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A GUARANTEED EQUILIBRATED ERROR ESTIMATOR FOR THE $\mathbf{A} - \varphi$ AND $\mathbf{T} - \Omega$ MAGNETODYNAMIC HARMONIC FORMULATIONS OF MAXWELL'S SYSTEM

In this talk a guaranteed equilibrated error estimator for the harmonic magnetodynamic formulation of Maxwell's system is proposed. This estimator is based on two dual problems corresponding to the two equivalent potential formulations of Maxwell's system, which are first presented. Then, the proof of the two key properties for an *a posteriori* equilibrated error estimator are proved: the reliability and efficiency results, without generic constants. Finally, two numerical simulations validate the applicability of our estimator. This work has been realized with S. Nicaise and R. Tittarelli, with the support of EDF R&D.