1086-65-2640 **Blanca Ayuso de Dios*** (`bayuso@crm.cat`), Centre de Recerca Matemàtica, Campus de Bellaterra, 08193 Barcelona, Catalunya, Spain, and **Franco Brezzi**, **L. Donatella Marini**, **Jinchao Xu** and **Ludmil T. Zikatanov**. *A simple preconditioning strategy for a class of DG-H(div)-conforming methods for the Stokes problem.*

We construct a family of Discontinuous Galerkin methods for the Stokes problem where the velocity field is $H(\mathrm{div};\Omega)$-conforming. This implies that the velocity solution is divergence-free in the whole domain. This property can be exploited to design a simple and effective preconditioning strategy for the final linear system. Both the construction of the methods and the preconditioner, as well as the analyses of both, are done in an abstract framework using some of the basic ingredients of Finite Element Exterior Calculus (FEEC). (Received September 25, 2012)