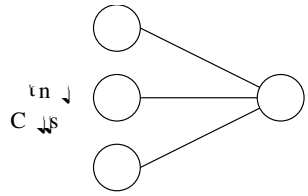
Stephen Jones

School of Computing Sciences



$$w'_{ij} \quad w_{ij} - \frac{}{nR}\left(tL - \sum_k^{nL} w_{kj}\right)$$

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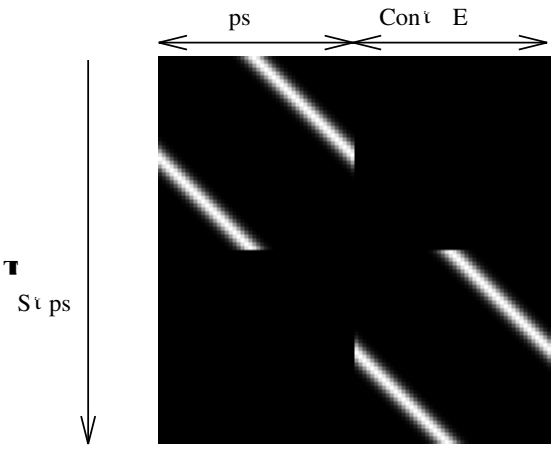
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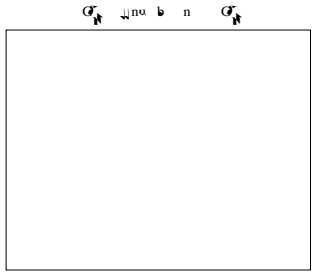
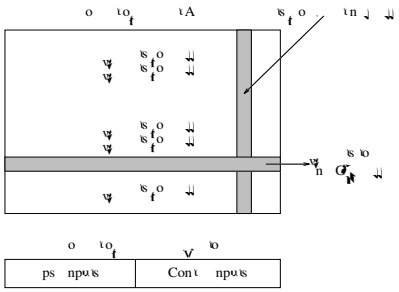
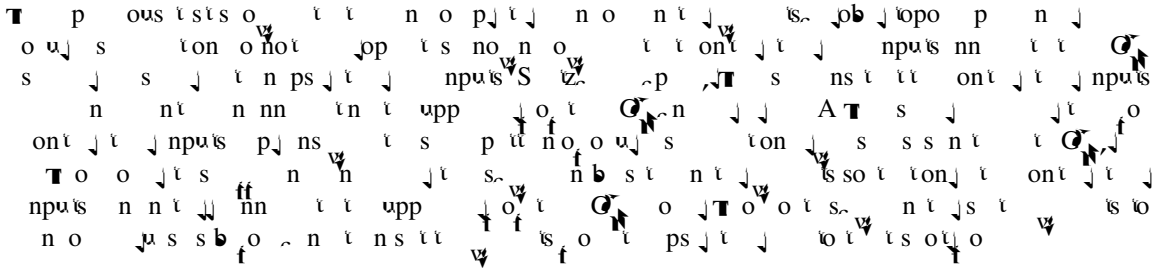


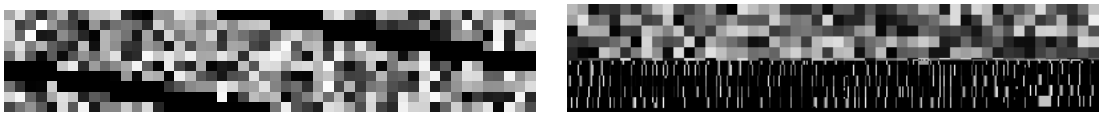


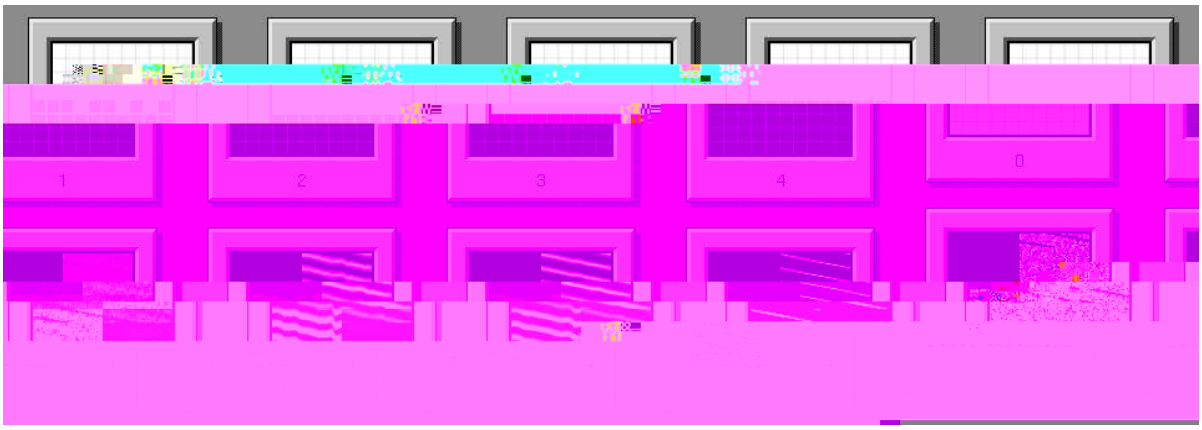
3.1 Test 1: Simultaneous Arrival of All Retinal Afferents

3.2 Test 2: Biased Arrival Times of Retinal Afferents



3.3 Test 3: Chemical Gradients used to Bias Topology

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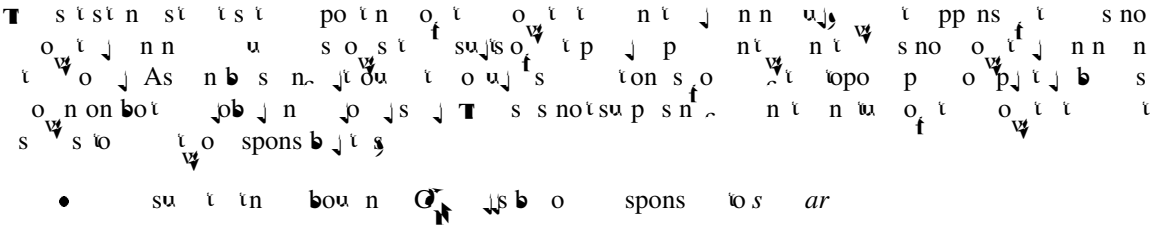
3.4 Test 4: Importance of Growth Term



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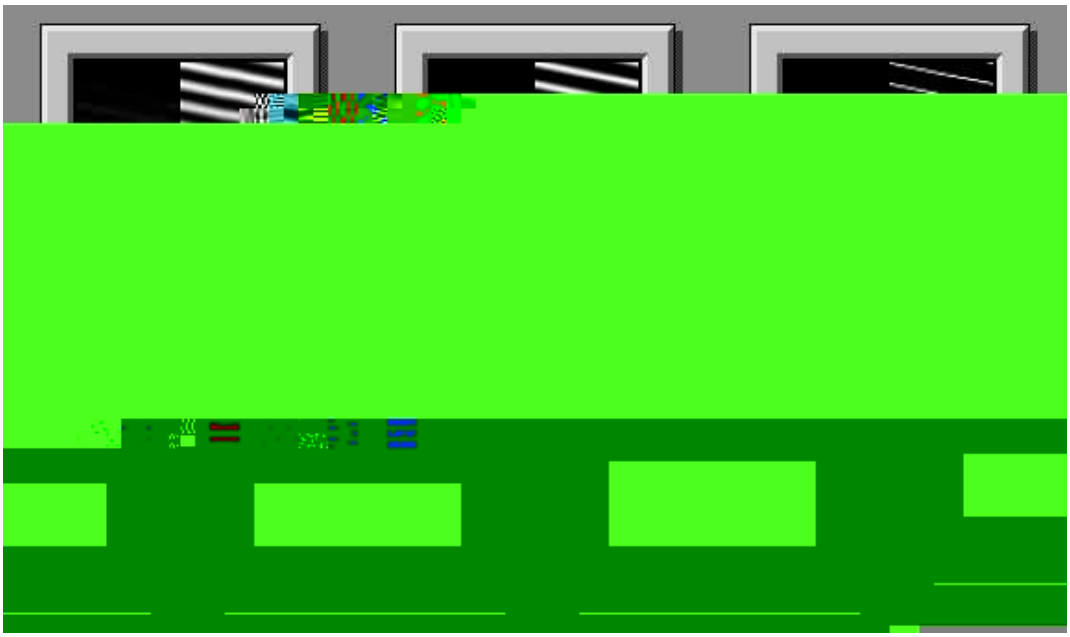

3.5 Test 5: Importance of Normalisation

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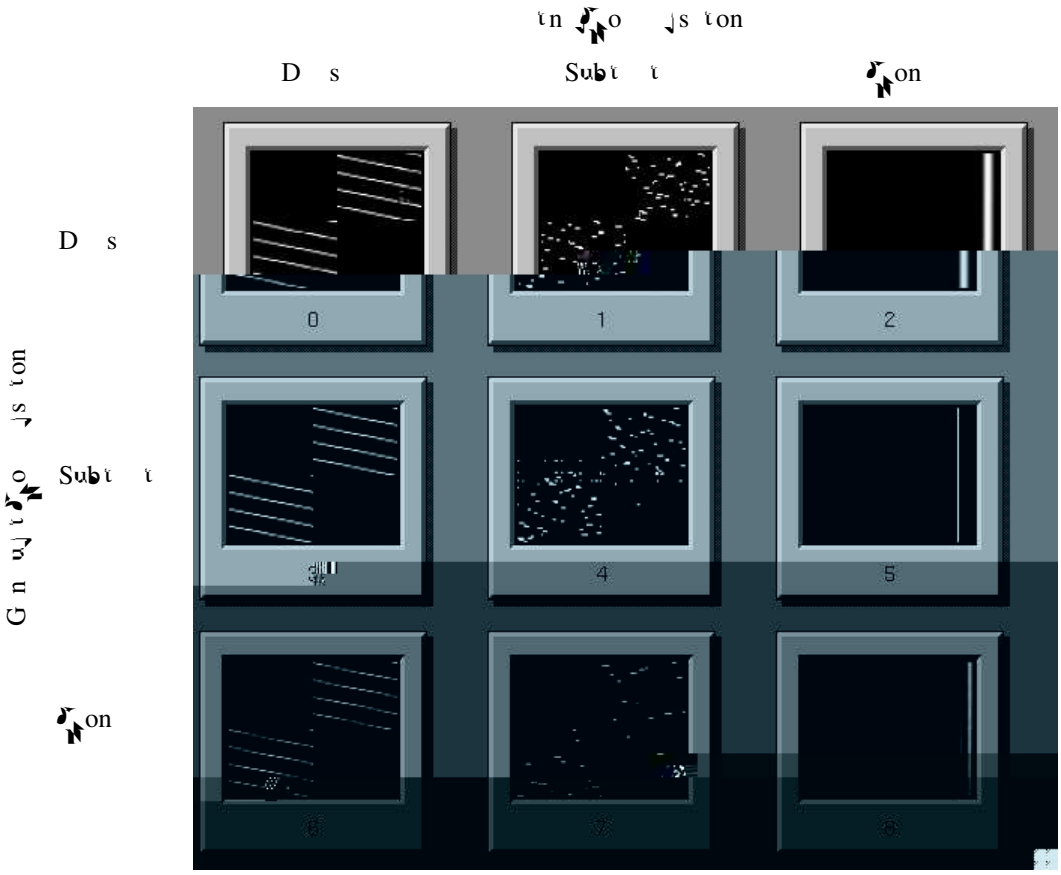
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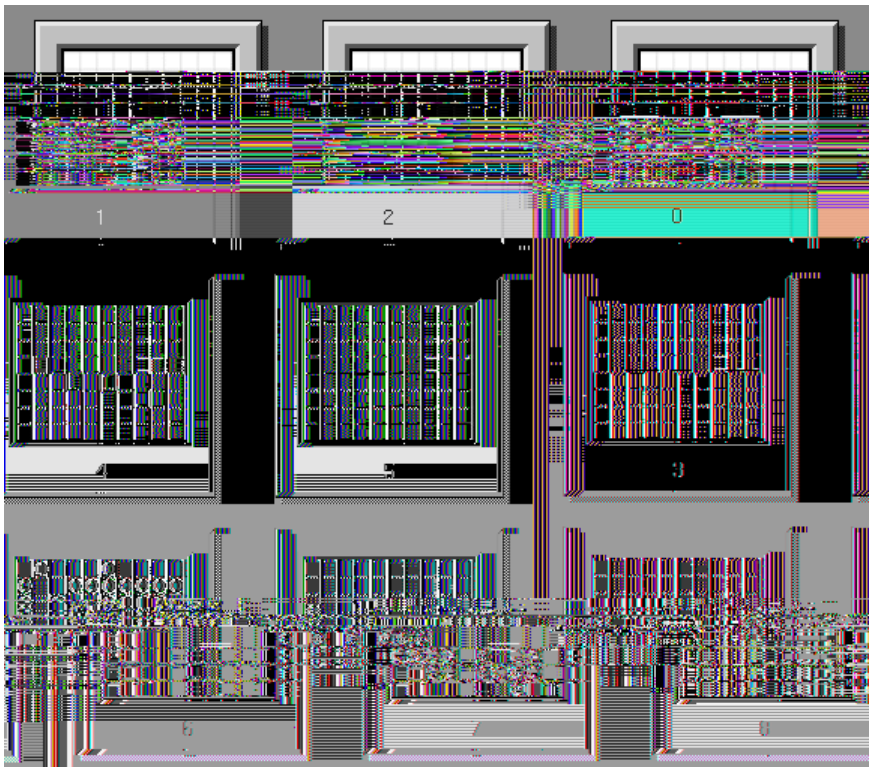
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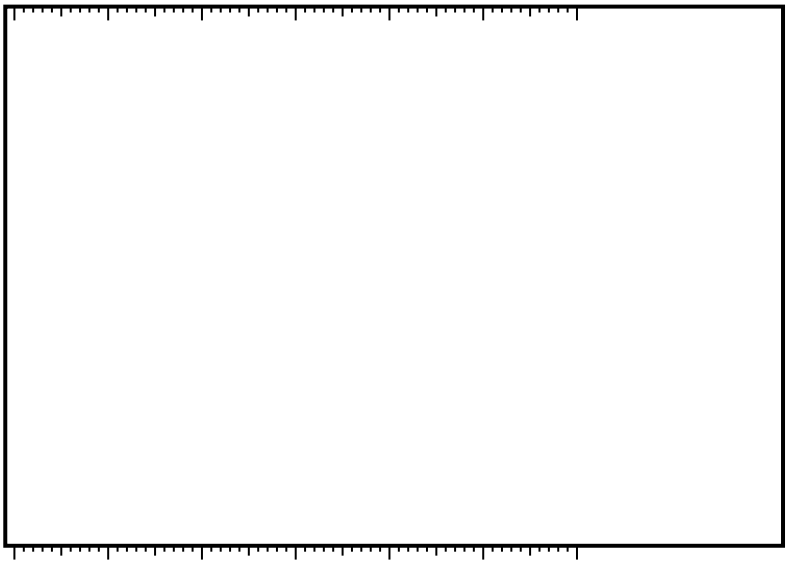
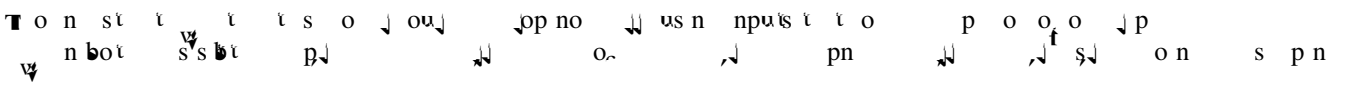


3.5.1 Is geniculate normalisation necessary?

Random Overlapping Waves

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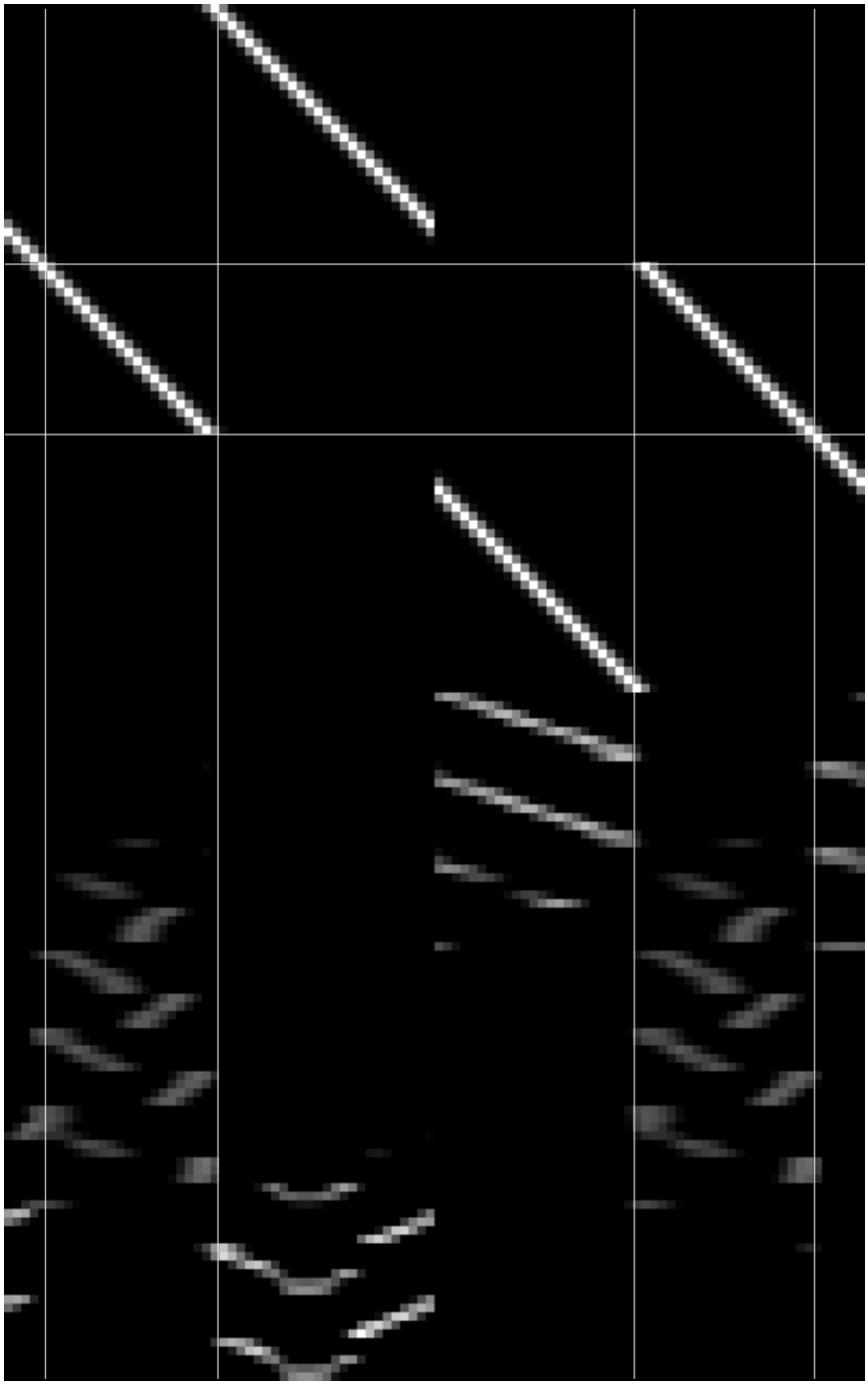

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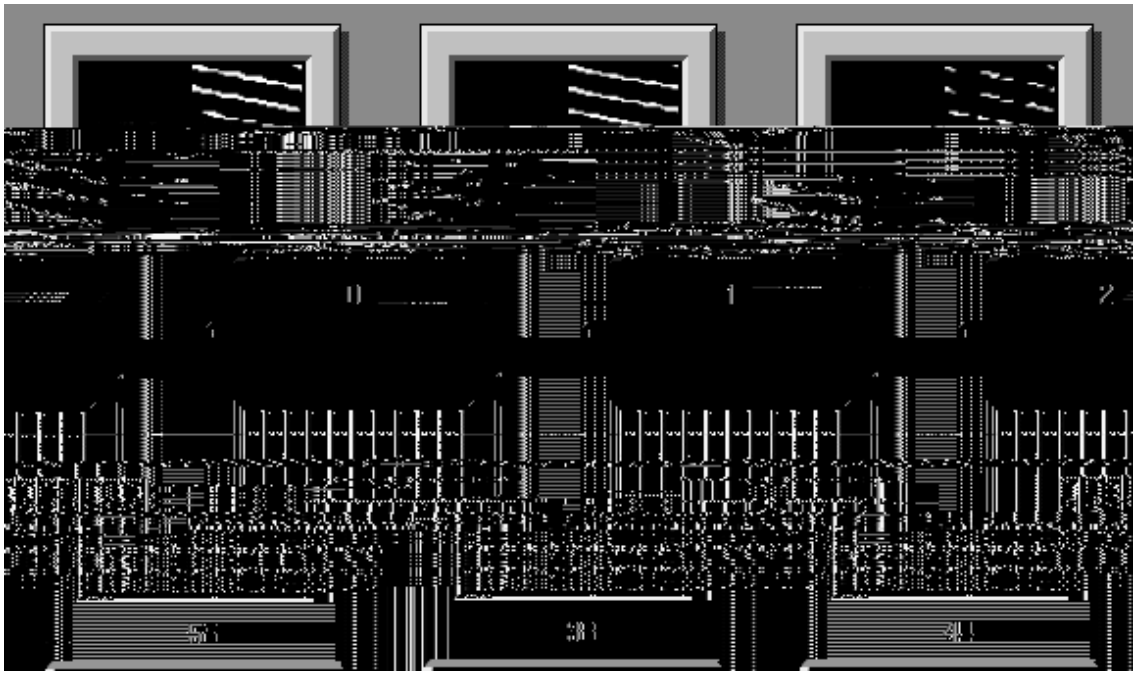
Fixed Overlapping Waves



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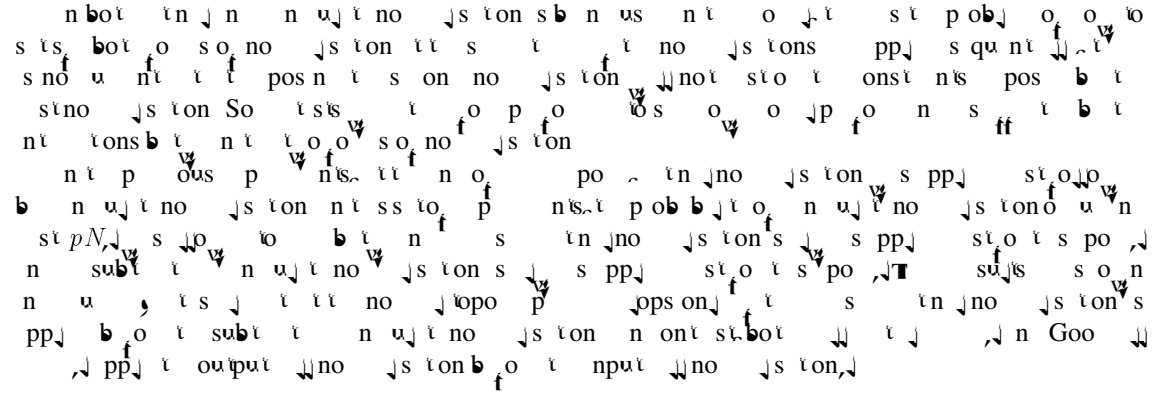
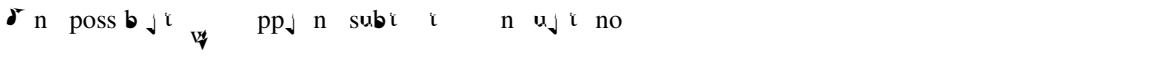
Satisfying both forms of normalisation.



Why does applying subtractive geniculate normalisation first produce strange results?



S on n po o f o f

A Parameters Used.

α	Angular position of the left end of the spring
β	Angular position of the right end of the spring
γ	Constant orientation of the spring
$radius$	Distance of the spring from the center of the bowl
nL	Number of coils on the left side
nR	Number of coils on the right side
tR	Thickness of the spring on the right side
tL	Thickness of the spring on the left side

Table 3: Parameters used in the spring equation

Table 4 lists the parameters used in the spring equation. The ratio $\frac{tR}{nl}$ is used to determine the thickness of the spring on the left side, $\underline{tL}$.