

The Orlicz-Sobolev Exponential Manifold

Giovanni Pistone

deCastro Statistics

Collegio Carlo Alberto

Moncalieri, Italy

e-mail: giovanni.pistone@gmail.com

One of the possible framework for Information Geometry is the nonparametric generalization of exponential families leading to a Banach manifold modeled on the exponential Orlicz space, called exponential manifold. This leads to a generalization of Amari's setup, including dual affine bundles and second order calculus. However, a nonparametric Information Geometry should be able to discuss nonparametric problems about probability measures as they appear outside Statistics, e.g. in Mathematical Analysis and Statistical Physics. In particular we will discuss the issue of differentiability of densities under Orlicz-Sobolev assumptions. The talk will present some new developments following from

References

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