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**Doyoon Kim\*** ([doyoonki@usc.edu](mailto:doyoonki@usc.edu)), University of Southern California, Department of Mathematics, 3620 Vermont Ave KAP108, Los Angeles, CA 90089. *Elliptic and parabolic equations with partially BMO coefficients in Sobolev spaces.*

Second order elliptic and parabolic equations in Sobolev spaces are studied. The leading coefficients are only measurable in one spatial variable and have small mean oscillations as functions of the other variables. The unique solvability of equations in the whole space is established. Then this result is applied to Dirichlet and Neumann boundary value problems for equations defined on a half-space or on a bounded domain. (Received March 03, 2009)