

樊宏路

玉泉数学中心 203

March 17, 2012, Saturday, 13:30-16:30

Title Morse theory and its applications

Abstract The talk consists of two parts. In the first part I will talk about the definition and the fundamental results of Morse theory carefully. My goal is to make juniors understand. Therefore anybody can interrupt if I do not make things clear. In the second part, I will talk about its various applications. I intend to focus on the idea of the original proof of the Bott periodicity theorem. Since some Riemmanian geometry is to be assumed, I may stop and change to other easier topics such as Lefschetz theorem on hyperplane section, or something about h-cobordism, according to the reaction of the audience.

References

- [1] J. W. Milnor, *Morse Theory*, 1963.
- [2] R. Bott, *Morse Theory and Its Application to Homotopy Theory*, 1960.