



Contribution ID: 19

Type: **Invited talk**

## Optimal Sensor Placement for Linear Inverse Problems via Measure Optimisation

*Tuesday, March 3, 2026 11:15 AM (45 minutes)*

In PDE-based inverse problems, only a limited number of sensors can be deployed, so choosing measurement locations is crucial, but the resulting design problem is highly nonconvex. This talk explores how we can lift sensor placement from selecting  $B$  points to optimising over probability measures on the design domain, giving a tractable relaxation with a Bayesian interpretation. We then solve the measure problem using particle-based Wasserstein gradient flows. We illustrate the approach on representative PDE-driven inverse problems.

**Author:** DUNCAN, Andrew (Imperial College London)

**Presenter:** DUNCAN, Andrew (Imperial College London)

**Session Classification:** Invited talks 4