

Euler Stratifications of Hypersurface Families

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We stratify families of projective and very affine hypersurfaces according to their topological Euler characteristic. Our new algorithms compute all strata using algebro-geometric techniques. For very affine hypersurfaces, we investigate and exploit the relation to critical point computations. Euler stratifications are relevant in algebraic statistics.

They fully describe the dependence of the maximum likelihood degree on model parameters. Joint work with Maximilian Wiesmann.