

---

**Yael Karshon**, University of Toronto

*The Morse-Bott-Kirwan condition is local*

Kirwan identified a condition on a smooth function, being "minimally degenerate", under which the usual techniques of Morse–Bott theory can be applied to the function. We prove that if a function satisfies this condition locally then it also satisfies the condition globally. As a corollary, we obtain a Morse-Lemma-type characterization of minimally degenerate functions. As another application, we use the local normal form theorem to recover Kirwan's result that the norm-square of a momentum map satisfies Kirwan's condition. This is joint work with Tara Holm.