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Weiwei Pan* (wp1@stmarys-ca.edu), CA. *Group Actions on Categorized Bundles.*

Categorification, coined by Louis Crane, refers to the process of finding analogues of set-theoretic objects in the setting of categories, and, more recently, to the process of finding higher-category analogues of ideas defined in category theory. The results of categorification are often richer versions of familiar mathematical structures that admit more powerful applications. In this talk we will discuss two particular examples of categorification in algebra and topology - 2-linear representations and 2-vector bundles, as our primary motivation is to introduce geometrically defined equivariant categorified K-theories. Towards this end, we will define a notion of equivariant 2-bundles, and demonstrate their relation to categorified representations of groups. (Received September 15, 2009)