

Siddhant Mishra-Sharma (MIT/AI FI) Summer School

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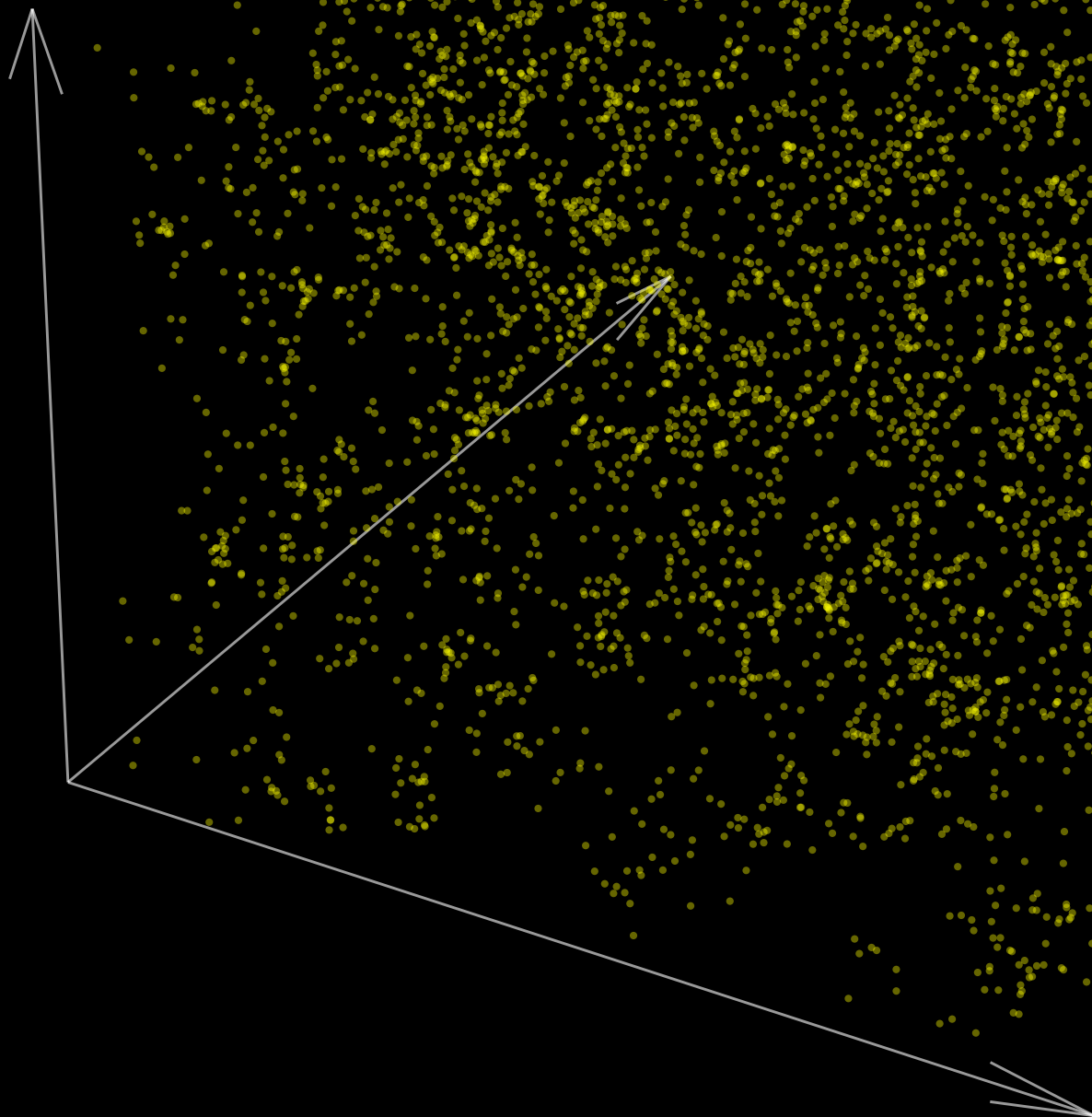
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Want a score model that

- Operates on *sets* of varying cardinality
- Is permutation equivariant
- Efficiently captures correlation structure of point cloud

The diffusion coefficient



✓ Transformers

✓ Graph neural networks

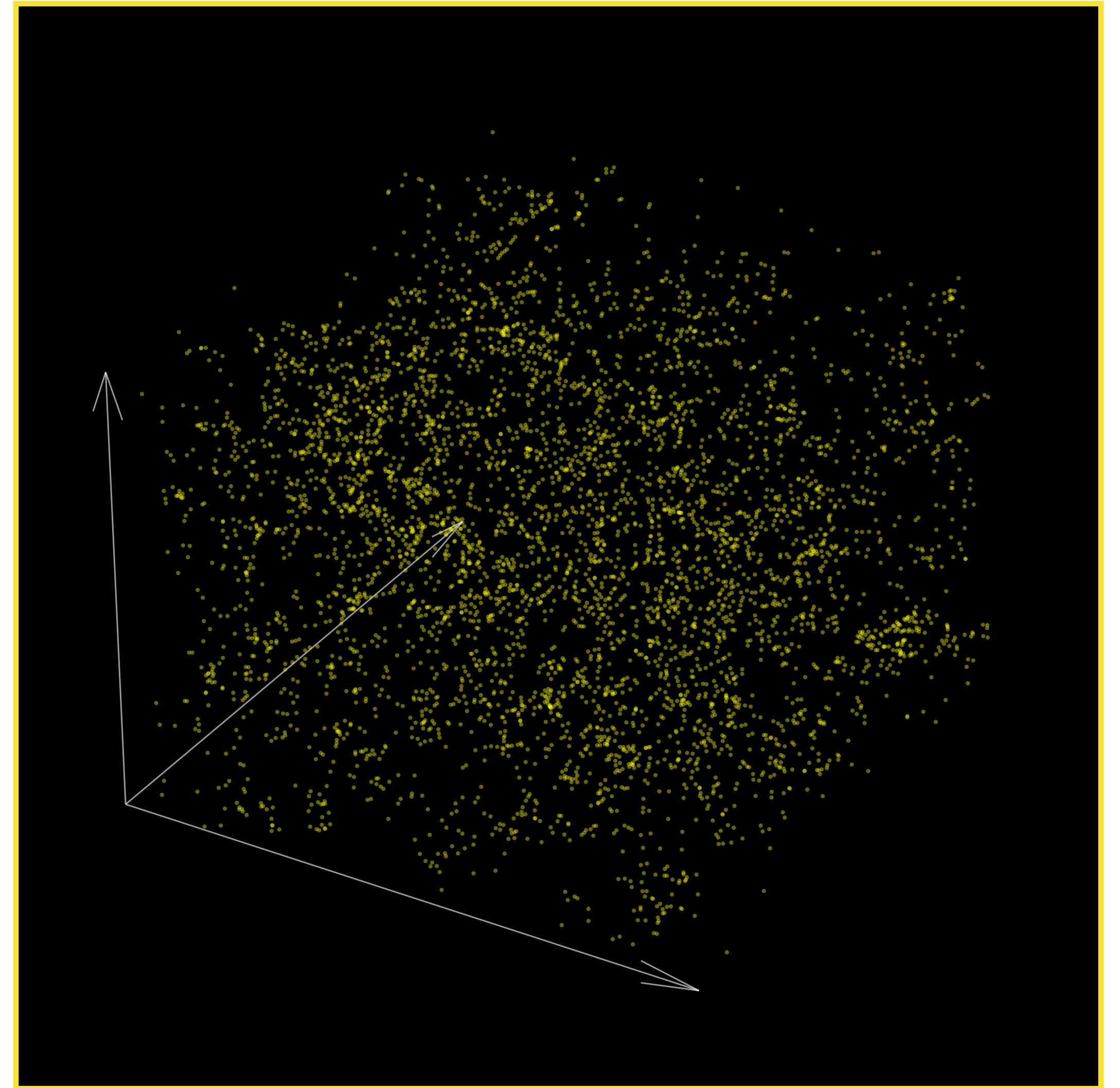
The diffusion score model

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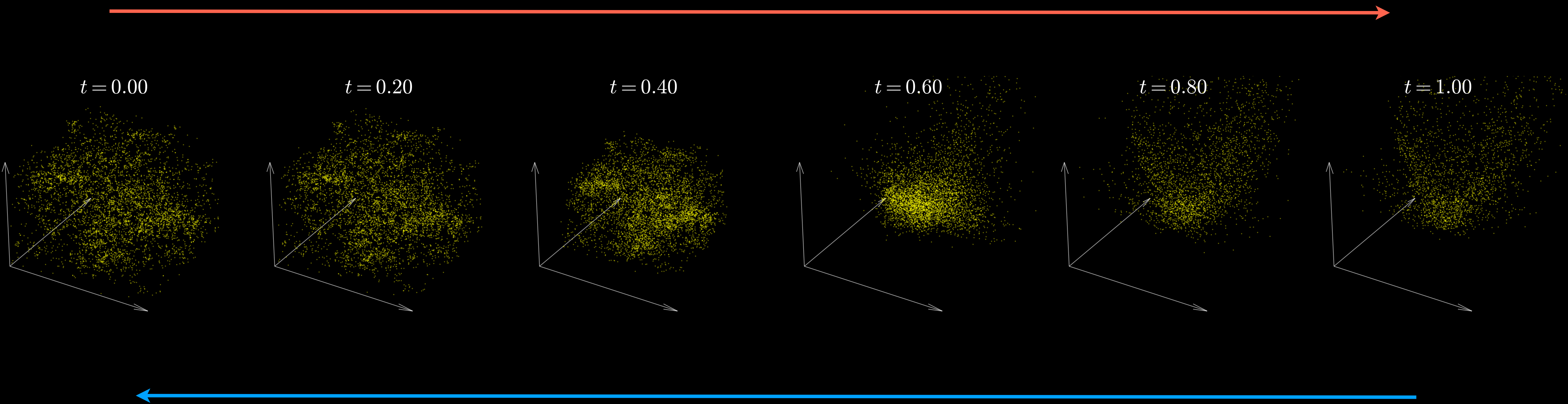


Graph neural network-guided diffusion on galaxies

SM, Cuesta-Lazaro [ICML ML4Astro]

Samples from *Quijote* [Villaescusa-Navarro et al, 2021].

Forward process (*adding noise*)



Reverse process (*denoising*)