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# Shape-aware Surface Reconstruction from Sparse 3D Point-Clouds

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**Highlights**

- A surface reconstruction method from sparse data is proposed.
- A statistical shape model is used as prior to compensate missing data.
- The problem is formulated probabilistically using Gaussian Mixture Models (GMM).
- Anisotropic covariances oriented by surface normals obtain a surface-based fitting.
- A fast approximation having the same complexity as isotropic GMMs is proposed.

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