The Tangent-Point Energy on Surfaces

1 Overview

On surfaces, the tangent-point energy has a slightly simpler expression, due to the ambient dimension of 1 (versus 2 for curves). The kernel can be written as:

$$K_f(x,y) = \frac{\langle N(x), f(x) - f(y)\rangle^\alpha}{\|f(x) - f(y)\|^\beta} \tag{1}$$

Because there is a unique normal direction, it suffices to use the inner product with the normal, instead of the cross product (as we used for curves).

1.1 Differential

Still to be written down...