Workshop on Topology and Geometry
— Heegaard splittings of 3-manifolds —

2011 年 6 月 28 日–6 月 29 日
広島大学 理学部棟 B702

アブストラクト

A Haken type theorem on intersections of essential laminations and genus 2 Heegaard surfaces

(joint work in progress with Prof. Tsuyoshi Kobayashi)

村井紘子（奈良女子大学)

Haken's Theorem shows that if a 3-manifold M is reducible, then for any Heegaard surface P of M, there is an essential 2-sphere S^2 such that the intersection of S^2 and P is a circle. Analogous results are given for the intersections of essential surfaces with larger complexities and Heegaard sufaces by several authors. In this talk, we will introduce a formulation for searching similar results for the intersections of essential laminations and Heegaard surfaces, and give a result for genus 2 Heegaard surfaces. We will also give an example and explain the phenomena which is typical for essential laminations, which are non-compact objects.

Isotoping Heegaard surfaces in neat positions with respect to critical distance Heegaard surfaces

井戸絢子（奈良女子大学)

Suppose a closed orientable 3-manifold M has a genus g Heegaard surface P with distance $d(P) = 2g$. Let Q be another genus g Heegaard surface which is strongly irreducible. In this talk, we give a method of estimating Hempel distance and we show that there is a height function $f : M \to I$ induced from P such that by isotopy, Q is deformed into a neat position with respect to P.

Heegaard splittings and singularities of product maps

高尾和人（大阪大学）

Rubinstein-Scharlemann が導入した graphic と呼ばれる道具は Heegaard 分解と周辺分野の発展に大きく貢献しているが, その構成は実に特異点論的なものであることが小林氏-佐伯氏の解釈により知られている. 本講演では graphic の変形を用いて Heegaard 分解の Stabilization 問題を特異点の言葉で評価し, 特異点論によるこの問題の解決方法を考察する.