Residual Minimization in Banach spaces: Recent Advances

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In (non-Hilbert) Banach spaces, minimizing the norm of the residual (of some linear operator equation) gives rise to a nonlinear Petrov-Galerkin method, where the nonlinearity is due to the so-called duality map. In this talk, I will present recent results related to the notions of optimal test spaces and orthogonality in Banach spaces, as well as the ability to eliminate the Gibbs phenomena while approximating discontinuities.