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On the conditioning of numerical boundary measures in wavelet Galerkin methods. (English summary)

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The paper discusses a domain embedding method for solving partial differential equations on various shaped domains. The advantage of embedding methods is that implementation is simple and moreover, as the larger domain can be chosen a square (cube), wavelet Galerkin methods can be used. Two different formulations of wavelet Galerkin methods are investigated. The main problem that still has to be solved is that the methods suffer from ill-conditioning.

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