

Anderson Acceleration and Application to Neutron Transport Equation

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Anderson acceleration method is an algorithm to accelerate the convergence of the fixed-point iteration. The method has the advantage that it can be used to accelerate any problem. And it has been used successfully in some application areas. It is very important to solve the neutron transport equation in nuclear reaction numerical simulations. The cost of solution for neutron transport equation is very much. Typically, multi-level iterations are used to solve the neutron transport equation. In this talk, we will show the application of Anderson acceleration algorithm to accelerate the solution for neutron transport equation. The results include the application of this algorithm to a model neutron transport equation and to real numerical simulations.

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