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スーパーグローバルコース数学特別講義 2



Date

15(Wed)-16(Thu), 20(Mon)-22(Wed), February, 2023

Time

10:00–12:00 (Hybrid lecture)

Venue

110 Conference Room,
Faculty of Science Bldg. #3, Kyoto University

Moment Angle Complexes, Steenrod's Problem and Persistent Homology

Consider a graded commutative algebra A over the integers. Steenrod's problem asks when there exists a space realizing A , in other words if there exists a space X whose cohomology ring coincides with A . The Hopf invariant one problem, solved by Adams is a famous example of this problem.

Persistent homology was developed to study the shape of data. It takes a data set and constructs a bar code which sees topological features of the data that exist at different scales. This course develops the theory of moment angle complexes and the related polyhedral products and gives some connections with and applications to Steenrod's problem and persistent homology.

We will begin with a review of classical homotopy theory and cohomology and continue with an introduction to the theory of moment angle complexes and polyhedral products which have been developed over the last thirty years. We then move onto applications and recent developments. After an introduction to Vietoris-Rips complexes and persistent homology, we will discuss multi-parameter persistence and joint work with Frankland.

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。
右記 QR コードまたは下記 URL からアクセスしてください。
オンライン視聴を希望する場合でも参加登録が必要です。

URL : <https://forms.gle/xe9eRCrrVJ63ZeAG6>

締切日：2月13日(月) 17時厳守



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。

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<https://ktgu.math.kyoto-u.ac.jp>

