

1121-55-186

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Arnimallee 2, 14195 Berlin, Germany. *Local multiplicity of continuous maps between manifolds.*

Let  $M$  and  $N$  be smooth (real or complex) manifolds, and let  $M$  be equipped with some Riemannian metric. A continuous map  $f: M \rightarrow N$  admits a local  $k$ -multiplicity if, for every real number  $\omega > 0$ , there exist  $k$  pairwise distinct points  $x_1, \dots, x_k$  in  $M$  such that  $f(x_1) = \dots = f(x_k)$  and  $\text{diam}\{x_1, \dots, x_k\} < \omega$ .

In this talk we present a systematic study of the existence of local  $k$ -multiplicities and derive criteria for their existence in terms of Stiefel–Whitney classes of the vector bundle  $f^*\tau N \oplus (-\tau M)$ .

(This lecture is based on the joint work with Roman Karasev) (Received July 18, 2016)