Data-Driven Elastic Models for Cloth: Modeling and Measurement
Suplemental Document

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This document is a supplemental file to accompany the paper:

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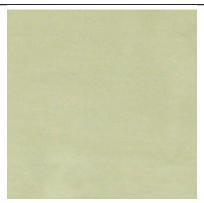
The following link can be used to access the main paper and other supplemental files:

> http://graphics.berkeley.edu/papers/Wang-DDE-2011-08

Note: We use standard metric units for all examples. They are meter (m) as the unit of length, kilogram (kg) as the unit of mass, and second (s) as the unit of time. Please refer to our paper for the definition of each parameter.



Ivory Rib Knit
(Underwear)
95% Cotton
5% Spandex
Density: 0.276 kg/m^2

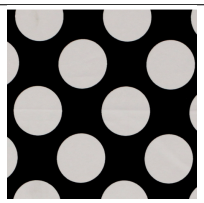
Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	42.871021	52.422512	29.482058	91.209549	48.973385	105.649139
c_{12}	-0.234556	7.219094	-5.146112	4.940307	-0.967226	0.416488
c_{22}	65.166023	245.337158	127.130753	109.746452	147.696823	254.593491
c_{33}	83.175644	-31.129513	13.068157	27.609430	-49.282963	3.472504

Parameters	0°	45°	90°
b_0	46.237591×10^{-6}	30.015930×10^{-6}	32.243889×10^{-6}
b_1	63.086697×10^{-6}	30.097424×10^{-6}	37.341282×10^{-6}
b_2	83.192772×10^{-6}	30.172081×10^{-6}	38.817448×10^{-6}
b_3	97.574425×10^{-6}	30.648300×10^{-6}	39.812527×10^{-6}
b_4	80.726685×10^{-6}	24.726685×10^{-6}	30.437820×10^{-6}

Pink Ribbon Brown
(Blanket)
100% Polyester
Density: 0.228 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	151.503906	164.124344	152.584641	209.604172	98.879021	96.805817
c_{12}	106.028160	33.689709	107.251373	175.223465	107.085518	54.626881
c_{22}	244.830673	268.195221	210.614838	220.198120	326.209442	359.792633
c_{33}	30.250183	30.074625	-62.760571	129.643188	44.475986	30.340616

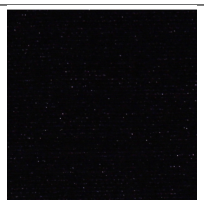
Parameters	0°	45°	90°
b_0	117.070122×10^{-6}	87.509773×10^{-6}	59.774277×10^{-6}
b_1	202.682922×10^{-6}	36.396919×10^{-6}	59.260632×10^{-6}
b_2	298.615936×10^{-6}	103.628098×10^{-6}	64.199661×10^{-6}
b_3	244.588867×10^{-6}	91.630119×10^{-6}	55.017326×10^{-6}
b_4	238.437820×10^{-6}	97.175949×10^{-6}	59.221714×10^{-6}



White Dots on Blk
(Tablecloth)
100% Polyester
Density: 0.128 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	2002.08618	2107.22753	2107.29882	2107.73291	2106.93750	2107.30786
c_{12}	0.345588	36.371597	57.936157	28.389059	70.149529	61.216290
c_{22}	2027.48559	2171.73339	2153.30712	2132.72607	2121.87353	2150.47680
c_{33}	19.189022	16.904713	24.392872	101.462021	38.054455	37.668823

Parameters	0°	45°	90°
b_0	51.713814×10^{-6}	40.659470×10^{-6}	31.282822×10^{-6}
b_1	36.506981×10^{-6}	10.401686×10^{-6}	22.910311×10^{-6}
b_2	66.360748×10^{-6}	20.847820×10^{-6}	26.350384×10^{-6}
b_3	52.729267×10^{-6}	30.993469×10^{-6}	30.637762×10^{-6}
b_4	15.221714×10^{-6}	12.726685×10^{-6}	16.726685×10^{-6}



Navy Sparkle Sweat
(Sweater)
96% Polyester
4% Spandex
Density: 0.224 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	12.486332	32.172089	48.565407	77.093796	126.205986	92.343170
c_{12}	-19.875324	56.012760	94.126335	2.958664	84.471718	117.527084
c_{22}	3.272434	283.466370	180.101227	91.251160	305.131531	243.264908
c_{33}	17.616289	-2.438436	4.439080	6.107700	38.495132	47.338436

Parameters	0°	45°	90°
b_0	59.469658×10^{-6}	40.072277×10^{-6}	45.625023×10^{-6}
b_1	37.500004×10^{-6}	37.446949×10^{-6}	39.520981×10^{-6}
b_2	35.787308×10^{-6}	35.206612×10^{-6}	30.734119×10^{-6}
b_3	35.737106×10^{-6}	24.871773×10^{-6}	23.301662×10^{-6}
b_4	21.033506×10^{-6}	9.033506×10^{-6}	13.033506×10^{-6}

Camel Ponte Roma
(Jacket)
60% Polyester
40% Rayon
Density: 0.284 kg/m^2

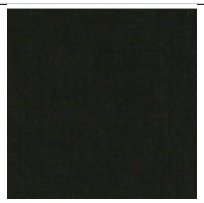
Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	31.146198	78.707756	67.368431	113.367035	144.294830	143.933365
c_{12}	-12.802702	26.754574	77.767944	54.802021	111.404854	49.654823
c_{22}	44.028667	268.680725	182.273407	175.126572	138.422150	191.777588
c_{33}	31.896357	27.743423	-14.661531	44.657330	-29.861851	39.491055

Parameters	0°	45°	90°
b_0	36.348366×10^{-6}	33.013252×10^{-6}	37.157593×10^{-6}
b_1	49.585537×10^{-6}	29.744385×10^{-6}	34.107452×10^{-6}
b_2	45.744080×10^{-6}	35.103642×10^{-6}	33.229435×10^{-6}
b_3	47.413387×10^{-6}	34.041019×10^{-6}	34.685535×10^{-6}
b_4	20.726685×10^{-6}	14.439938×10^{-6}	10.439938×10^{-6}

Gray Interlock
(T-shirt)
60% Cotton
40% Polyester
Density: 0.187 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	16.593832	46.364765	49.285110	123.989220	139.686325	127.443810
c_{12}	-14.695990	53.694656	87.596100	105.181770	73.592560	85.848587
c_{22}	34.477123	261.013855	206.373993	365.966217	413.553162	405.872833
c_{33}	36.860302	-29.691301	22.768457	44.217571	-174.43853	32.238411

Parameters	0°	45°	90°
b_0	23.191698×10^{-6}	24.749964×10^{-6}	14.267624×10^{-6}
b_1	32.932217×10^{-6}	18.651314×10^{-6}	7.052906×10^{-6}
b_2	34.406498×10^{-6}	16.370552×10^{-6}	14.515154×10^{-6}
b_3	39.014420×10^{-6}	25.095791×10^{-6}	24.665127×10^{-6}
b_4	23.382786×10^{-6}	8.860165×10^{-6}	19.383726×10^{-6}



11oz Black Denim
(Jeans)
99% Cotton
1% Spandex
Density: 0.324 kg/m^2

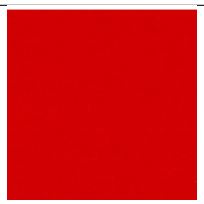
Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	205.352005	232.027634	224.592209	225.951050	226.039566	225.767487
c_{12}	10.234077	40.646339	40.384563	62.095657	40.502792	40.917892
c_{22}	1013.88629	1052.84289	1054.43444	1059.59741	1058.27771	1051.55712
c_{33}	53.387184	64.980499	67.184807	83.992020	75.118423	71.810631

Parameters	0°	45°	90°
b_0	64.196457×10^{-6}	73.384567×10^{-6}	96.951576×10^{-6}
b_1	60.286175×10^{-6}	59.671982×10^{-6}	107.848228×10^{-6}
b_2	60.943428×10^{-6}	61.080757×10^{-6}	113.060738×10^{-6}
b_3	62.433697×10^{-6}	68.242569×10^{-6}	120.569740×10^{-6}
b_4	19.824701×10^{-6}	36.033474×10^{-6}	79.781021×10^{-6}

White Swim Solid
(Swimsuit)
87% Nylon
13% Spandex
Density: 0.204 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	47.971176	40.369045	40.291599	51.393467	51.500938	68.621185
c_{12}	6.834521	23.092957	48.142597	-32.966949	1.868910	40.131950
c_{22}	104.615456	169.666290	138.261612	79.881721	63.693932	124.468513
c_{33}	60.773663	-24.681890	9.002558	35.973194	-37.540417	36.199604

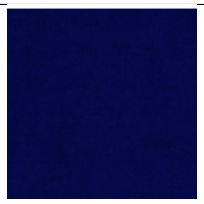
Parameters	0°	45°	90°
b_0	60.237942×10^{-6}	58.803211×10^{-6}	51.018833×10^{-6}
b_1	56.357208×10^{-6}	63.121964×10^{-6}	50.741455×10^{-6}
b_2	69.698593×10^{-6}	61.379181×10^{-6}	50.570576×10^{-6}
b_3	55.305969×10^{-6}	47.971302×10^{-6}	50.006001×10^{-6}
b_4	34.705532×10^{-6}	19.383726×10^{-6}	24.556618×10^{-6}



Tango Red Jet Set
(Jacket)
100% Polyester
Density: 0.113 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	43.067627	75.151695	57.548206	107.244377	178.734039	227.028687
c_{12}	54.373299	82.195221	89.637825	124.801788	178.488907	-21.865427
c_{22}	171.424835	236.163773	224.553848	364.583557	371.764618	404.867188
c_{33}	14.314700	-7.230383	3.932043	41.386868	-30.898058	62.636021

Parameters	0°	45°	90°
b_0	14.293814×10^{-6}	21.951700×10^{-6}	20.345654×10^{-6}
b_1	8.949391×10^{-6}	22.446325×10^{-6}	22.696880×10^{-6}
b_2	30.011126×10^{-6}	18.408735×10^{-6}	15.698071×10^{-6}
b_3	36.081490×10^{-6}	19.598495×10^{-6}	13.466827×10^{-6}
b_4	18.363136×10^{-6}	12.071854×10^{-6}	7.556618×10^{-6}



Royal target
(Pants)
65% Cotton
35% Polyester
Density: 0.220 kg/m^2

Parameters	Origin	0°	22.5°	45°	67.5°	90°
c_{11}	2016.55456	2109.51684	2109.78002	2110.33349	2109.16015	2109.52612
c_{12}	9.170511	38.604588	60.165310	30.987429	72.393326	63.424015
c_{22}	2034.97644	2173.93969	2155.51367	2135.07910	2124.13525	2152.73852
c_{33}	104.759674	19.129177	27.817890	121.482445	40.810982	39.885654

Parameters	0°	45°	90°
b_0	125.409805×10^{-6}	107.997696×10^{-6}	125.409805×10^{-6}
b_1	167.284561×10^{-6}	120.583267×10^{-6}	167.284561×10^{-6}
b_2	215.412750×10^{-6}	144.141678×10^{-6}	215.412750×10^{-6}
b_3	215.090790×10^{-6}	140.606689×10^{-6}	215.090790×10^{-6}
b_4	223.861038×10^{-6}	153.048309×10^{-6}	227.861038×10^{-6}