Regularity as Regularization in Optimal Transport

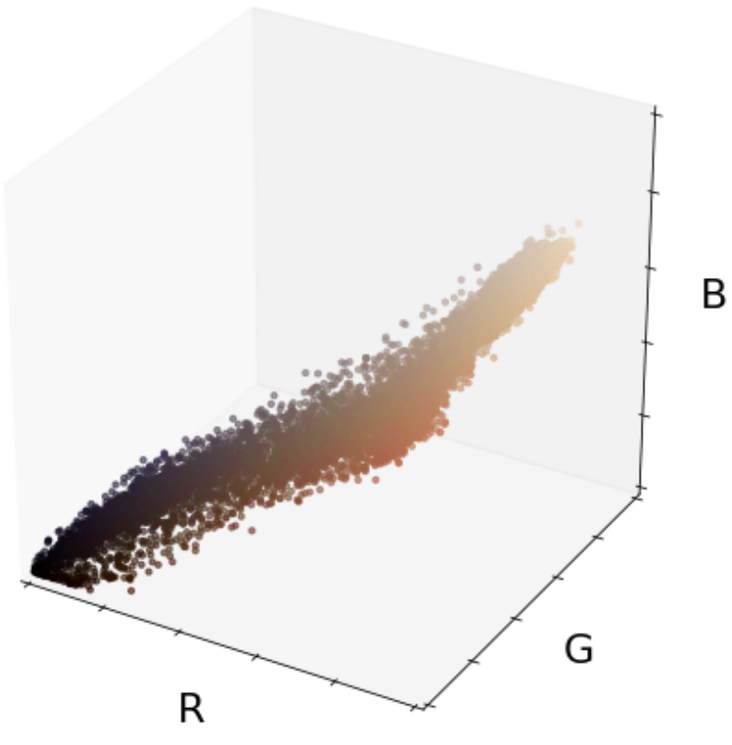
François-Pierre Paty

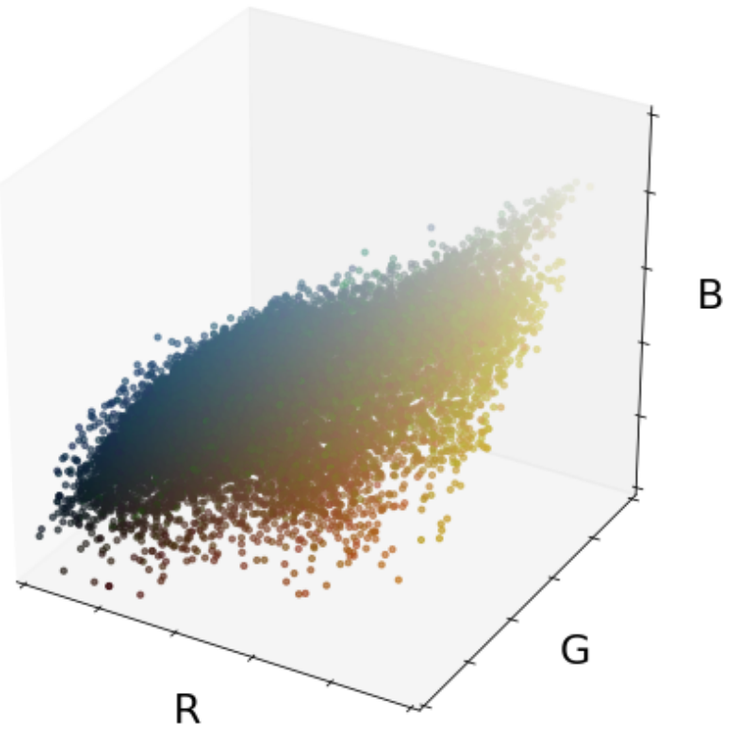
*Joint work with **Alexandre d'Aspremont** and **Marco Cuturi***

Saint-Flour 2019

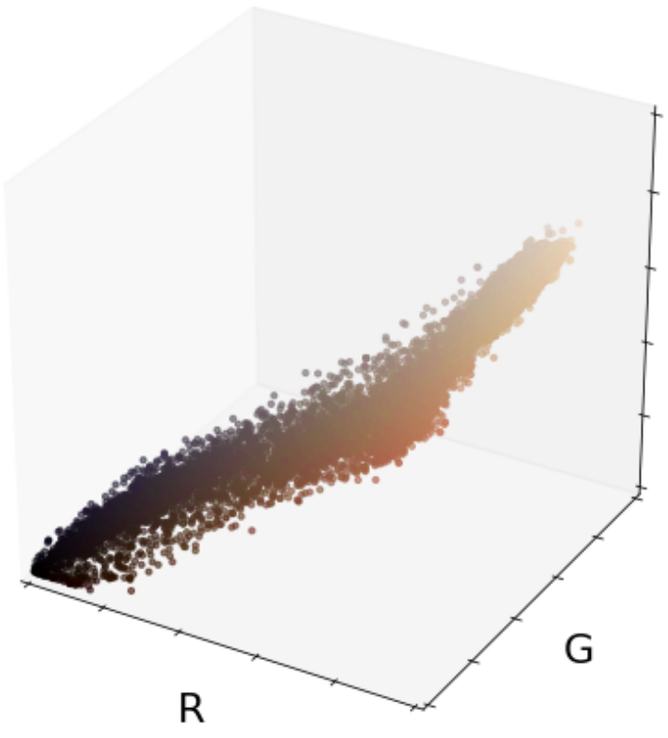
Color Transfer Map

Color Transfer Map

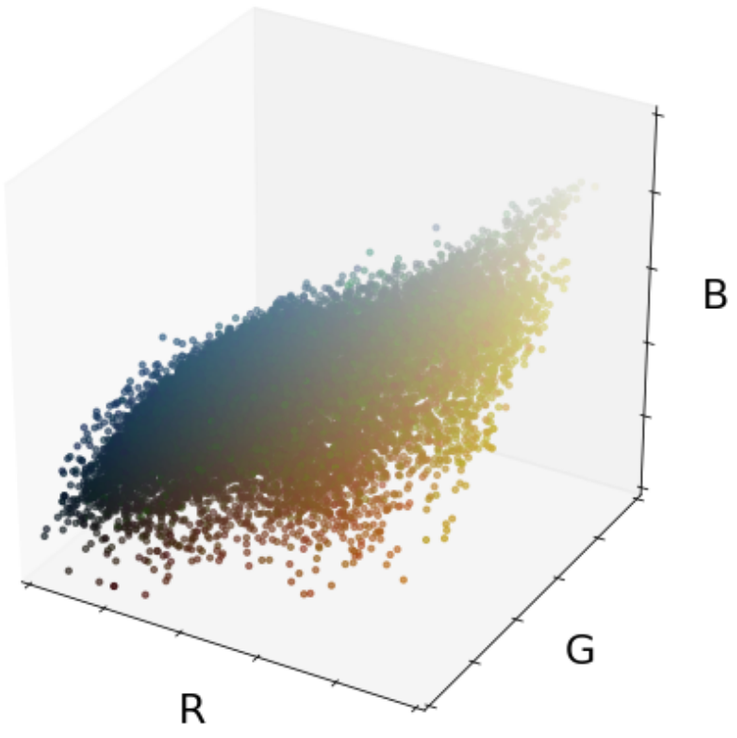


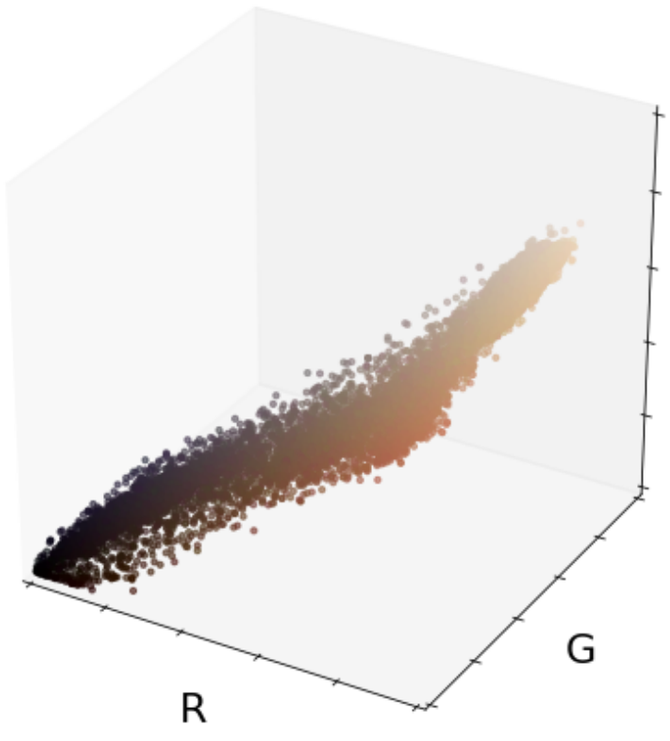


Color Transfer Map

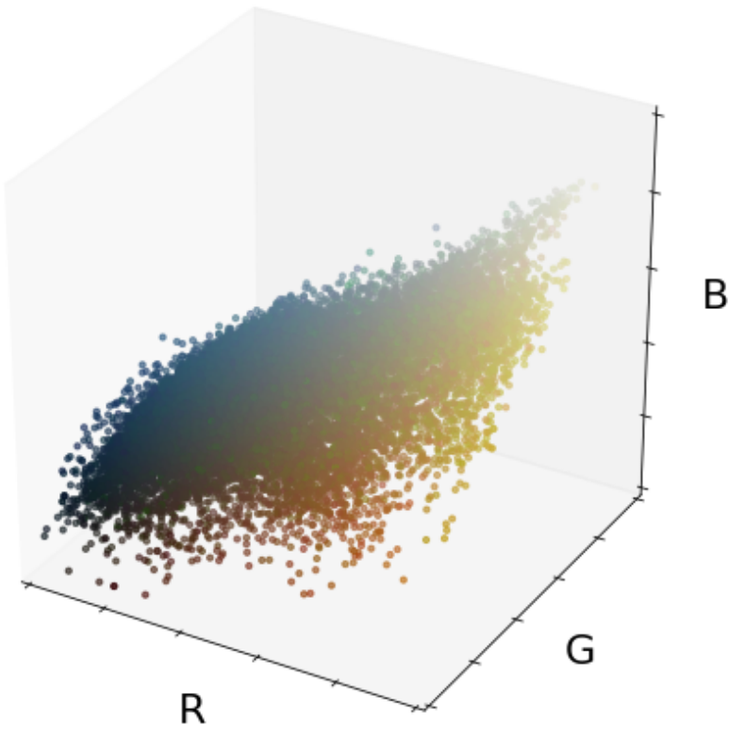


Optimal Transport Map

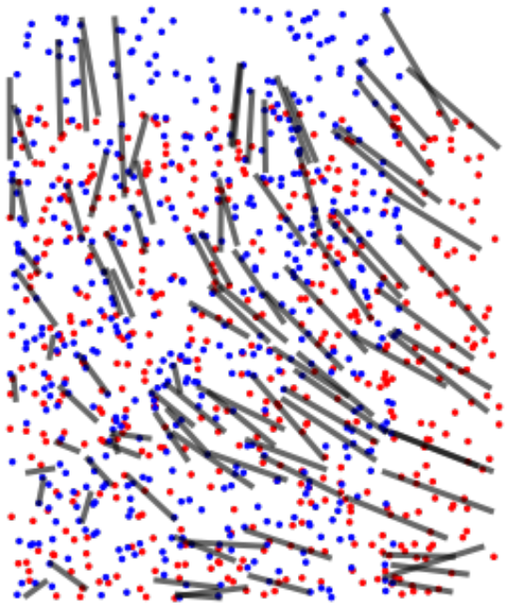




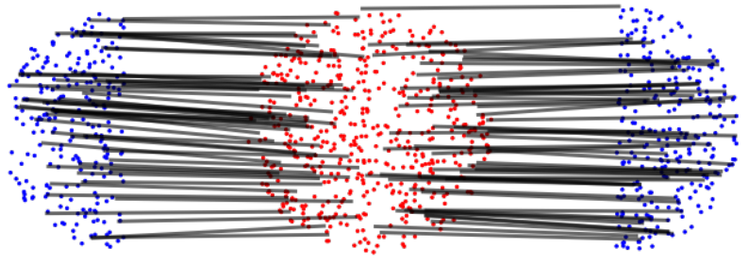
Optimal Transport Map



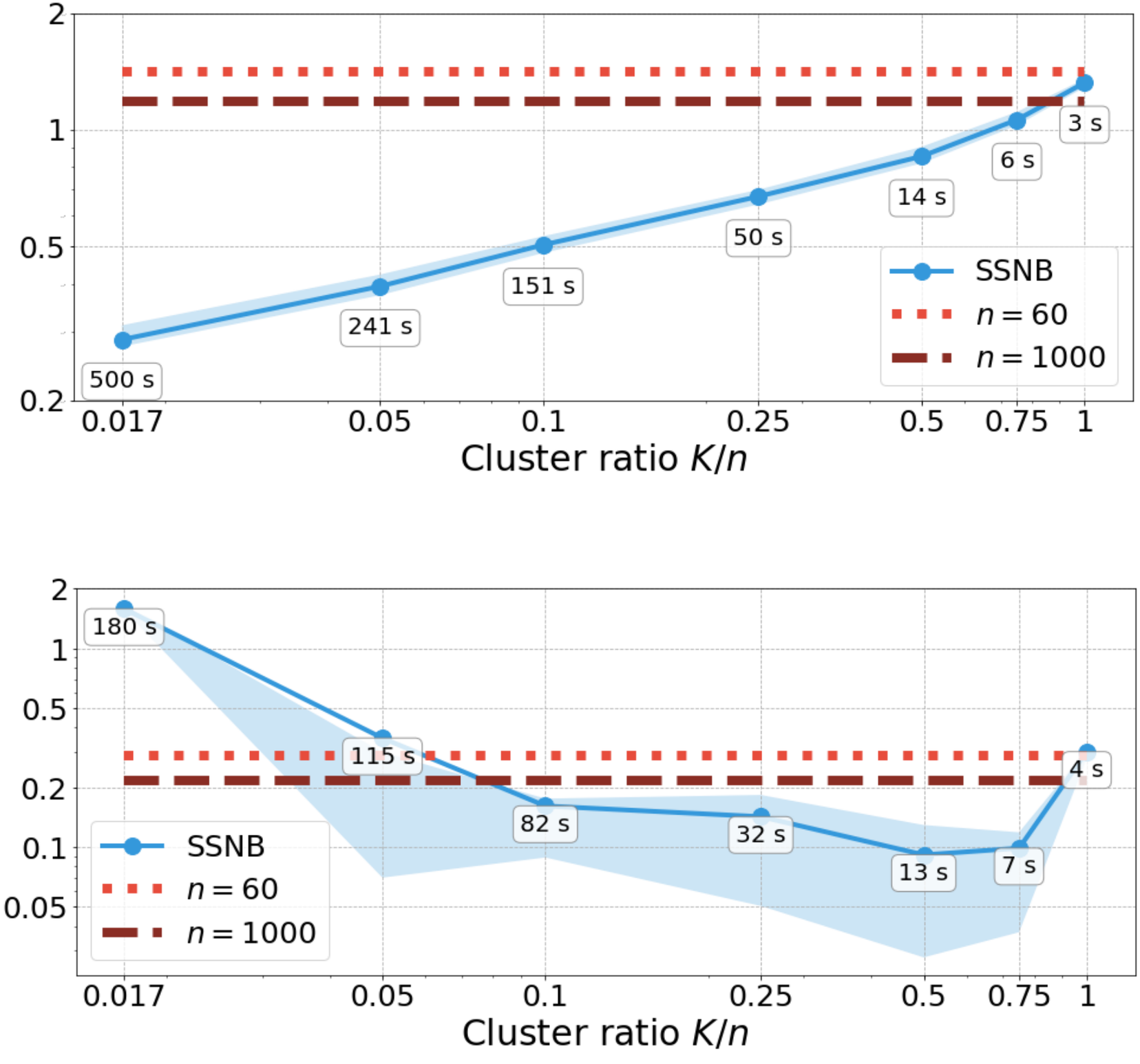
Estimation Error depending on K



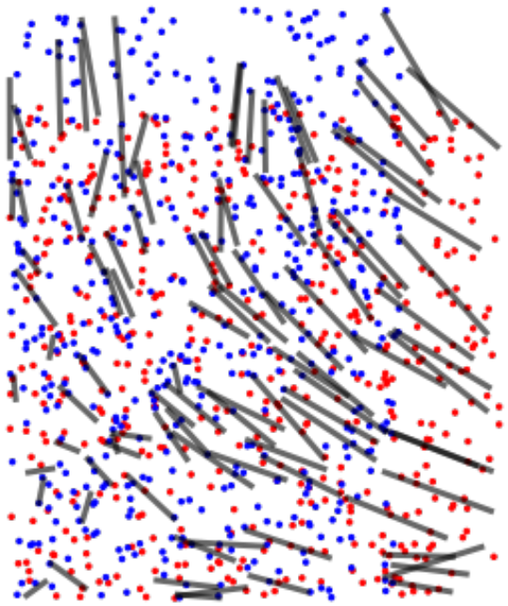
Global Regularity



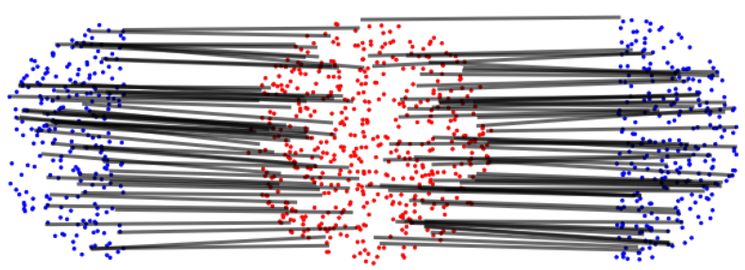
Local Regularity



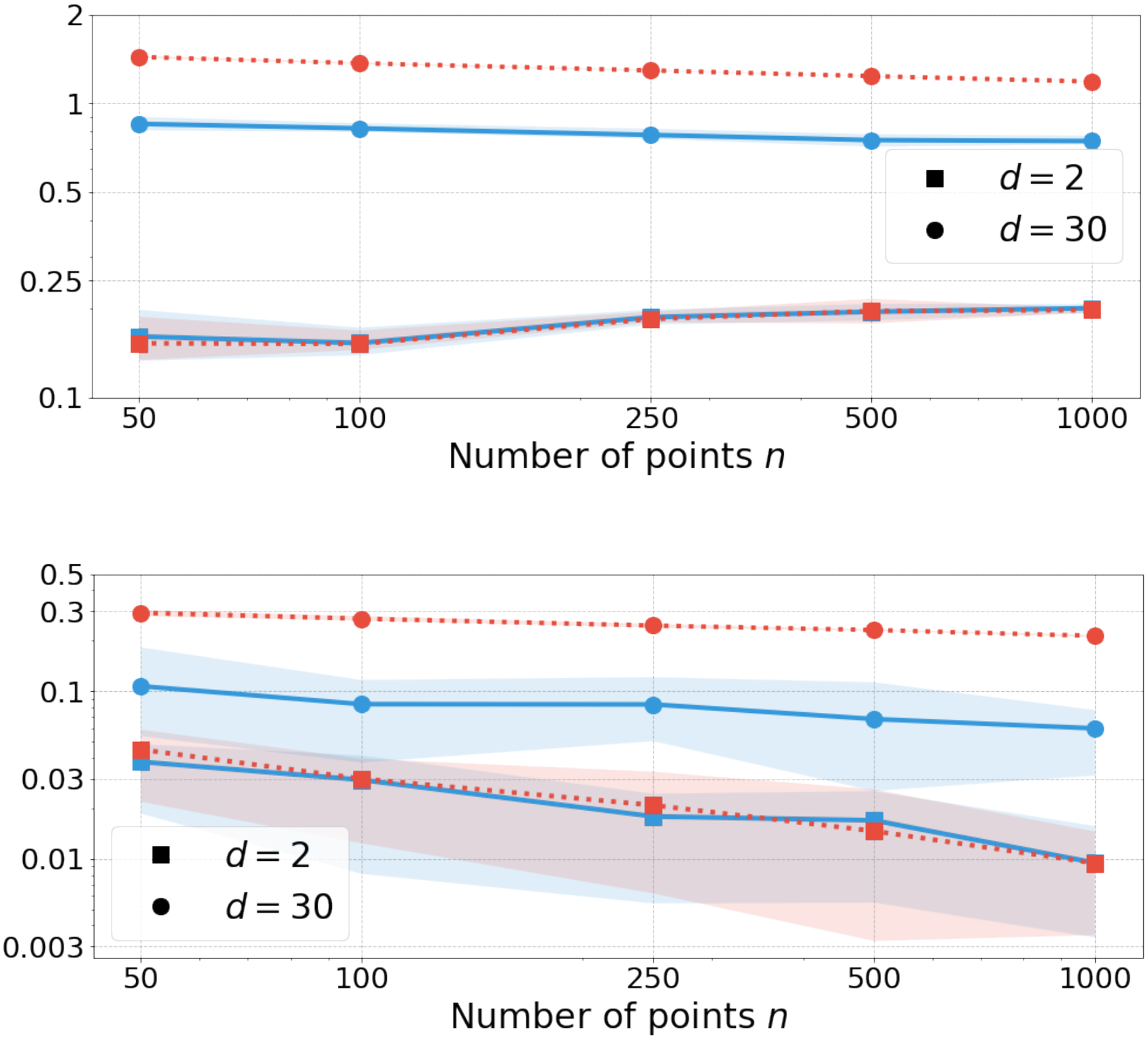
Estimation Error depending on n



Global Regularity



Local Regularity



$\ell = 0$ $\ell = 0.5$ $\ell = 1$

$L = 1$

$L = 2$

$L = 5$