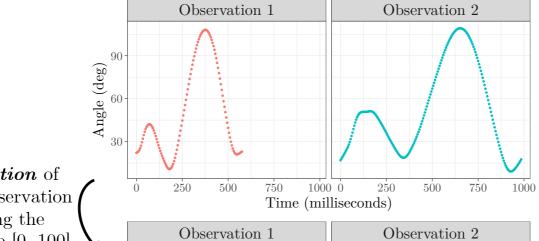
Raw data containing discrete measurements of different lengths:

Observation	Frame 0	Frame 1		Frame 115	Frame 116	•••	Frame 197
1	15.22	16.42		14.56	NA	•••	NA
2	16.02	17.06	•••	97.22	97.64	•••	13.77



Time normalisation of each functional observation by linearly rescaling the argument values to [0, 100] (%):

Choose a **common basis** to represent the data:

Represent each observation as a **linear combination** of the basis functions:

Store the basis function coefficients to give a functional representation of the data:

90 90 90 60 0 25 50 75 100 Normalised Tim	0 25 50 75 100 ne (% of Stride)
0.75 0.75 0.25 0.00 0.25 0.00	ne (% of Stride)
Observation 1 $ \underbrace{\begin{array}{c} 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0 \end{array}} $ Observation 1 $\underbrace{\begin{array}{c} 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0 \end{array}} $ Normalised Times	Observation 2 Observation 2 Observation 2 Observation 2 October (% of Stride)

Observation		Basis Function 1 Coefficient	Basis Function 2 Coefficient	
•	1	15.5	18.56	
	2	16.9	19.05	

Basis		
Function K		
Coefficient		
20.57		
15.20		