

The extended Rippa's algorithm in RBF interpolation

Francesco Marchetti

University of Padua, Padua (Italy)

`francesco.marchetti@unipd.it`

In the context of RBF interpolation, Rippa's algorithm is a well known Leave-One-Out Cross Validation (LOOCV) method for the tuning of the shape parameter. In this talk, we present and discuss the extension of Rippa's scheme to a more general k -fold CV setting, which has been provided in [1]. Letting n be the number of data sites, the so-constructed Extended Rippa's Algorithm (ERA) is advantageous if $k \approx n$, since in this case the costly resolution of many *large* linear systems is avoided.

References

- [1] F. MARCHETTI, *The extension of Rippa's algorithm beyond LOOCV*, Appl. Math. Letters, 120 (2021), 107262.