



**THE HONG KONG UNIVERSITY OF SCIENCE & TECHNOLOGY**

**Department of Mathematics**

**PHD STUDENT SEMINAR**

**R.Oliver's theory on the converse of Smith theory**

**By**

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**Abstract**

Smith theory is a classical theory which reveals the homology information of the fixed point set of a certain space with group action. And the converse question is that, given two spaces  $F$  and  $Y$  (both without group action), can  $F$  be realized as the fixed point set of  $X$  (with a group action  $G$ ), which has the same homotopy type as  $Y$ ? So far the best answer is by Robert Oliver, who proves that, for certain type of group, and when  $Y$  is a point, the only obstruction of the converse problem is the Euler characteristic.

**\*\*Date : 25 May 2020 (Monday)**  
**Time : 10:00am – 11:00am**  
**Zoom Meeting : <https://hkust.zoom.us/j/2924864373>**

*All are Welcome!*