



2019 年
九州大学 組合せ数学セミナー
Hakata Workshop 2019; Summer Meeting¹

下記のようにセミナーを開催しますので、ご案内申し上げます。

世話人: 溝口 佳寛 (九大 IMI) 谷口 哲至 (広島工大)
島袋 修 (長崎大) 田上 真 (九州工大)
栗原大武 (北九州高専) 千葉周也 (熊本大)
三枝崎 剛 (琉球大)
アドバイザー: 坂内 英一

記

日時: June 15, 2019

場所: Seminar Room P (4F) in Reference Eki Higashi Building. 1-16-14 Hakata-Eki-Higashi, Hakata-Ku, Fukuoka City, 812-0013.

プログラム

15:07–15:10 Opening (Tetsuji Taniguchi)

15:10–15:50 Tetsuji Taniguchi (Hiroshima Institute of Technology)

16:00–16:40 Yagita Tsuyoshi (Kyushu Institute of Technology)

16:50–17:30 Aokage Kazuya (National Institute of Technology, Ariake College)

17:30–17:35 Closing

18:00– Post-meeting party

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Abstract

Tetsuji Taniguchi (Hiroshima Institute of Technology)

Title: A generalization of Hoffman graph

Abstract: Hoffman graphs were introduced by Woo and Neumaier to study the graphs with smallest eigenvalue $\geq -1 - \sqrt{2}$ but < -2 . For a given value $\lambda (\leq -2)$, there exist graphs with smallest eigenvalue $\geq \lambda$ that they can not be represented by a sum of (usual) Hoffman graphs with smallest eigenvalue $\geq \lambda$. Therefore, we consider a further generalization of Hoffman graph by giving to the fat vertices a weight and by giving to the edges a sign “ \pm ”. By using this latest generalization, it becomes possible to such graphs to be represented by a sum of (new) Hoffman graphs with smallest eigenvalue $\geq \lambda$. In this talk we consider the above described generalization of Hoffman graphs and we give some results about them.

Yagita Tsuyoshi (Kyushu Institute of Technology)

Title: On k -path Vertex Cover problem and its maximization

Abstract: Vertex Cover Problem (VCP) is one of the most popular graph optimization problems. Given a graph $G = (V, E)$ and integer s , VCP asks to find a vertex subset S of size at most s such that $G[V \setminus S]$ induces no edges. Recently, k -path Vertex Cover Problem (P_k VCP) was proposed and attracted much attention. P_k VCP aims to monitor all paths of k vertices, thus is a natural generalization of the original vertex cover. In this talk, we talk about its maximization version and show the obtained results.

Aokage Kazuya (National Institute of Technology, Ariake College)

Title: Tensor products for the group related to the symmetric groups

Abstract: The covering groups of the finite group G is introduced by Schur who investigated the projective representations of G . We consider the tensor products of the covering groups for the symmetric group. In this case, the tensor products have (i) linear and linear, (ii) linear and spin, and (iii) spin and spin. When n is odd, Stembridge(1989) derived the results of (ii) and (iii) for the basic spin. In this talk, we present the results when n is even.