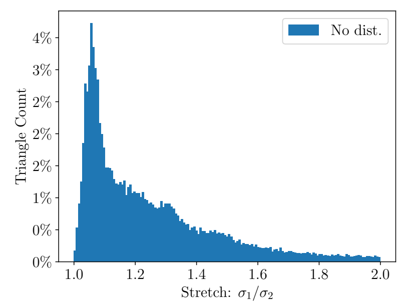




M7
Triangles: 53146

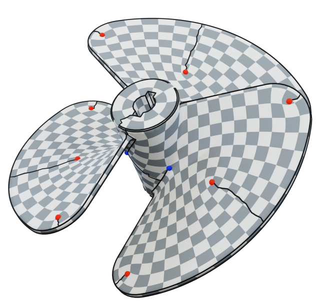
	No dist.	min LSCM
Energy:	9.868E-08	4.651E+00
Time:	842s	5494s
#Singus:	142	116
Scale:	1.028	1.062
Stretch:	1.351	1.351

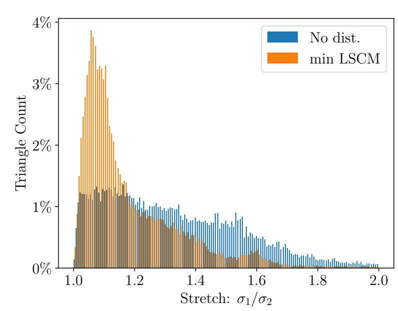




M8
Triangles: 26062

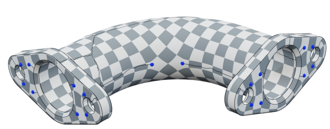
	No dist.	min LSCM
Energy:	2.584E-08	2.508E-07
Time:	312s	1024s
#Singus:	24	24
Scale:	1.033	1.162
Stretch:	1.375	1.208

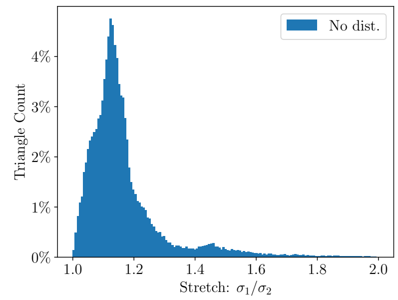




M9
Triangles: 31214

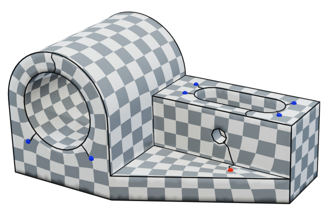
	No dist.	min LSCM
Energy:	8.754E-08	5.379E+01
Time:	1559s	14883s
#Singus:	36	40
Scale:	1.014	1.081
Stretch:	1.183	1.533

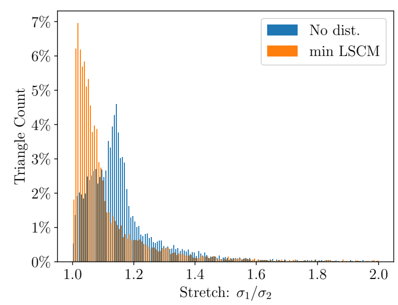




S0
Triangles: 11402

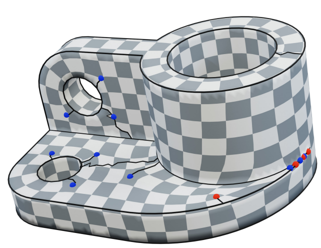
	No dist.	min LSCM
Energy:	3.481E-08	7.183E-08
Time:	106s	273s
#Singus:	13	13
Scale:	1.022	1.072
Stretch:	1.199	1.14

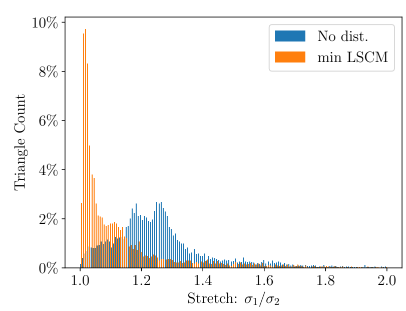




S1
Triangles: 9830

	No dist.	min LSCM
Energy:	1.451E-08	1.265E-07
Time:	148s	916s
#Singus:	21	15
Scale:	1.034	1.119
Stretch:	1.326	1.257

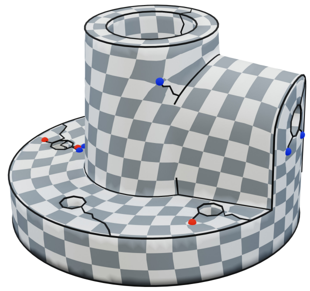


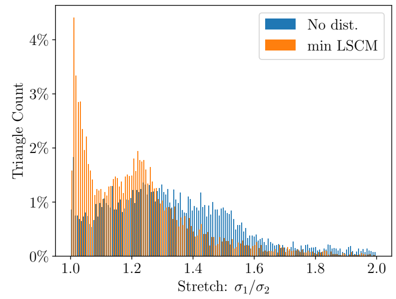


S20

Triangles: 9264

	No dist.	min LSCM
Energy:	3.848E-08	5.554E-07
Time:	81s	225s
#Singus:	26	22
Scale:	1.033	1.296
Stretch:	1.446	1.256

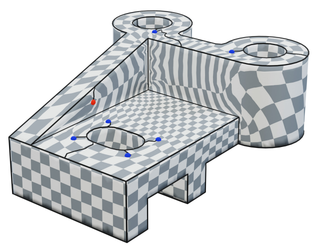


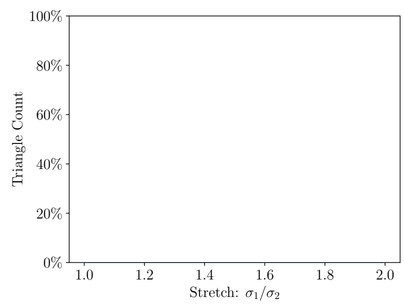


S22

Triangles: 10662

	No dist.	min LSCM
Energy:	1.411E-03	1.319E-03
Time:	341s	649s
#Singus:	15	15
Scale:	1.148	1.265
Stretch:	2.442	3.407

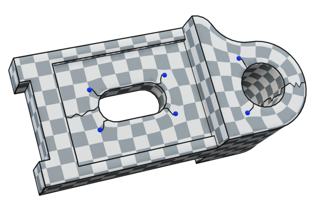


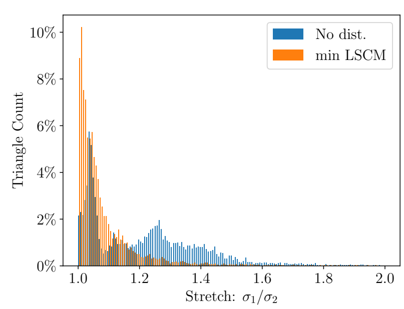


S23

Triangles: 9046

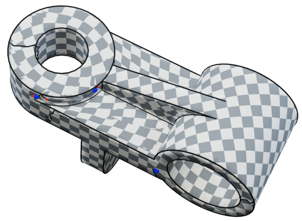
	No dist.	min LSCM
Energy:	1.976E-08	9.835E-07
Time:	69s	191s
#Singus:	12	12
Scale:	1.018	1.112
Stretch:	1.238	1.099

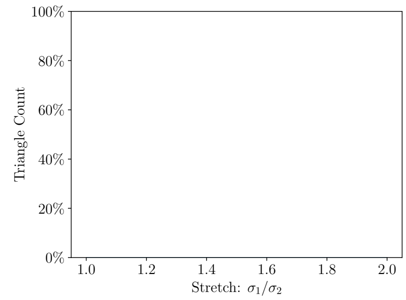




S24
Triangles: 8302

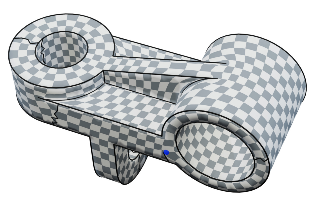
	No dist.	min LSCM
Energy:	1.346E+01	5.413E+01
Time:	299s	1109s
#Singus:	14	10
Scale:	1.01	1.007
Stretch:	1.166	1.046

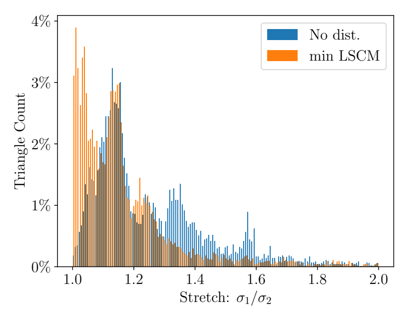




S24r
Triangles: 8290

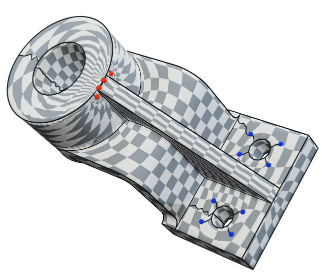
	No dist.	min LSCM
Energy:	1.882E-08	3.231E-08
Time:	105s	2338s
#Singus:	8	8
Scale:	1.029	1.089
Stretch:	1.397	1.31

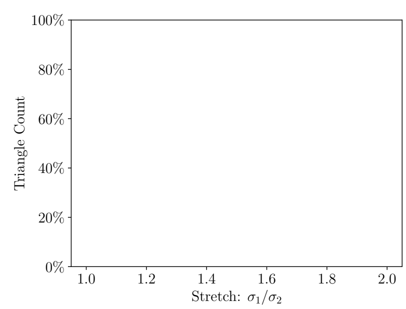




S25
Triangles: 9652

	No dist.	min LSCM
Energy:	1.283E-04	2.695E-02
Time:	972s	311s
#Singus:	22	22
Scale:	1.285	1.137
Stretch:	6.301	2.567

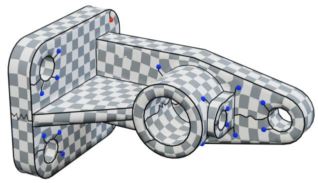


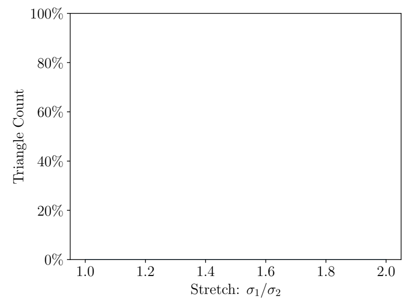


S26

Triangles: 9034

	No dist.	min LSCM
Energy:	2.336E-01	1.864E+00
Time:	214s	1468s
#Singus:	40	40
Scale:	1.019	1.024
Stretch:	1.241	1.207

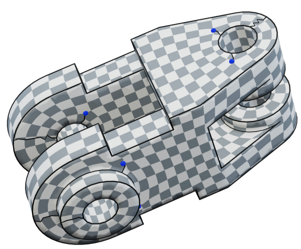


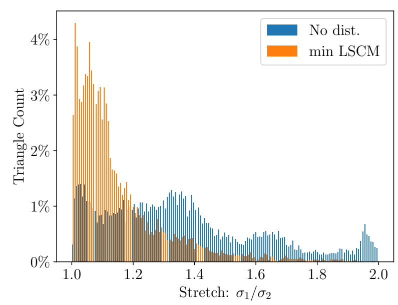


S27

Triangles: 11862

	No dist.	min LSCM
Energy:	1.087E-07	6.754E-07
Time:	89s	258s
#Singus:	12	12
Scale:	1.04	1.263
Stretch:	1.465	1.208

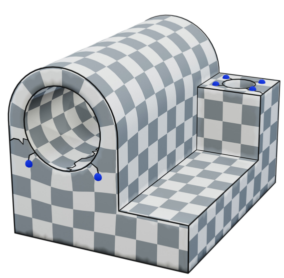


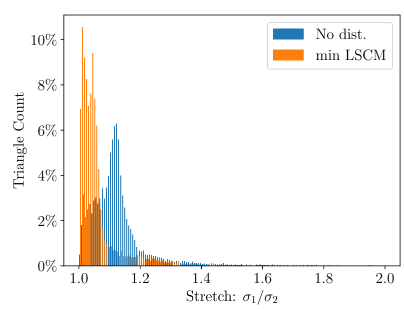


S3

Triangles: 15482

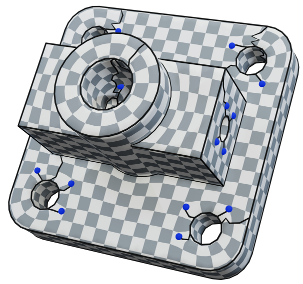
	No dist.	min LSCM
Energy:	3.670E-08	4.003E-08
Time:	129s	490s
#Singus:	12	12
Scale:	0.993	1.078
Stretch:	1.218	1.095

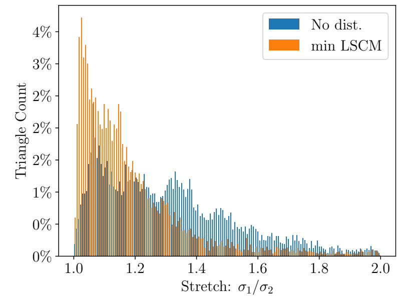




S31
Triangles: 9450

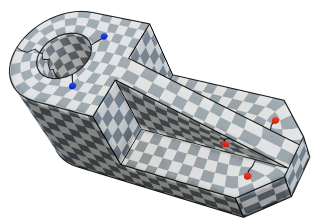
	No dist.	min LSCM
Energy:	1.874E-08	4.702E-07
Time:	87s	253s
#Singus:	50	48
Scale:	1.028	1.238
Stretch:	1.401	1.257

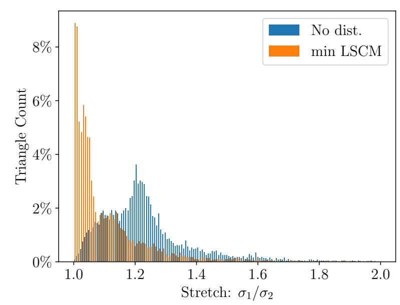




S33
Triangles: 9204

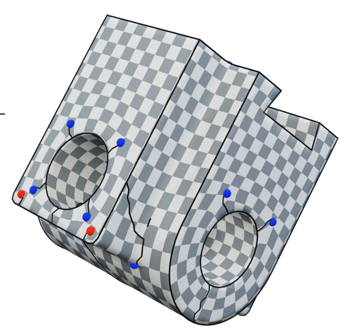
	No dist.	min LSCM
Energy:	4.078E-08	2.901E-07
Time:	67s	228s
#Singus:	10	10
Scale:	1.036	1.127
Stretch:	1.268	1.158

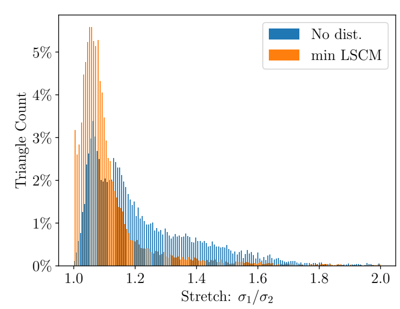




S34
Triangles: 16450

	No dist.	min LSCM
Energy:	4.575E-08	9.783E-07
Time:	160s	348s
#Singus:	32	24
Scale:	1.018	1.224
Stretch:	1.242	1.121

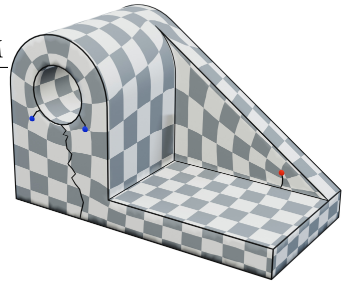


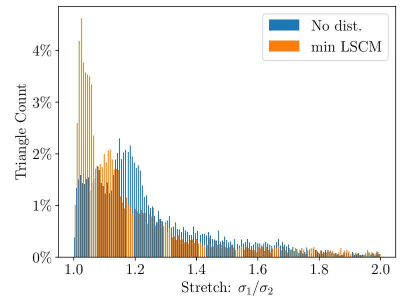


S35

Triangles: 10946

	No dist.	min LSCM
Energy:	7.891E-08	8.730E-07
Time:	126s	989s
#Singus:	6	6
Scale:	1.047	1.099
Stretch:	1.433	1.34

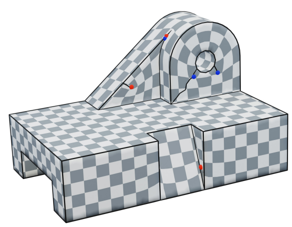


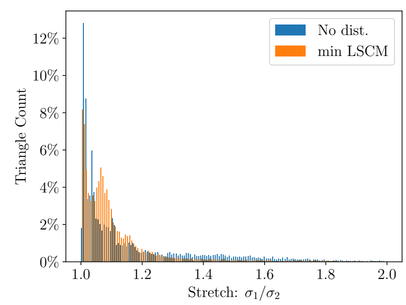


S36

Triangles: 10736

	No dist.	min LSCM
Energy:	1.187E-07	1.161E-07
Time:	152s	368s
#Singus:	10	8
Scale:	1.02	1.086
Stretch:	1.2	1.148

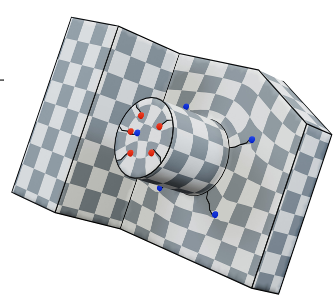


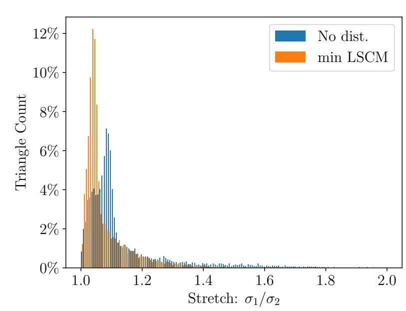


S37

Triangles: 10606

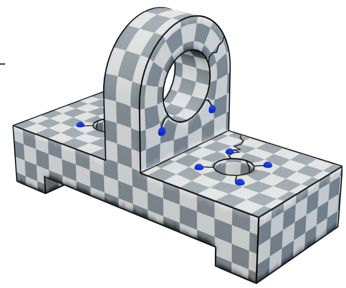
	No dist.	min LSCM
Energy:	1.506E-08	2.851E-08
Time:	85s	239s
#Singus:	10	8
Scale:	1.011	1.114
Stretch:	1.143	1.084

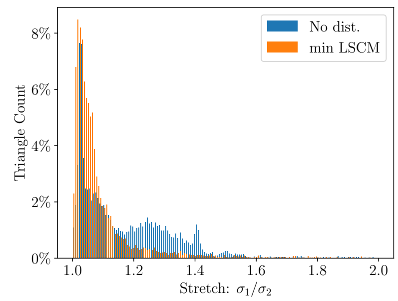




S38
Triangles: 8386

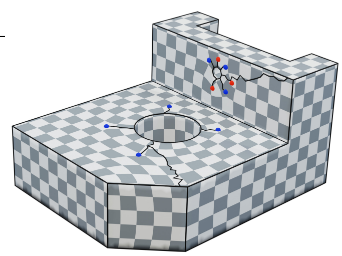
	No dist.	min LSCM
Energy:	1.649E-08	1.092E-07
Time:	64s	173s
#Singus:	20	20
Scale:	0.998	1.113
Stretch:	1.212	1.102

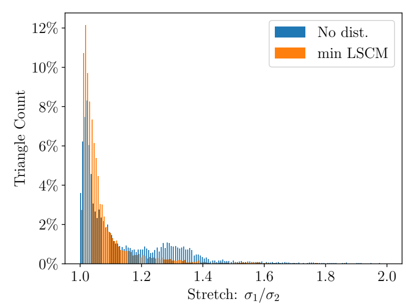




S39
Triangles: 11826

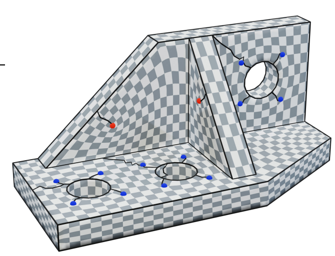
	No dist.	min LSCM
Energy:	1.726E-08	3.868E-07
Time:	106s	267s
#Singus:	17	15
Scale:	1.01	1.101
Stretch:	1.152	1.077

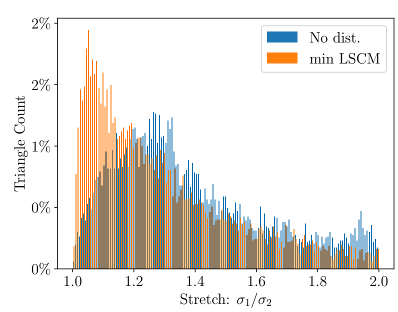




S4
Triangles: 8694

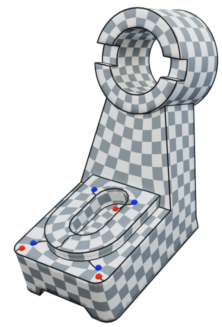
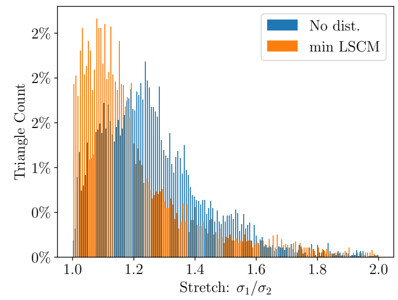
	No dist.	min LSCM
Energy:	1.742E-08	3.687E-07
Time:	106s	209s
#Singus:	29	27
Scale:	1.067	1.159
Stretch:	1.775	1.619





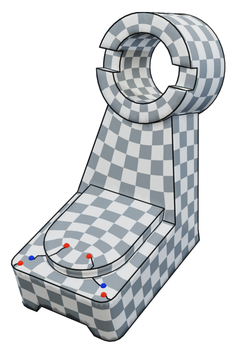
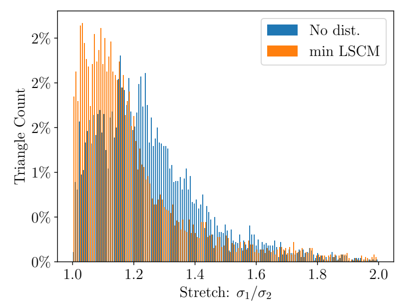
S40
Triangles: 7502

	No dist.	min LSCM
Energy:	3.590E-08	5.306E-08
Time:	55s	153s
#Singus:	12	8
Scale:	1.028	1.123
Stretch:	1.287	1.299

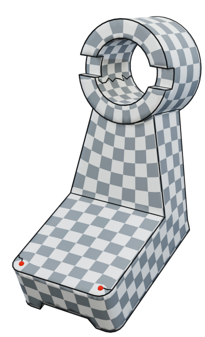
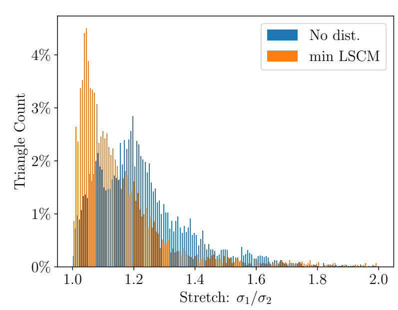
S41
Triangles: 7190

	No dist.	min LSCM
Energy:	1.173E-08	3.950E-07
Time:	52s	159s
#Singus:	8	4
Scale:	1.025	1.101
Stretch:	1.263	1.28

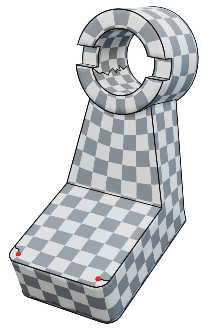
S42
Triangles: 7034

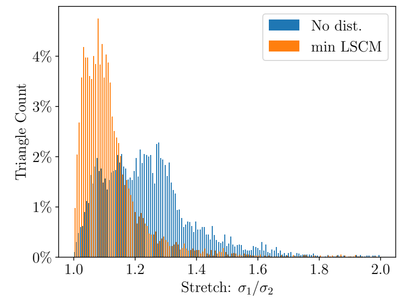
	No dist.	min LSCM
Energy:	1.126E-08	1.368E-08
Time:	46s	148s
#Singus:	4	4
Scale:	1.023	1.087
Stretch:	1.227	1.217

S43
Triangles: 7046

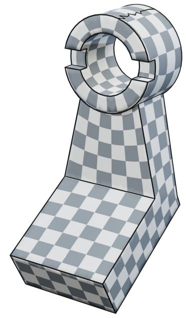
	No dist.	min LSCM
Energy:	6.407E-08	1.664E-08
Time:	46s	141s
#Singus:	4	4
Scale:	1.024	1.09
Stretch:	1.247	1.129

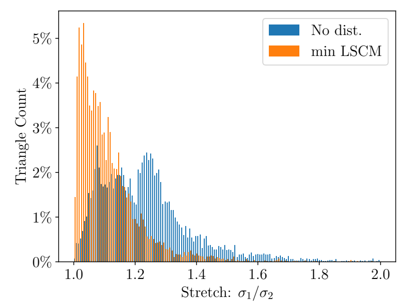




S44
Triangles: 6884

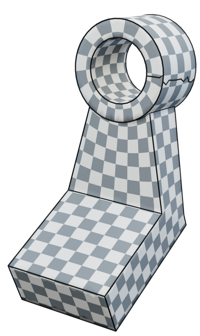
	No dist.	min LSCM
Energy:	3.291E-08	1.019E-06
Time:	40s	130s
#Singus:	0	0
Scale:	1.023	1.085
Stretch:	1.236	1.115

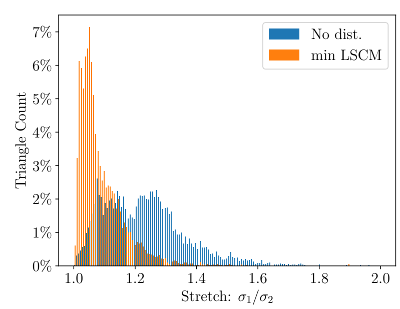




S45
Triangles: 6828

	No dist.	min LSCM
Energy:	9.870E-08	1.784E-07
Time:	32s	133s
#Singus:	0	0
Scale:	1.022	1.115
Stretch:	1.23	1.092

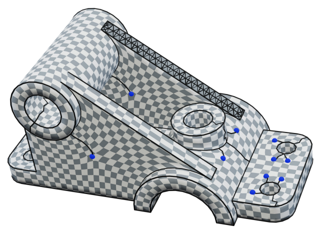


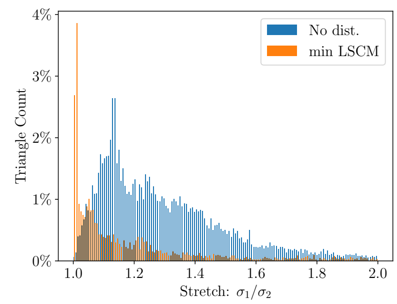


S5

Triangles: 10878

	No dist.	min LSCM
Energy:	1.293E-08	3.130E-07
Time:	191s	388s
#Singus:	36	36
Scale:	1.016	0.561
Stretch:	1.446	0.407

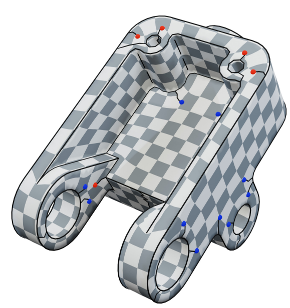


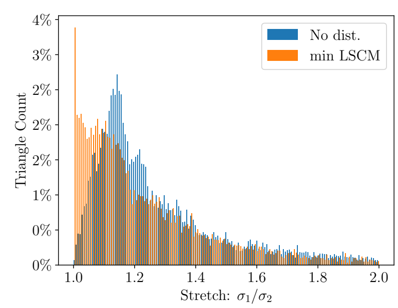


S6

Triangles: 12818

	No dist.	min LSCM
Energy:	9.208E-08	2.588E-07
Time:	124s	319s
#Singus:	38	32
Scale:	1.028	1.168
Stretch:	1.347	1.334

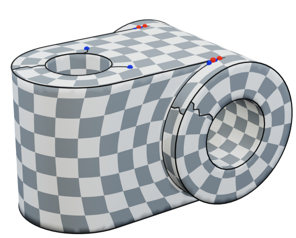


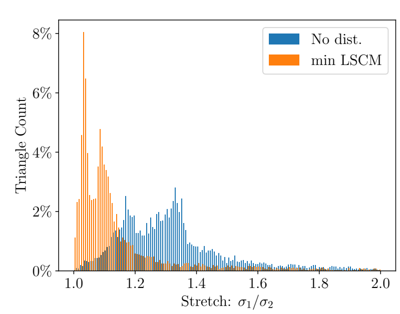


S7

Triangles: 12692

	No dist.	min LSCM
Energy:	6.759E-08	7.142E-08
Time:	157s	1547s
#Singus:	20	4
Scale:	1.038	1.164
Stretch:	1.365	1.242

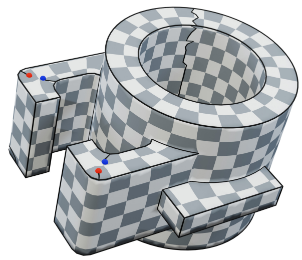


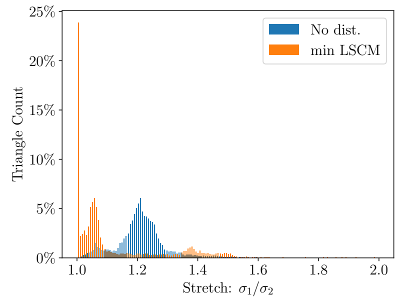


S8

Triangles: 12998

	No dist.	min LSCM
Energy:	2.177E-07	2.167E-07
Time:	78s	969s
#Singus:	8	0
Scale:	1.017	1.067
Stretch:	1.234	1.149

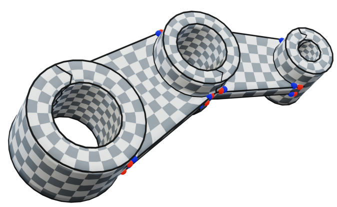


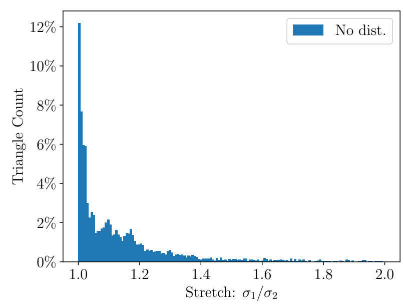


S9

Triangles: 6570

	No dist.	min LSCM
Energy:	7.417E-08	1.005E-01
Time:	225s	1091s
#Singus:	30	4
Scale:	1.15	1.125
Stretch:	1.24	1.143

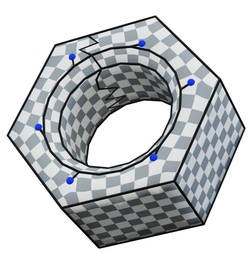


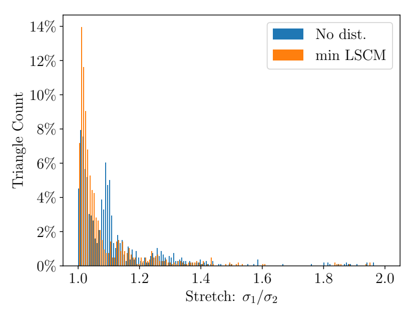


abca_00003957

Triangles: 1060

	No dist.	min LSCM
Energy:	3.173E-08	1.177E-05
Time:	7s	25s
#Singus:	12	12
Scale:	1.012	1.019
Stretch:	1.131	1.106

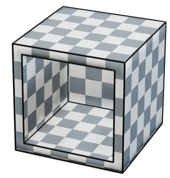


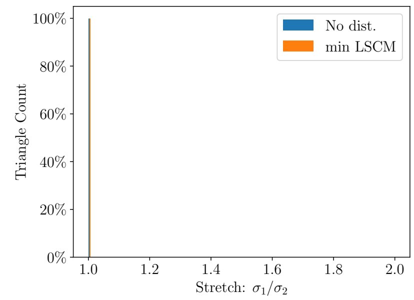


abca_00003963

Triangles: 1982

	No dist.	min LSCM
Energy:	1.461E-11	2.421E-13
Time:	7s	7s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

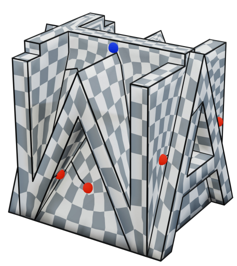


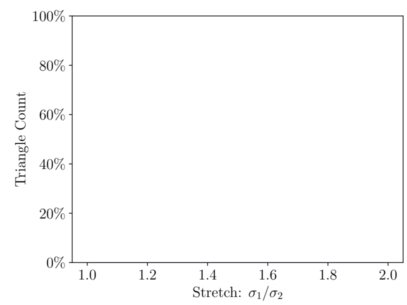


abca_00004035

Triangles: 2636

	No dist.	min LSCM
Energy:	1.403E-03	2.059E-01
Time:	232s	80s
#Singus:	24	20
Scale:	1.172	1.162
Stretch:	4.308	2.195

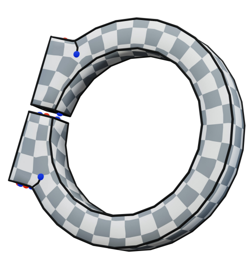


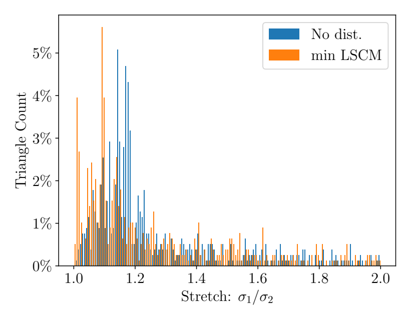


abca_00004064

Triangles: 784

	No dist.	min LSCM
Energy:	2.301E-08	1.679E-08
Time:	11s	55s
#Singus:	28	26
Scale:	1.018	1.045
Stretch:	1.35	1.341

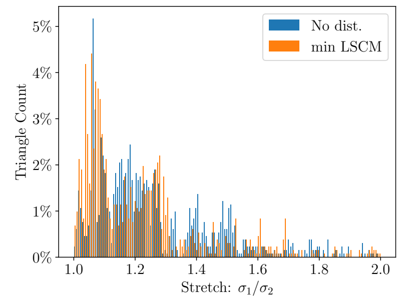




abca_00004513

Triangles: 1314

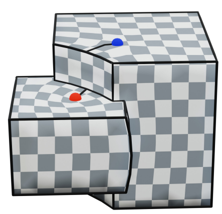
	No dist.	min LSCM
Energy:	3.364E-08	2.297E-07
Time:	8s	23s
#Singus:	0	0
Scale:	1.023	1.031
Stretch:	1.268	1.226

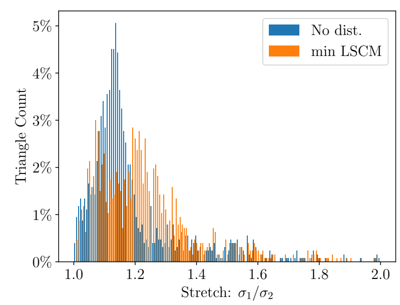


abca_00004730

Triangles: 1264

	No dist.	min LSCM
Energy:	8.593E-08	3.381E-07
Time:	8s	27s
#Singus:	4	4
Scale:	1.022	1.054
Stretch:	1.215	1.268

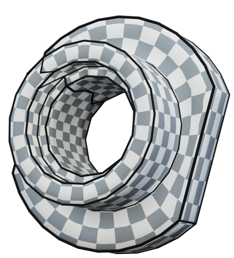


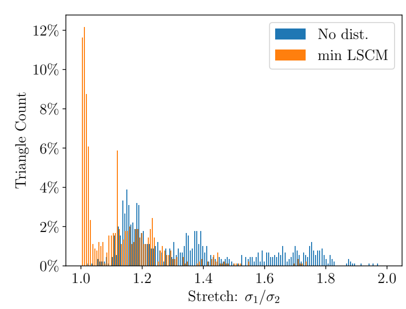


abca_00005057

Triangles: 904

	No dist.	min LSCM
Energy:	8.522E-08	5.329E-06
Time:	6s	24s
#Singus:	0	0
Scale:	1.055	1.222
Stretch:	1.412	1.128

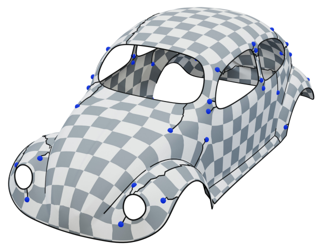


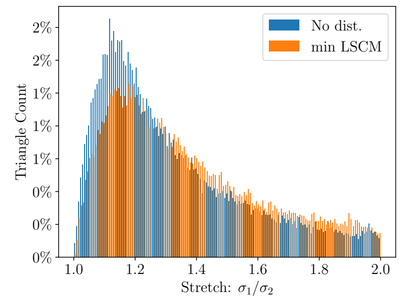


bettle

Triangles: 38752

	No dist.	min LSCM
Energy:	1.531E-08	1.910E-07
Time:	726s	18603s
#Singus:	46	46
Scale:	1.031	1.042
Stretch:	1.301	1.384

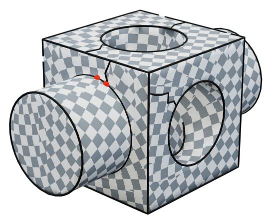


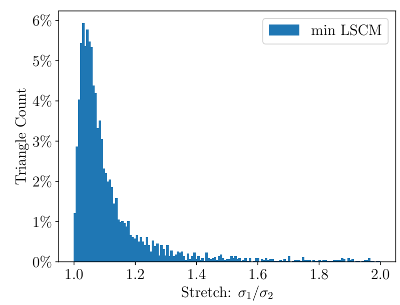


block

Triangles: 4456

	No dist.	min LSCM
Energy:	5.139E+02	1.708E+03
Time:	76s	706s
#Singus:	21	54
Scale:	1.008	1.025
Stretch:	3.178	1.413

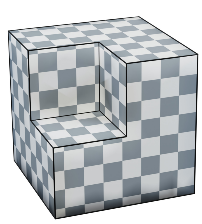


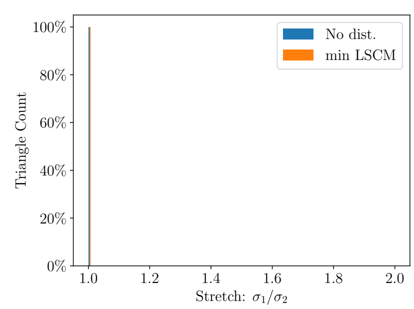


cube_minus_corner

Triangles: 612

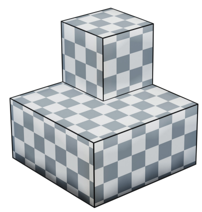
	No dist.	min LSCM
Energy:	3.007E-12	4.111E-12
Time:	2s	2s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

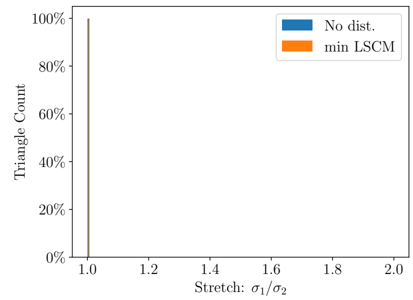




cube_plus_corner
Triangles: 508

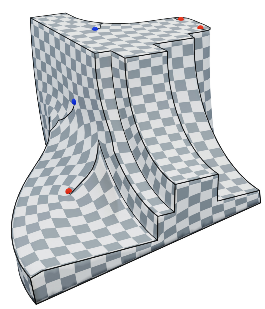
	No dist.	min LSCM
Energy:	5.898E-08	6.062E-15
Time:	2s	3s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

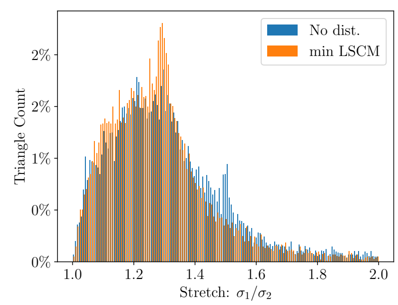




fandisk
Triangles: 14472

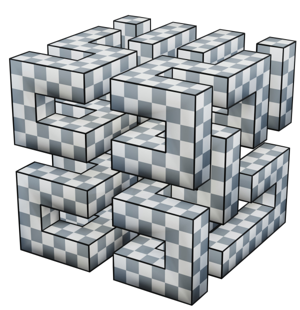
	No dist.	min LSCM
Energy:	2.978E-08	4.680E-07
Time:	159s	359s
#Singus:	9	9
Scale:	1.034	1.048
Stretch:	1.356	1.332

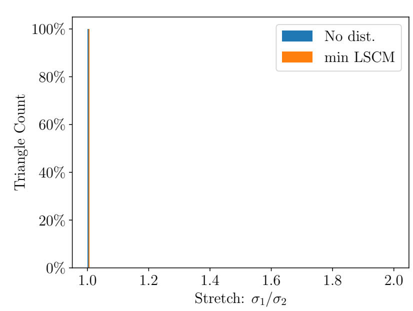




hilbert
Triangles: 1968

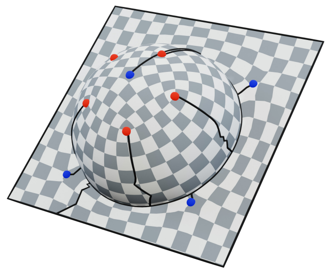
	No dist.	min LSCM
Energy:	1.638E-12	1.168E-19
Time:	7s	6s
#Singus:	0	0
Scale:	1.0	1.0
Stretch:	1.0	1.0

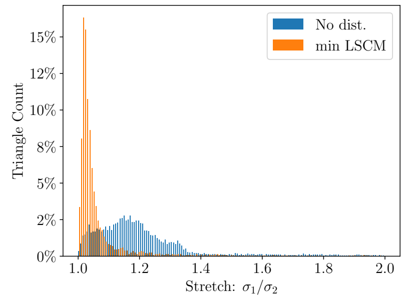




plane-sphere
Triangles: 6842

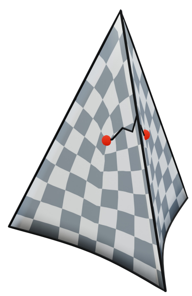
	No dist.	min LSCM
Energy:	2.237E-08	1.588E-07
Time:	73s	164s
#Singus:	10	8
Scale:	0.924	1.31
Stretch:	1.655	1.255

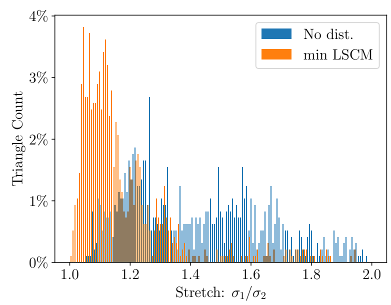




sharp_3
Triangles: 968

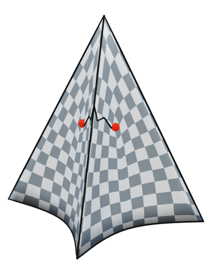
	No dist.	min LSCM
Energy:	5.564E-08	6.842E-08
Time:	9s	32s
#Singus:	4	4
Scale:	1.043	1.169
Stretch:	1.533	1.386

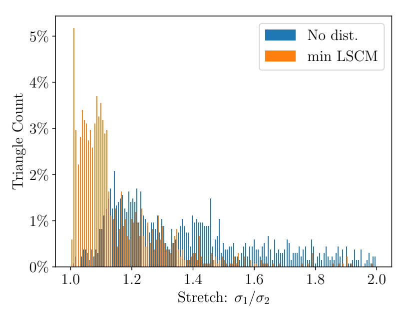




sharp_4
Triangles: 1352

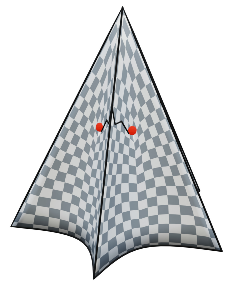
	No dist.	min LSCM
Energy:	6.780E-08	9.066E-08
Time:	13s	37s
#Singus:	4	4
Scale:	1.038	1.193
Stretch:	1.597	1.483

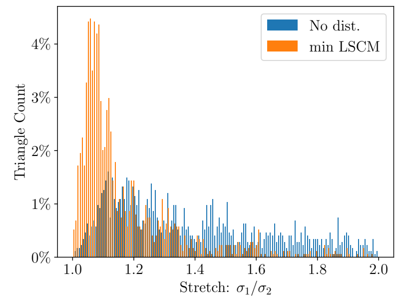




sharp_5
Triangles: 1740

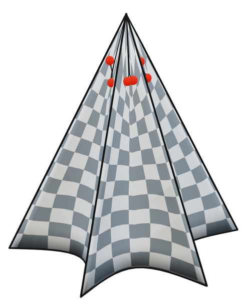
	No dist.	min LSCM
Energy:	1.505E-08	1.239E-07
Time:	14s	45s
#Singus:	6	6
Scale:	1.041	1.215
Stretch:	1.697	1.644

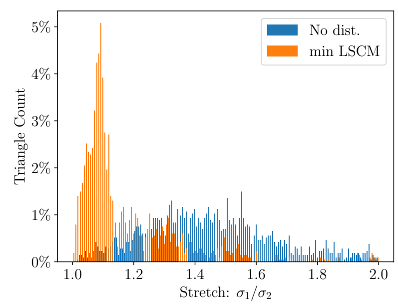




sharp_6
Triangles: 2144

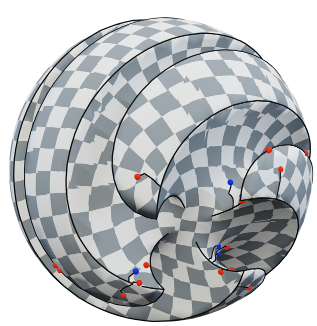
	No dist.	min LSCM
Energy:	1.658E-08	4.830E-07
Time:	17s	63s
#Singus:	16	16
Scale:	1.1	1.191
Stretch:	1.954	3.184

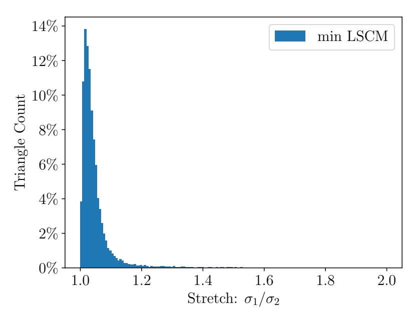




sharp_sphere
Triangles: 20998

	No dist.	min LSCM
Energy:	1.298E+01	7.362E+01
Time:	1446s	4119s
#Singus:	51	43
Scale:	1.016	1.005
Stretch:	1.262	1.064

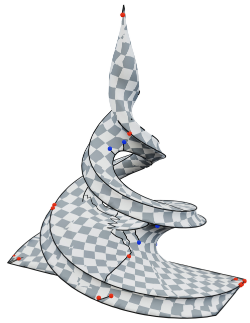


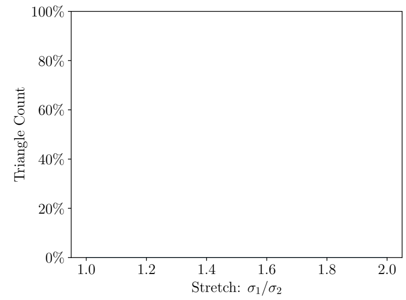


twirl_5000

Triangles: 10470

	No dist.	min LSCM
Energy:	6.971E+00	1.928E+01
Time:	502s	2851s
#Singus:	34	26
Scale:	1.017	1.028
Stretch:	1.335	1.194

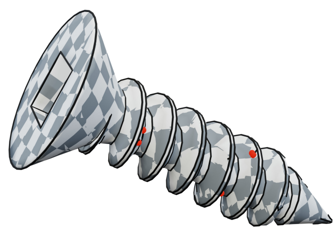


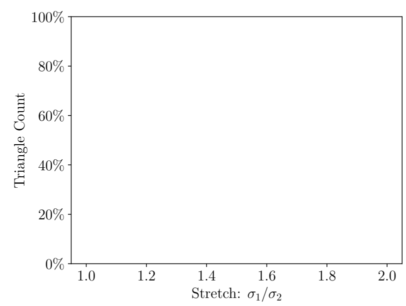


vis

Triangles: 3682

	No dist.	min LSCM
Energy:	7.034E+03	4.472E+02
Time:	1223s	1830s
#Singus:	14	25
Scale:	1.06	1.203
Stretch:	1.691	2.906





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