

Singularities of three functions and the product maps

Kazuto Takao (Kyoto University)

Johnson gave a characterization of when a stable singular point of $(f_1, f_2) : \mathbb{R}^n \rightarrow \mathbb{R}^2$ is a stable singular point of $f_1 : \mathbb{R}^n \rightarrow \mathbb{R}$ in terms of the discriminant set of (f_1, f_2) , and applied it to study homotopies between f_1 and f_2 . In this talk, I give a characterization of when a stable singular point of $(f_1, f_2, f_3) : \mathbb{R}^n \rightarrow \mathbb{R}^3$ is a stable singular point of $f_1 : \mathbb{R}^n \rightarrow \mathbb{R}$ or $(f_1, f_2) : \mathbb{R}^n \rightarrow \mathbb{R}^2$ in terms of the discriminant set of (f_1, f_2, f_3) . I would also like to mention a future application to study homotopies of maps.