1027-35-120 **Vladimir Maz'ya*** (vlmaz@math.ohio-state.edu), Department of Mathematics, 231 West 18th Avenue, Columbus, OH 43210. *Derivatives of biharmonic functions near nonsmooth boundary.*

The following three results concerning solutions of the Dirichlet problem for a biharmonic equation will be discussed. 1. Boundedness of the gradient of a solution for an arbitrary three-dimensional domain. 2. Boundedness of the Hessian of a solution on a convex domain (all dimensions). 3. Necessary and sufficient conditions for continuity of the gradient at a point of the boundary of an arbitrary three-dimensional domain. This is a joint work with S.Mayboroda (OSU). (Received February 22, 2007)