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## Discontinuous Galerkin methods for Numerical Weather Prediction

*Friday, 18 September 2020 11:30 (45 minutes)*

In this lecture discontinuous Galerkin (DG) methods for numerical weather prediction (NWP) will be described. Both strengths and limitations of such methods applied to atmospheric modeling will be discussed and possible ways to improve their efficiency reviewed.

A particular strategy based on combining a high order DG discretization with p-adaptivity techniques and efficient semi-Lagrangian and semi-implicit time integrators will be presented in the context of simplified NWP model equations. An outlook towards the parallel implementation of such numerical formulation in the case of a dynamical core prototype will also be discussed.

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**Session Classification:** Moderator: Michail Diamantakis (ECMWF)