

# AAM Data Report

Generated by the AAM-API  
[ c:/users/mbs/studies/hands/model1\_tangent ]

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January 18, 2002

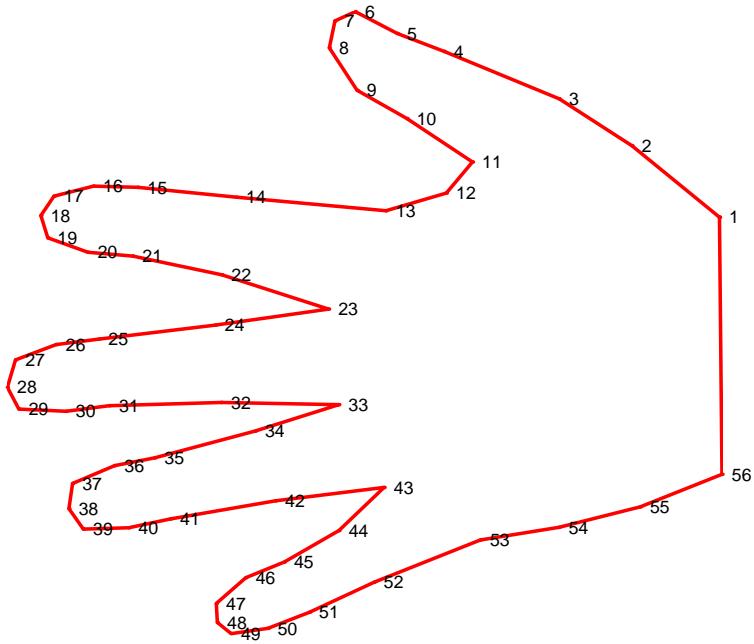


Figure 1: Mean shape.

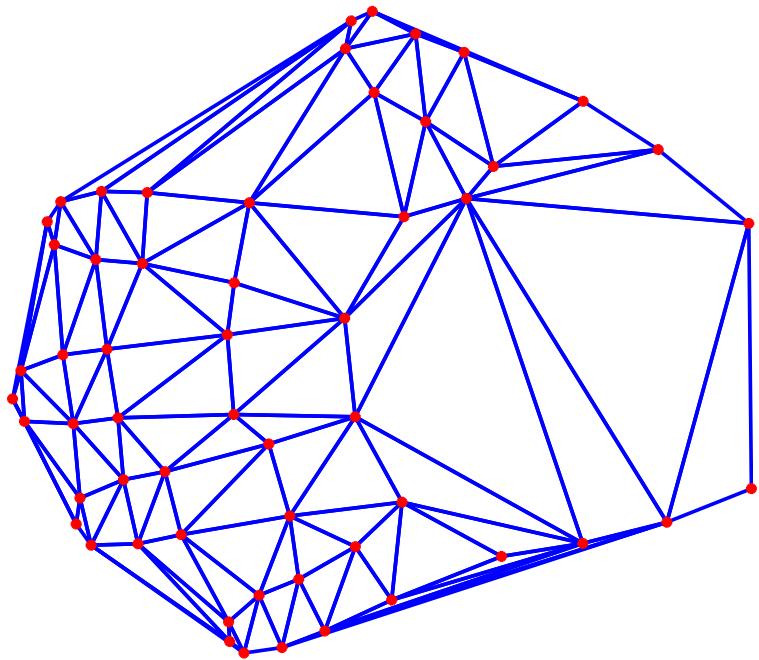


Figure 2: Delaunay triangulation of the mean shape.

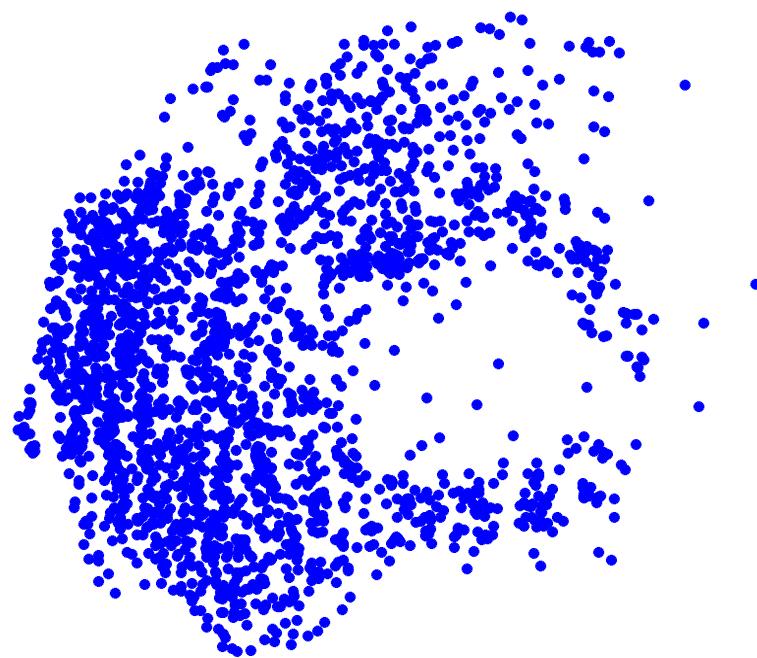


Figure 3: Point cloud of the unaligned annotations.

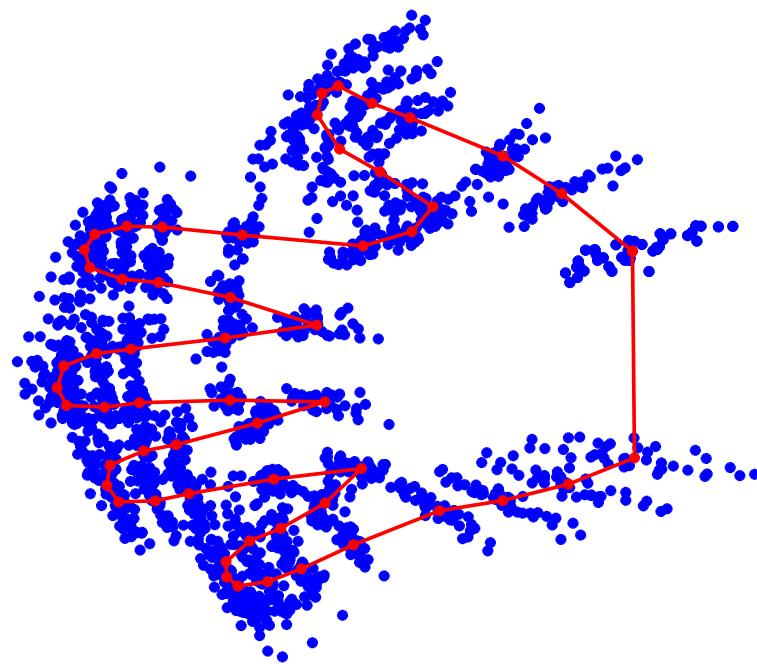


Figure 4: Point cloud of the aligned annotations with mean shape fully drawn in red.

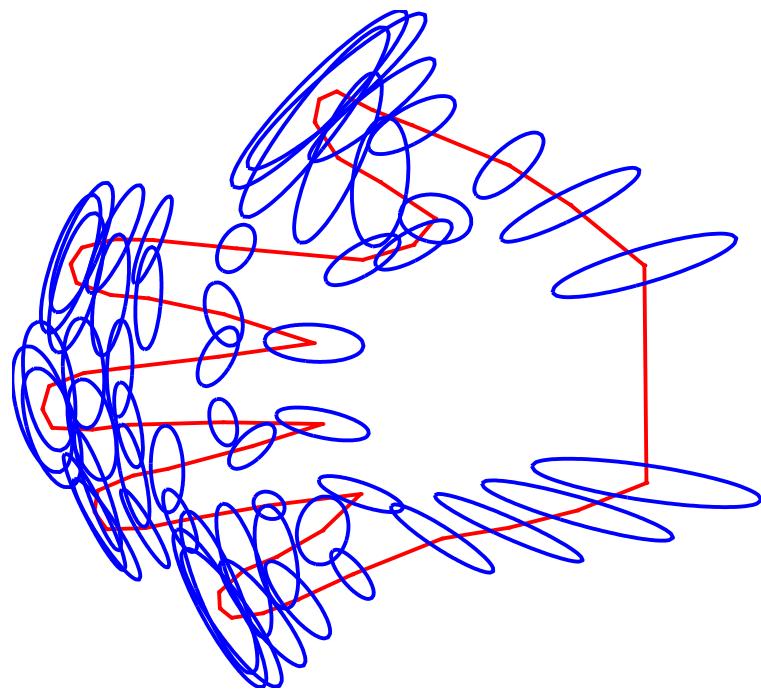


Figure 5: Independent principal component analysis of each model point.

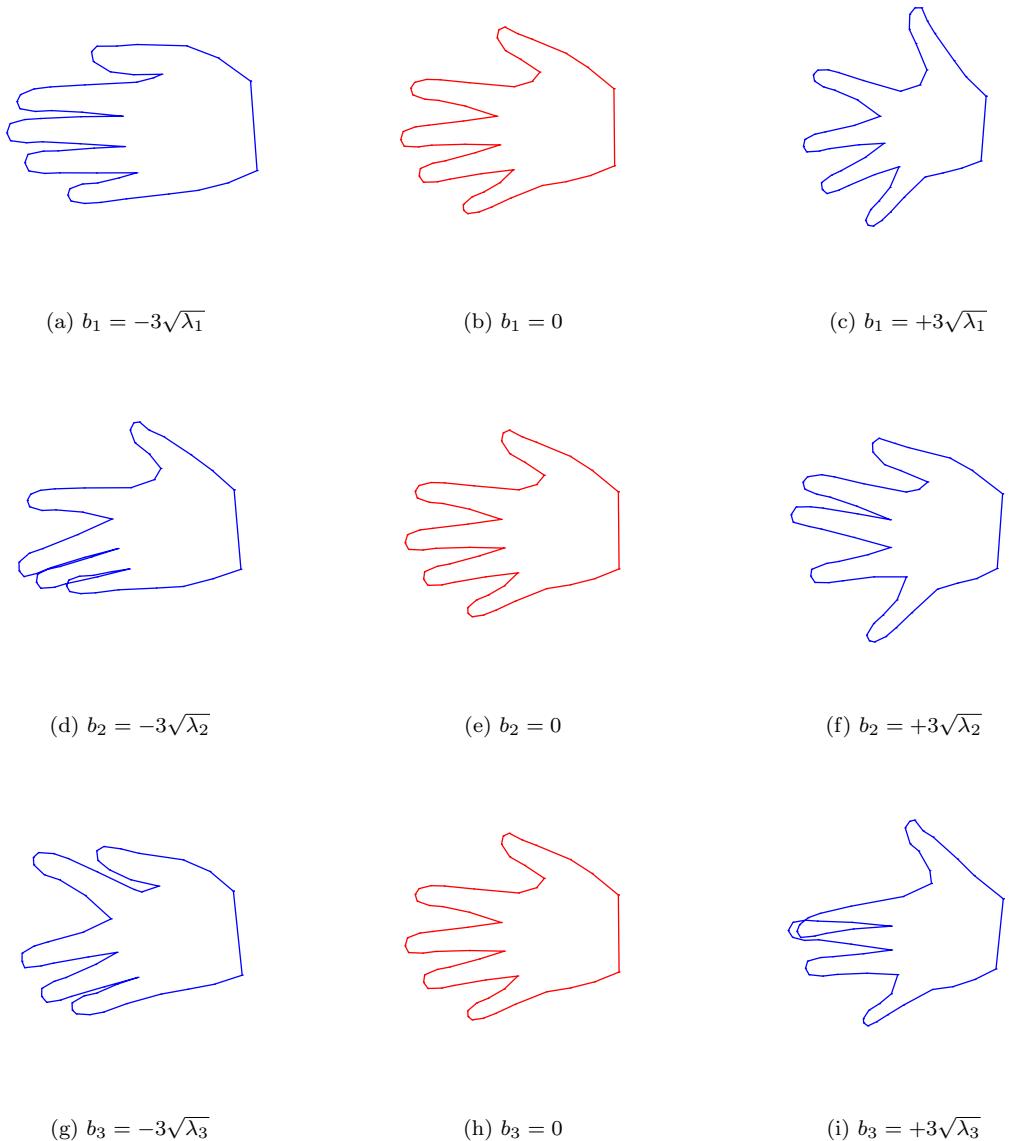


Figure 6: Mean shape deformation using 1st, 2nd and 3rd principal mode.  $b_i = -3\sqrt{\lambda_i}$ ,  $b_i = 0$ ,  $b_i = 3\sqrt{\lambda_i}$ .

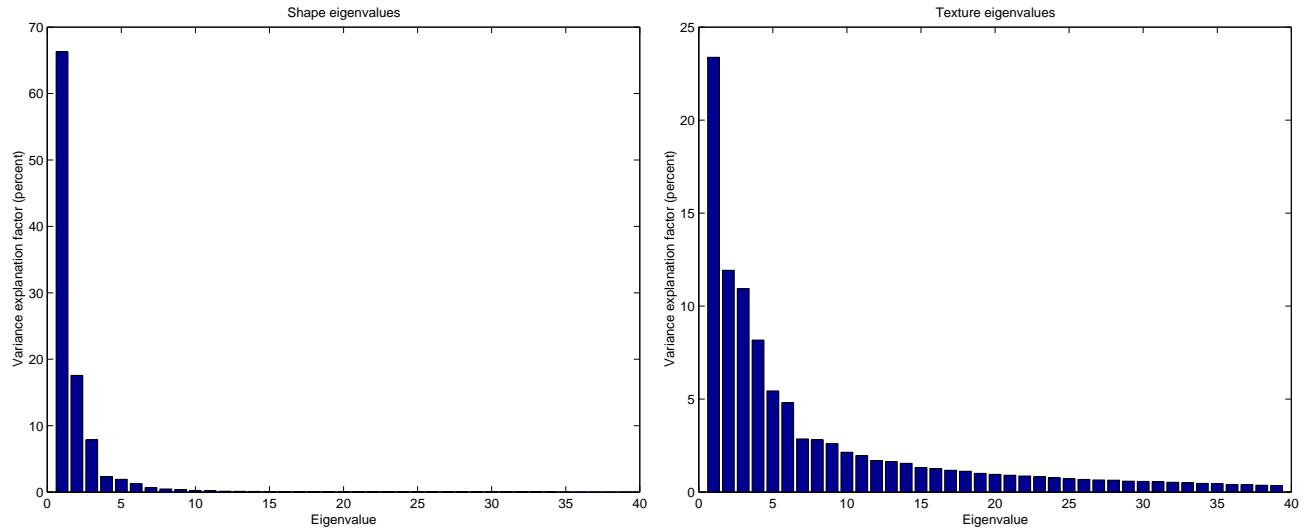


Figure 7: Shape (left) and texture (right) eigenvalues in descending order.

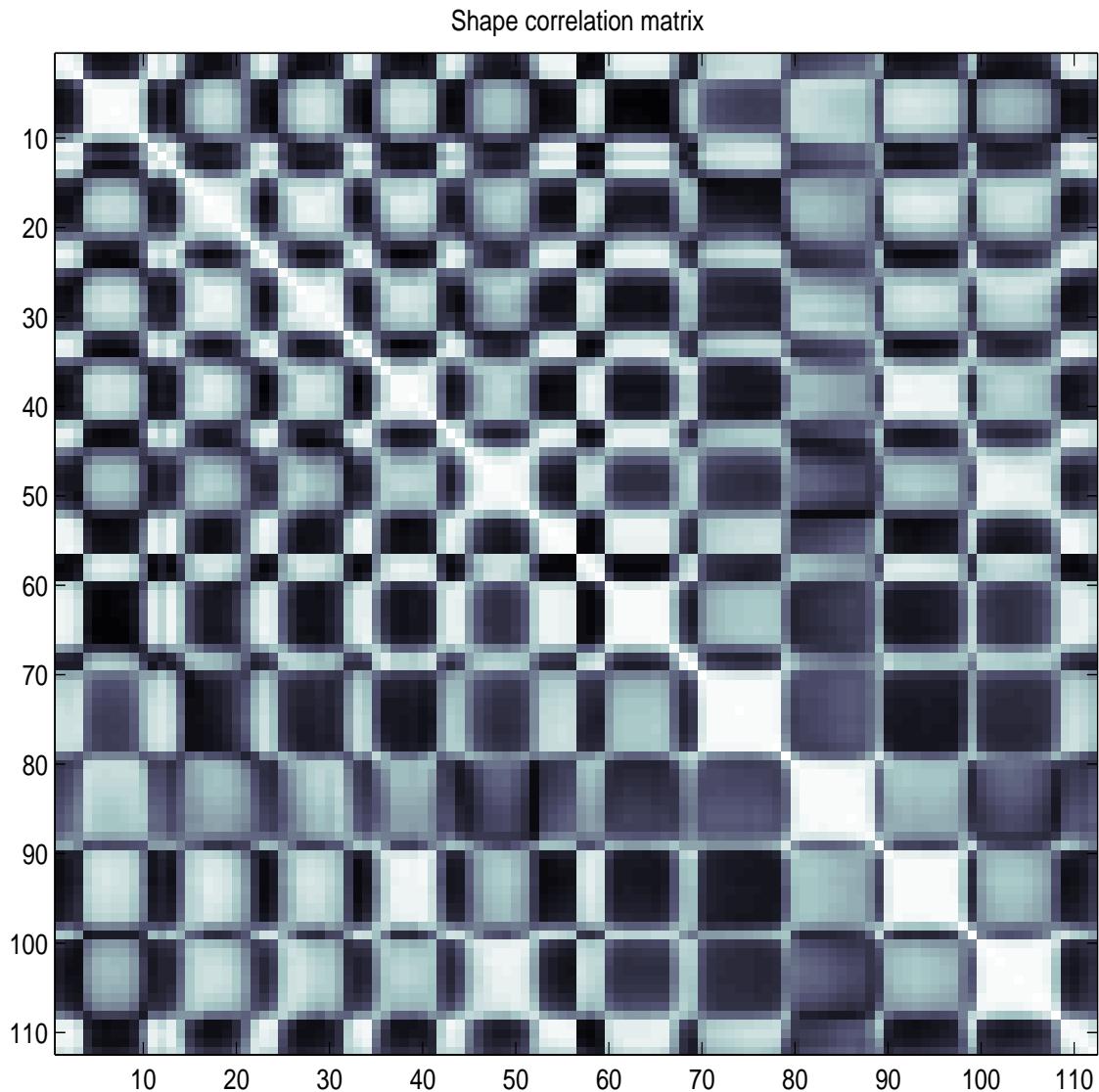


Figure 8: Correlation matrix of the annotations.

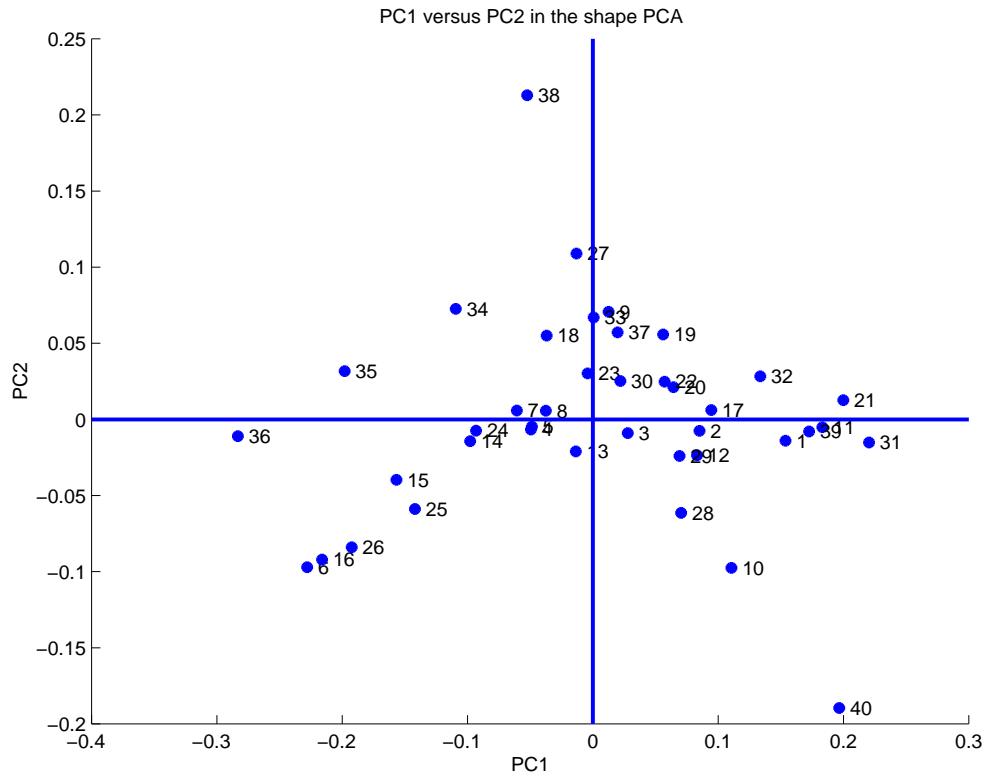


Figure 9: PC1 ( $b_{s,1}$ ) vs. PC2 ( $b_{s,2}$ ) in the shape PCA.

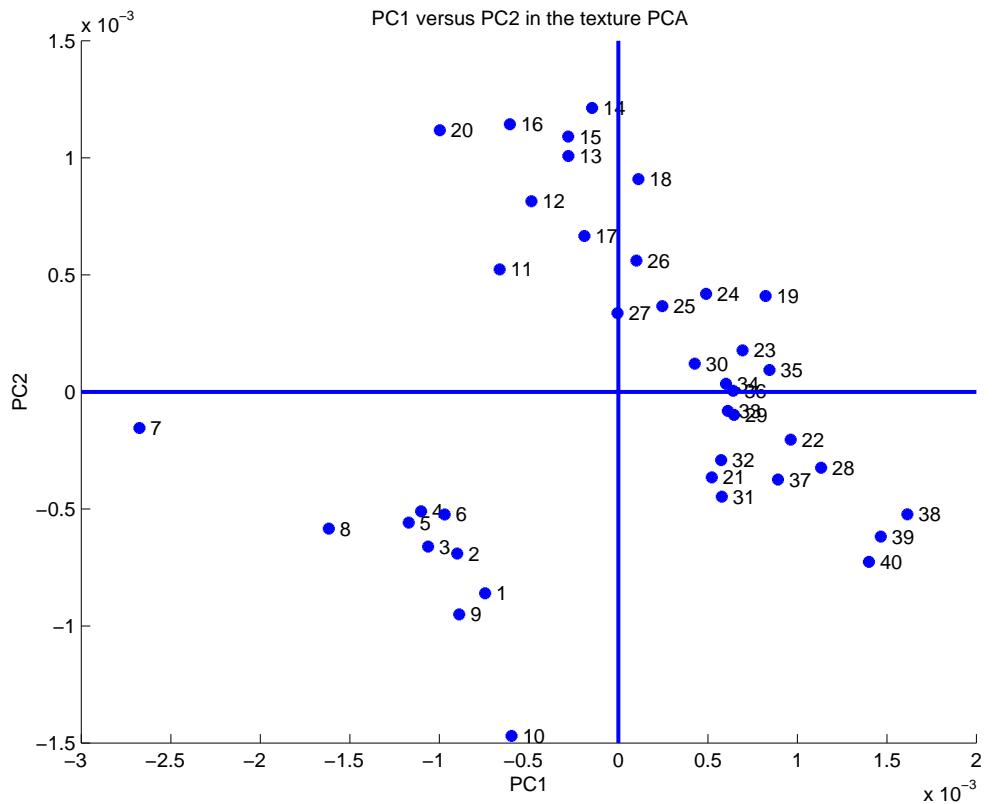


Figure 10: PC1 ( $b_{g,1}$ ) versus PC2 ( $b_{g,2}$ ) in the texture PCA.

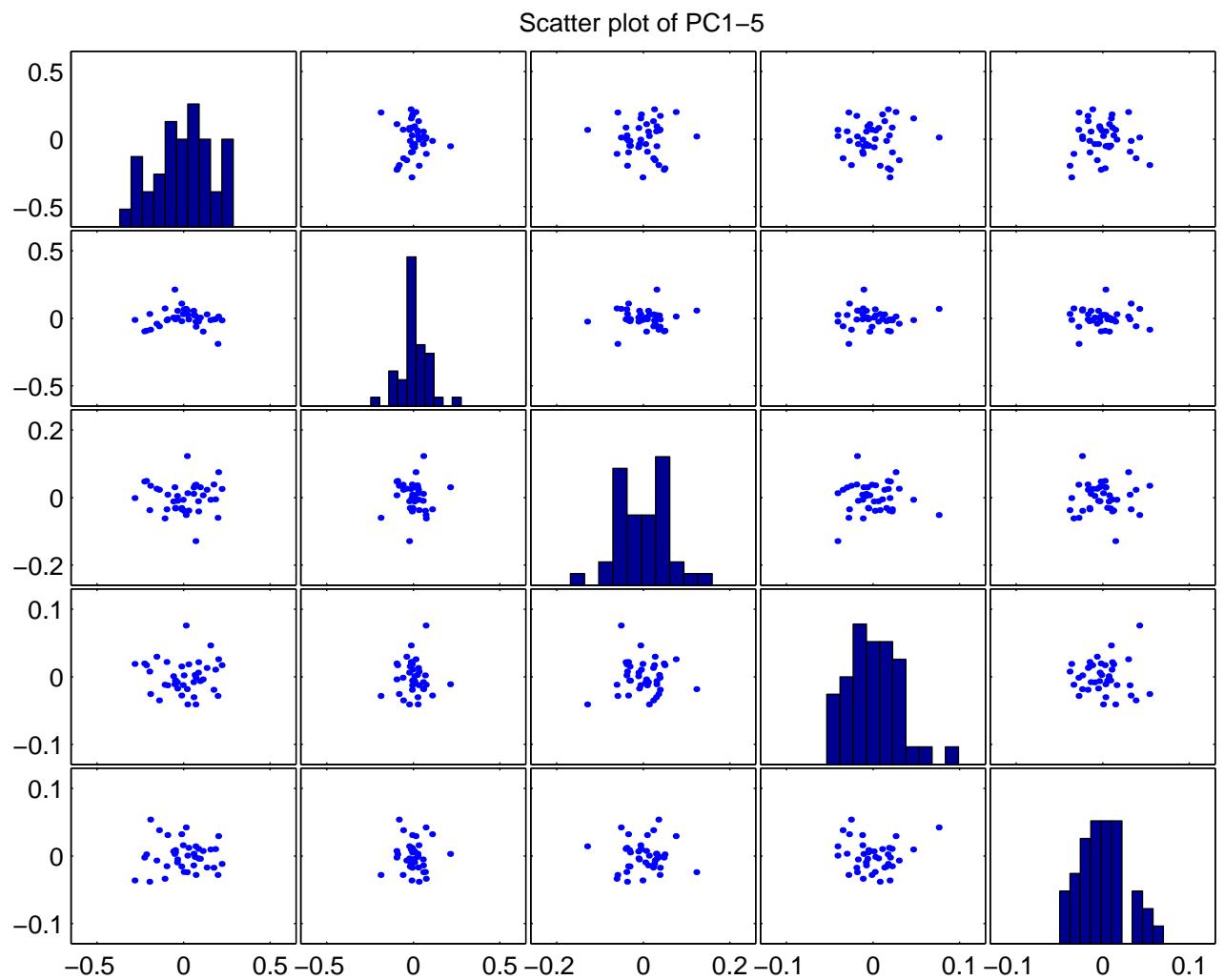


Figure 11: Scatter plot of PC1–5 (PC1 is top-left).



Figure 12: Texture variance, black corresponds to high variance.

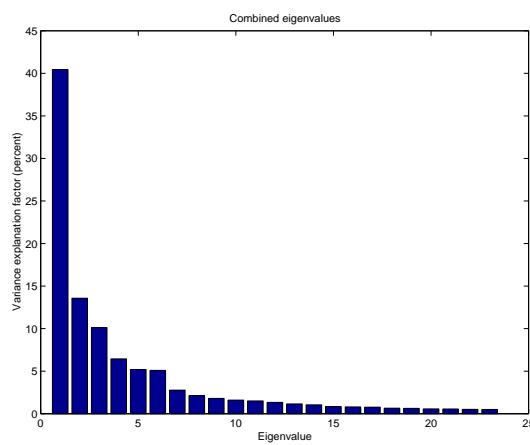


Figure 13: Combined eigenvalues.

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**Active Appearance Model File**

Written : Friday January 18 - 2002 [11:54]

Format version : 0.94

Shapes : 40

Shape points : 56

Texture samples : 93360

Model reduction : 1

Add Shape Extents : 0

Convex hull used : No

Tangent space used : Yes

Learning Method : 0

Variance Exp. Level: 95

Parameters used : 23

Mean shape area : 93343.65

**Combined mode variation :**

1	38.51%	( 38.51%)
2	12.92%	( 51.43%)
3	9.64%	( 61.07%)
4	6.14%	( 67.21%)
5	4.95%	( 72.17%)
6	4.85%	( 77.02%)
7	2.64%	( 79.66%)
8	2.02%	( 81.68%)
9	1.72%	( 83.40%)
10	1.52%	( 84.92%)
11	1.43%	( 86.35%)
12	1.26%	( 87.61%)
13	1.10%	( 88.71%)
14	1.00%	( 89.71%)
15	0.79%	( 90.50%)
16	0.76%	( 91.26%)
17	0.73%	( 91.99%)
18	0.62%	( 92.61%)
19	0.60%	( 93.21%)
20	0.54%	( 93.75%)
21	0.53%	( 94.27%)
22	0.49%	( 94.76%)
23	0.48%	( 95.24%)

**Shape mode variation :**

1	66.28%	( 66.28%)
2	17.56%	( 83.84%)

3	7.85%	( 91.70%)
4	2.33%	( 94.03%)
5	1.92%	( 95.95%)
6	1.26%	( 97.22%)
7	0.65%	( 97.86%)
8	0.47%	( 98.33%)
9	0.35%	( 98.68%)
10	0.21%	( 98.88%)
11	0.20%	( 99.08%)
12	0.13%	( 99.21%)
13	0.11%	( 99.32%)
14	0.10%	( 99.42%)
15	0.09%	( 99.51%)
16	0.05%	( 99.57%)
17	0.05%	( 99.61%)
18	0.04%	( 99.66%)
19	0.04%	( 99.70%)
20	0.04%	( 99.73%)
21	0.03%	( 99.76%)
22	0.03%	( 99.79%)
23	0.03%	( 99.82%)
24	0.02%	( 99.84%)
25	0.02%	( 99.86%)
26	0.02%	( 99.88%)
27	0.02%	( 99.90%)
28	0.01%	( 99.91%)
29	0.01%	( 99.92%)
30	0.01%	( 99.94%)
31	0.01%	( 99.95%)
32	0.01%	( 99.96%)
33	0.01%	( 99.97%)
34	0.01%	( 99.97%)
35	0.01%	( 99.98%)
36	0.01%	( 99.99%)
37	0.01%	( 99.99%)
38	0.00%	(100.00%)
39	0.00%	(100.00%)

Texture mode variation :

1	23.38%	( 23.38%)
2	11.92%	( 35.30%)
3	10.94%	( 46.24%)
4	8.17%	( 54.41%)
5	5.44%	( 59.85%)
6	4.81%	( 64.66%)
7	2.86%	( 67.51%)
8	2.81%	( 70.33%)
9	2.61%	( 72.93%)
10	2.14%	( 75.07%)
11	1.96%	( 77.03%)
12	1.70%	( 78.73%)
13	1.64%	( 80.37%)
14	1.55%	( 81.92%)
15	1.32%	( 83.24%)
16	1.27%	( 84.51%)
17	1.17%	( 85.68%)
18	1.12%	( 86.80%)
19	1.01%	( 87.81%)
20	0.95%	( 88.76%)
21	0.90%	( 89.66%)

22	0.87%	( 90.53%)
23	0.82%	( 91.35%)
24	0.77%	( 92.12%)
25	0.72%	( 92.84%)
26	0.68%	( 93.52%)
27	0.65%	( 94.17%)
28	0.64%	( 94.81%)
29	0.59%	( 95.40%)
30	0.57%	( 95.97%)
31	0.55%	( 96.52%)
32	0.53%	( 97.05%)
33	0.50%	( 97.55%)
34	0.47%	( 98.02%)
35	0.45%	( 98.47%)
36	0.41%	( 98.88%)
37	0.39%	( 99.27%)
38	0.37%	( 99.64%)
39	0.36%	(100.00%)

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