Krylov Deferred Correction Methods

In this talk, we present Krylov deferred correction methods for accurate and efficient time-integrations. The methods treat a collocation formulation using spectral deferred correction techniques as preconditioners, where the collocation is equivalent to the quadrature based implicit Runge-Kutta method. The preconditioned system is then solved with Newton-Krylov schemes. The resulting Krylov deferred correction (KDC) methods for ODE can be of arbitrary but finite order of accuracy and A-stable.