



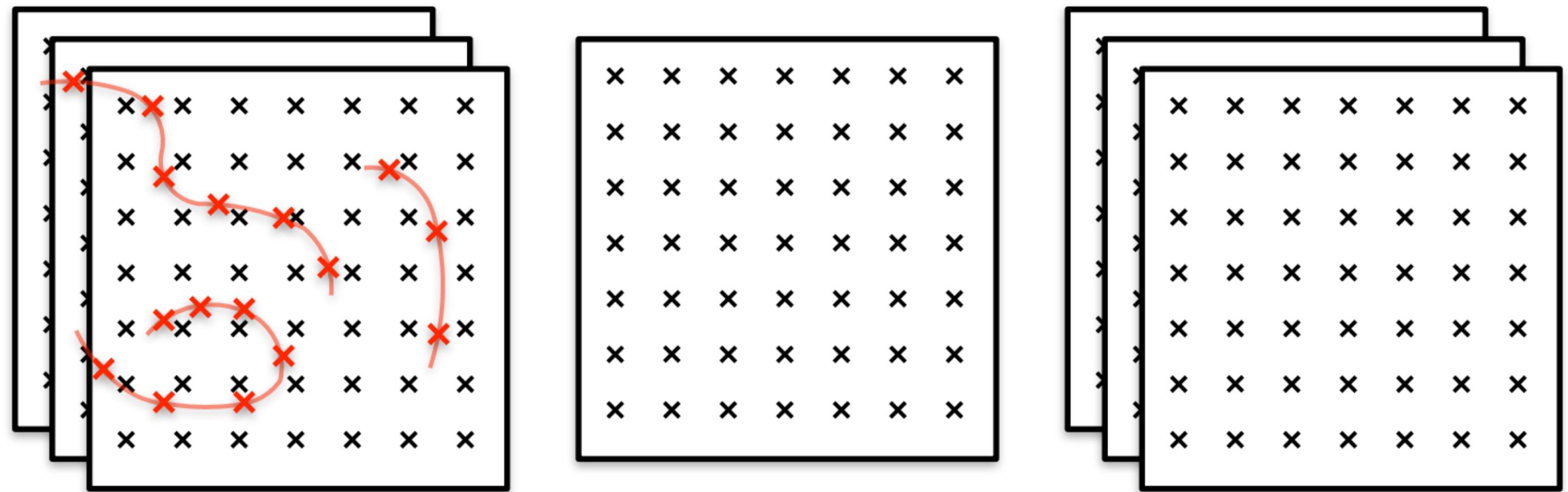
Lancaster
University



Spatio-Temporal Inference

with Disjoint Spatial Locations

Zhang, R.-Y., Moss, H. B., Astfalck, L., Cripps, E. S. (2025). BALLAST: Bayesian Active Learning with Look-ahead Trajectories under Spatio-Temporal Vector Fields, arXiv preprint arXiv:2509.26005



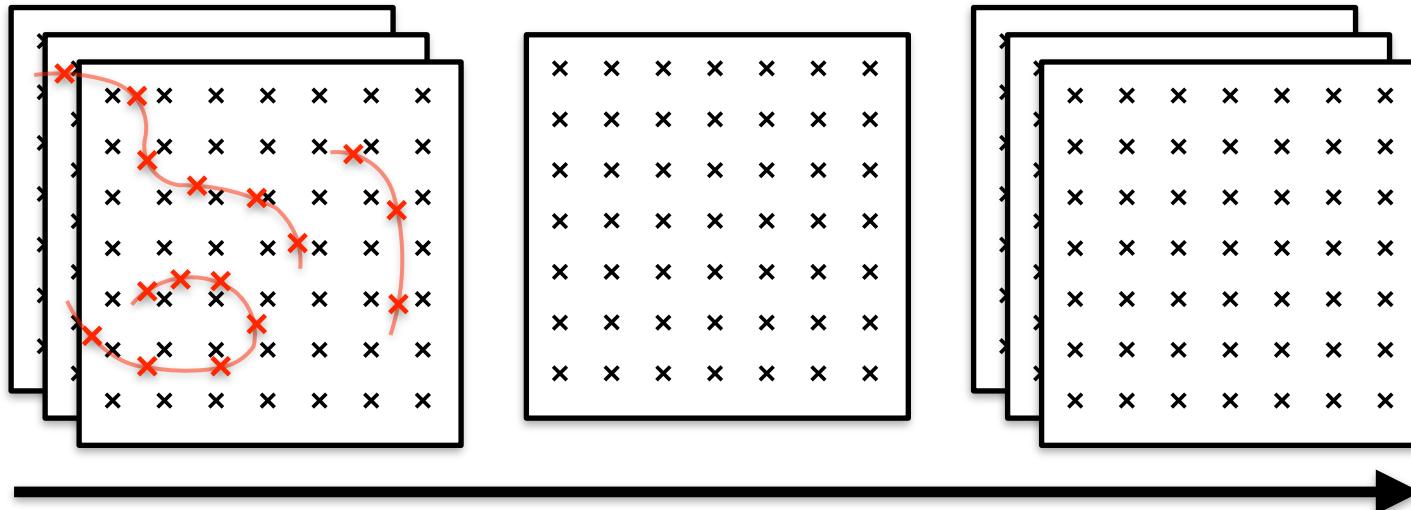
Vanilla GP

- Cheap to optimise
- Expensive to predict

SPDE-GP

- Cheap to predict once regressed
- Expensive to regress

Spatio-Temporal Inference with Disjoint Spatial Locations



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Gaussian Processes [Static]



$$f \sim GP(\mu, k)$$

