

A meshfree method for a PDE-constrained optimisation problem

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Abstract: In this talk, I will describe a novel approximation method for solving a PDE-constrained optimisation problem numerically. The method is based on the adjoint formulation of the optimisation problem, leading to a system of weakly coupled, elliptic PDEs. These equations are then solved using kernel-based collocation. I will derive the method, give a thorough error analysis and show numerical examples.