Supplementary Information

Figure S1 Contour plots of FOM_{scores} (left) and $FOM_{loadings}$ (right) as a function of the rotation parameters ϕ and ψ for simulations with different shapes of the system response. The paths visited during the OCCR procedure are highlighted by white dots. The starting angles are always (0,0).
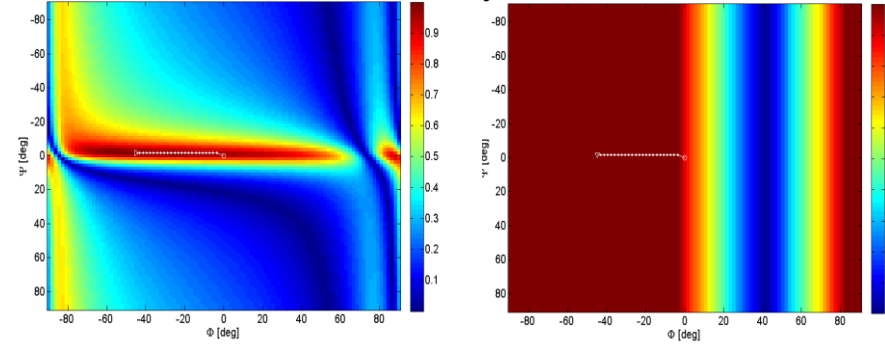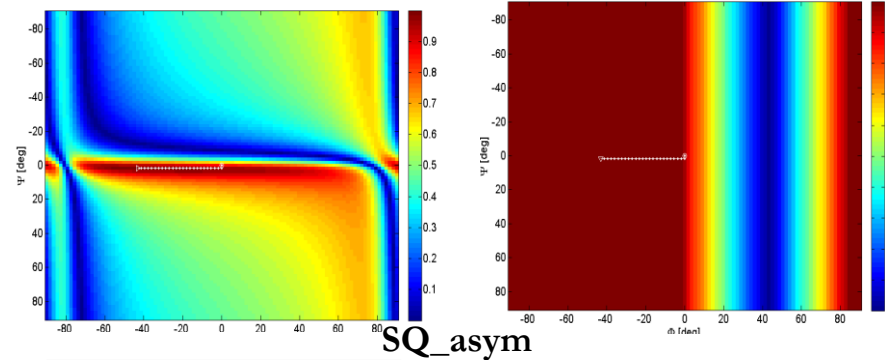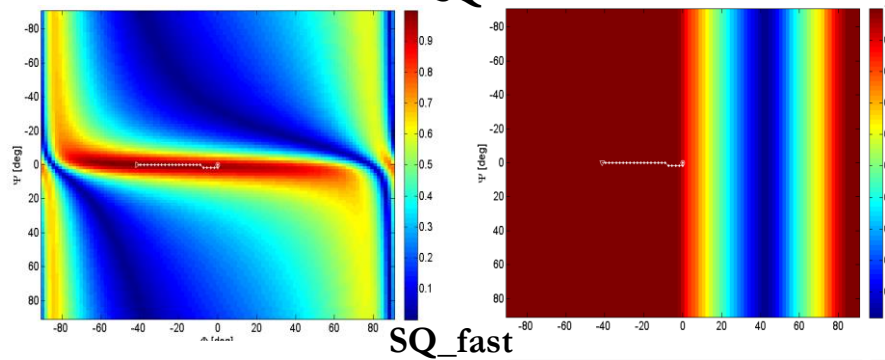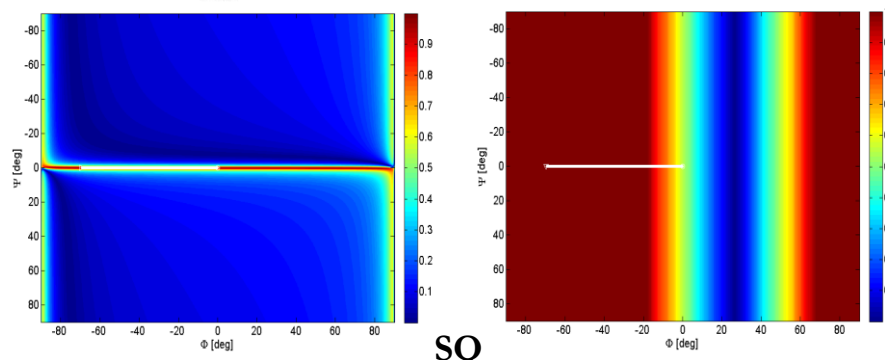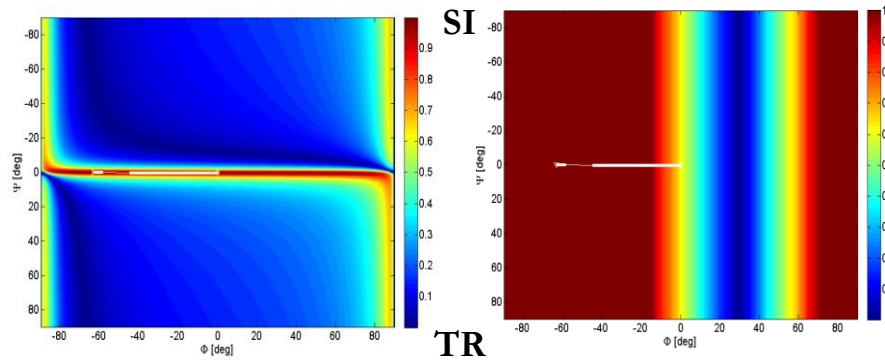
SI

TR

SQ

SQ_fast

SQ_asym

Table S1: Percentage of data variance explained by the first (PC1) and second (PC2) principal components.

System response	PC1	PC2
Sinusoidal [0 0.4]	99.1	0.89
Triangular [0.8 1]	99.9	0.02
Square, slow decay [0 1]	98.8	1.20
Square, fast decay [0 1]	99.3	0.68
Square, asymmetric decay [0 1]	99.2	0.80
Sinusoidal [0.8 1]	99.9	0.09
Ramp [0.8 1]	99.9	0.04
Ramp [0 1]	95.7	4.34
Real data	84.2	15.20