

# Paper with Matthias and Jürgen

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1. Choose two kernels.  $\implies$  Abel Poisson

$$k(\mathbf{g}, \kappa) = \sum_{l=0}^{\infty} (2l+1) \kappa^l \mathcal{U}_{2l}(\cos \frac{\angle \mathbf{g}}{2})$$

with  $\kappa_1 = 0.85$  and  $\kappa_2 = 0.92$ .

2. Calculate Fourier coefficients of the function

$$f(\mathbf{g}) = \frac{5}{6} k(\mathbf{g}_1, \kappa_1) + \frac{1}{6} k(\mathbf{g}_2, \kappa_2)$$

with  $\mathbf{g}_1 = \text{Id}$ ,  $\mathbf{g}_2 = \text{Rot}_{\mathbf{e}_1}(25 \text{ grad})$  with Mathematica.  $\implies$  `wiegner.nb`.

3. Choose grid on  $\mathbb{S}^2 \times \mathbb{S}^2$  and evaluate  $P$  at this grid.  $\implies$  `pf_001.txt, ..., pf_111.txt`. with  $\mathbf{h}_1 = \pm(0, 0, 1)^t, \dots, \mathbf{h}_N = \pm(1, 1, 1)^t$ .
4. look for maximum bandwidth in Bunge.  $\implies$  4

The goal is to show that the leading C-coefficients are better approximated if more C-coefficients are calculated.