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**Sara W. Lapan\*** ([slapan@math.northwestern.edu](mailto:slapan@math.northwestern.edu)). *Domain of attraction along an apparent direction for holomorphic maps tangent to the identity.*

Given  $f$ , a germ of a holomorphic self-map of  $\mathbb{C}^m$  that fixes a point  $p$ , how do points near  $p$  behave under iteration by  $f$ ? More specifically, when does there exist a domain whose points are attracted to  $p$  under iteration by  $f$  and, if such a domain exists, what can be said about how the points converge to  $p$ ? In this talk, we will consider these questions for such maps  $f$  that are tangent to the identity at  $p$  (i.e.,  $df_p = \text{Id}$ ). The Leau-Fatou flower theorem, which describes the existence of domains of attraction in dimension one, serves as inspiration for this study in higher dimensions. We will discuss what is known in dimension two, focusing on new results regarding the existence of a domain of attraction whose points converge along an apparent characteristic direction. (Received September 16, 2014)