

- We present an efficient approach for the inference of the Manning's n coefficient.
- We propose a three-parameter representation of Manning's n coefficient.
- We use Polynomial Chaos to build an inexpensive surrogate for the GEOCLAW model.
- We use Bayesian inference to infer the parameters using data from Tōhoku tsunami.
- We report *pdfs* and Maximum-A-Posteriori values of the uncertain parameters.