

# Loop space decompositions in homotopy theory with applications to Poincare Duality spaces

**October 7 - 15**

Stephen Theriault University of Southampton	Thursday	Oct. 7	16:00-18:00
	Friday	Oct. 8	16:00-18:00
Online lecture by Zoom	Wednesday	Oct. 13	16:00-18:00
	Thursday	Oct. 14	16:00-18:00
	Friday	Oct. 15	16:00-18:00

A great challenge in homotopy theory is determining properties of the homotopy groups of finite simply-connected CW-complexes. One approach is to try to decompose the based loops on such a space into a product of more recognizable factors. In these talks we will investigate a new loop space decomposition method that applies to many interesting families of spaces, with special focus on various classes of Poincare Duality complexes. Among the consequences are resolutions of instances of famous conjectures: by Moore on the relation between the torsion and rational homotopy groups, and by Gromov and Vigue-Poirrier on exponential growth in the rational homology of free loop spaces.

**要申込**：受講希望者は、[Googleフォーム](#)にて申込みを行って下さい。  
下記URL からアクセスしてください。聴講のみの希望者も申込みが必要です。

URL：<https://forms.gle/DBZ4XfabyLxbQk4g8>

締切日：10月6日17:00 締切厳守！

**本講義はスーパーグローバルコース登録学生のコース修了要件の1単位となります。  
ただし、大学院科目として通常の単位に認定されるわけではありませんので、注意してください。**