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Romyar T. Sharifi*, Department of Mathematics and Statistics, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4K1, Canada. *Cup products and unramified extensions*. Preliminary report.

I will discuss a couple of applications of cup products in the Galois cohomology of number fields with restricted ramification. Among those objects to which these cup products have applications are Galois groups of unramified pro- p extensions, L-values of cusp forms, K-groups, and Selmer groups. I will also describe the important role that computation has played in their study. (Received September 25, 2005)