**Method description heat-plot construction:**

We created heat-map style occupancy plots based on the swimming paths recorded during acquisition trials. Heat plots were normalized by comparing to non-spatial versions of all originally recorded tracks. These shuffled tracks were created using the same starting position and step sizes and combining these with random directions changes (taken from a distribution based on data from over 2000 tracks, with standard deviation depending on step size; method based on [Bovet and Benhamou (1988](#_ENREF_1)). Intensity colors indicated occupancy (blue is low, red is high) in those specific areas in terms of number of standard deviations above or below chance level.

**References**

Bovet, P., & Benhamou, S. (1988). Spatial-Analysis of Animals Movements Using a Correlated Random-Walk Model. *Journal of Theoretical Biology, 131*(4), 419-33