

# Wavelet-Vaguelette method for the solution of non-stationary collocation

Wang Haihong<sup>1,2</sup> Luo Zhicai<sup>1,2</sup>

1 School of Geodesy and Geomatics, Wuhan University, 129 Luoyu Road, Wuhan, China, 430079

2 Key Laboratory of Geospace Environment and Geodesy, Ministry of Education, Wuhan University, 129 Luoyu Road, Wuhan, China, 430079

**Abstract:** With the help of Galerkin method, numerically efficient methods for the solution of the Wiener-Kolmogorov equations in collocation are discussed. In the non-stationary case, FFT can't be used because of its disability to deal with the non-stationary signals, and the wavelet method needs to solve a system of linear equations with a non-diagonal matrix. In this paper, a method based on the Wavelet-Vaguelette decomposition is presented for the solution of the non-stationary collocation. This method combines the advantages of FFT and wavelet methods.

**Keywords:** Non-stationary Collocation; Galerkin Method; Wavelet; Vaguelette

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