Table S1: Goodness of fit statistics

S.No	Condition	R^2 in $X(t)$	R^2 in $X(t+\tau)$	R^2 in $X(t+2\tau)$	RMSE in $X(t)$	RMSE in $X(t+\tau)$	RMSE in $X(t+2\tau)$
1.	'Periodic'	0.94	0.94	0.93	0.02	0.02	0.02
2.	'Periodic'	0.94	0.94	0.92	0.02	0.02	0.02
3.	'Periodic'	0.90	0.91	0.85	0.02	0.02	0.02
4.	'Periodic'	0.96	0.95	0.95	0.02	0.02	0.02
5.	'Periodic'	0.96	0.95	0.94	0.02	0.02	0.02
6.	'Periodic'	0.93	0.93	0.91	0.02	0.02	0.03
7.	'Periodic'	0.89	0.92	0.83	0.02	0.02	0.03
8.	'Pink'	0.96	0.96	0.96	0.02	0.02	0.02
9.	'Pink'	0.96	0.95	0.95	0.01	0.02	0.02
10.	'Pink'	0.89	0.92	0.84	0.02	0.02	0.03
11.	'Pink'	0.92	0.93	0.90	0.02	0.02	0.02
12.	'Pink'	0.93	0.94	0.91	0.02	0.02	0.02
13.	'Pink'	0.94	0.94	0.93	0.02	0.02	0.02
14.	'Pink'	0.95	0.95	0.95	0.02	0.02	0.02
15.	'Pink'	0.96	0.95	0.95	0.02	0.02	0.02
	Mean	0.94	0.94	0.91	0.02	0.02	0.02

Note:

S.No - Participants

R^2 - R-squared and RMSE - Root Mean Squared Error

Fig. S1: Construction of ellipse and torus:

Note: The coordinates of the ellipse in 3D space was generated using the Matlab function 'ellipse3D' (William Martin (2020), https://www.mathworks.com/matlabcentral/fileexchange/37304-ellipse3d, MATLAB Central File Exchange.)

The input arguments of the function are a) length of semi major axis, b) length of semi minor axis and c) number of points used to define the ellipse. In our case: The length of the semi-major axis of the ellipse was equal to the largest standard deviation of the enclosed data points from the three dimensions($(X(t), X(t+\tau), X(t+2\tau)$). The second largest standard deviation gave the length of the semi-minor axis. Each ellipse is defined using 50 points. The output of this function was a three row (X, Y, Z), single column vector that represents the coordinates of an ellipse in 3D space. The ellipse is drawn on the XY plane as below:

Fig. S1A: Construction of an ellipse

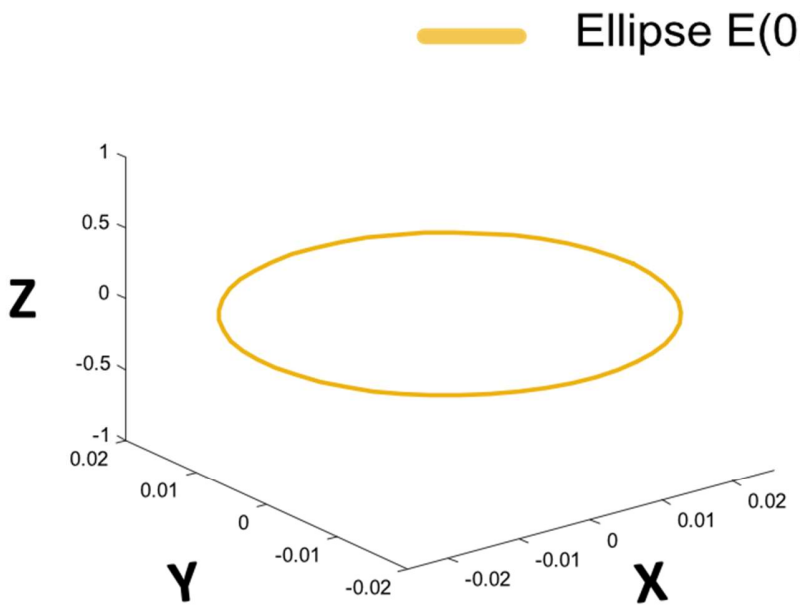
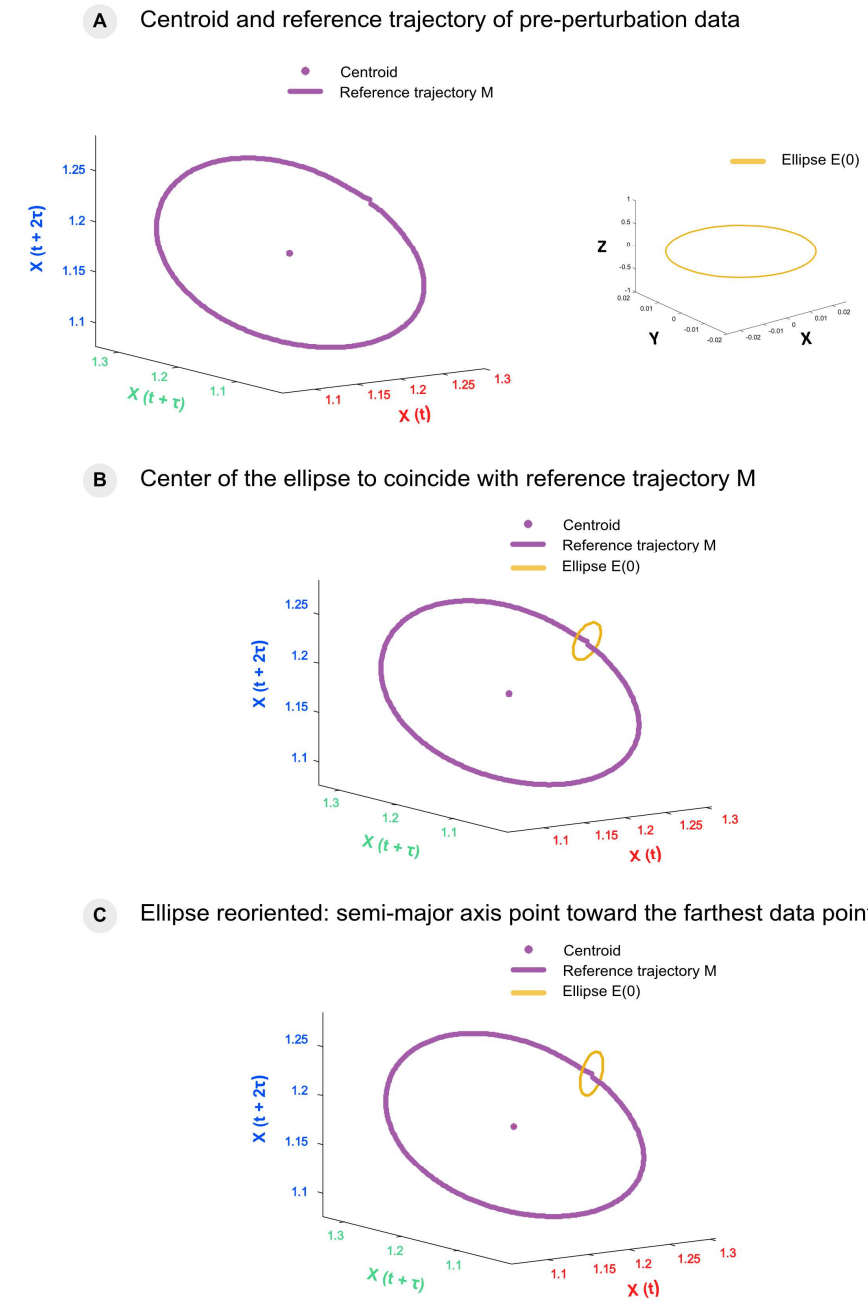
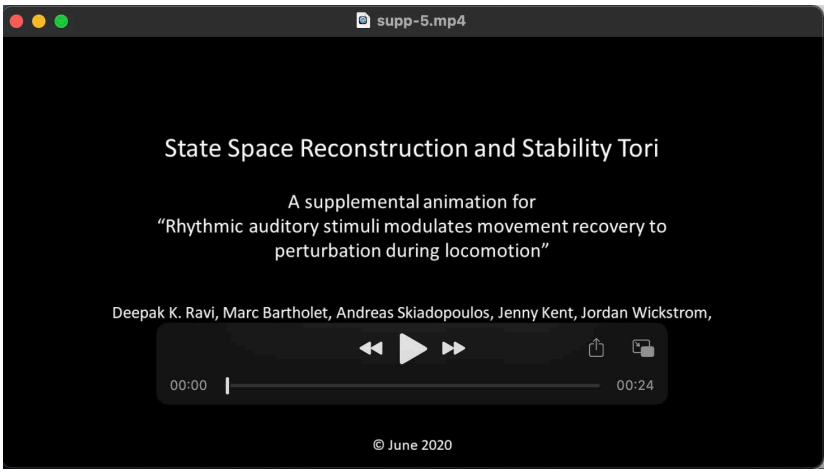


Fig. S1B: Using the ellipses to construct the torus

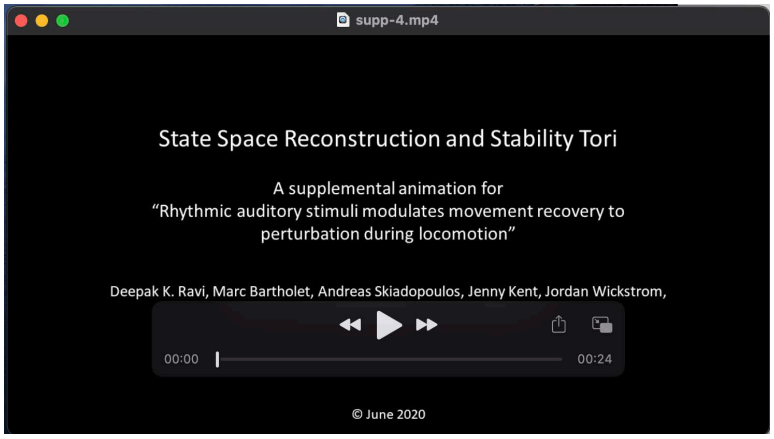


Audio 1: Auditory stimulus from an example participant belonging to the 1/f group

Audio 2: Auditory stimulus from an example participant belonging to the periodic group



Movie 1: Supplemental animation for resilience analysis of an example participant belonging to the 1/f group



Movie 2: Supplemental animation for resilience analysis of an example participant belonging to the periodic group

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