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**Boris Mordukhovich** and **Mau Nam Nguyen\*** ([nam@math.wayne.edu](mailto:nam@math.wayne.edu)). *Exact subdifferential calculus and optimality conditions in nondifferentiable programming.*

We develop an approach to obtain various exact calculus rules for lower and upper subgradients of extended-real-valued functions in real Banach spaces. Then we apply this calculus to derive new necessary optimality conditions for some remarkable classes of problems in constrained and unconstrained optimization including minimization problems for difference-type functions and subdifferential optimality conditions for the so-called weak sharp minima. (Received August 08, 2006)