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# Polarization methods

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## Abstract

In addition to primal methods, another class of solution techniques turned out to be extremely effective for FFT-based computational micromechanics. Starting from the pioneering work of Eyre-Milton and Michel-Moulinec-Suquet, polarization methods combine a fast convergence speed with a low memory footprint when used properly. A key characteristic of these methods is that they operate on fields that are neither compatible nor equilibrated. As for the basic scheme, the Eyre-Milton iterative scheme corresponds to a rather popular and well-studied technique in optimization, the Douglas-Rachford splitting. We will discuss how to choose the involved parameters, provide insights into an efficient implementation and demonstrate the power of this piece of computational technology.

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