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Abbas Bahri and **Yongzhong Xu*** (yxu@cims.nyu.edu), Courant Institute for Mathematical sciences, 251 Mercer Street, New York, NY 10012. *On the Morse Index of a Functional Arising in Contact Geometry.*

The pseudo-holomorphic curves method introduced by M.Gromov has been extended to contact form framework. Some results have been proved using this method.

Another approach has been developed earlier by Abbas Bahri in a series of books and papers using the space of Legendrian curves for a dual form. In this framework, we prove a result about the Morse index of the corresponding functional at infinity. We prove that the Morse index of the functional splits into two parts, the normal index and the index along the characteristic manifold. And we prove that one can redistribute the index between the two parts while keeping the false critical point at infinity isolated and non-degenerate. (Received February 21, 2006)