Título del seminario

Nombre del expositor

Asesor de tesis: **Nombre del asesor de tesis**

Universidad Autónoma de Nuevo León
Facultad de Ingeniería Mecánica y Eléctrica
Cuerpo Académico Tecnología e Innovación Mecatrónica

Mes Día, Año

Presentation Outline

Introduction

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Working Definitions

Definition 2.1

A set $M \subseteq E(G)$ is an *edge dominating set of* G if every $u \in E(G) \backslash M$ is adjacent to some $v \in M$. The *edge domination number of* G, denoted by $\gamma_e(G)$, is the minimum cardinality of an edge dominating set of G. Any edge dominating set of G with cardinality $\gamma_e(G)$ is referred to as a γ_e*-set of* G.

Working Definitions (Cont'n)

Example 2.2

The sets $M_1 = \{a, c, f\}, M_2 = \{d, h\}$, and $M_3 = \{a, e, g, h\}$ are edge dominating sets of G in Figure 1.5. Moreover, $M_2 = \{d, h\}$ is a minimum edge dominating set of G. Thus, $\gamma_e(G) = |M_2| = 2$.

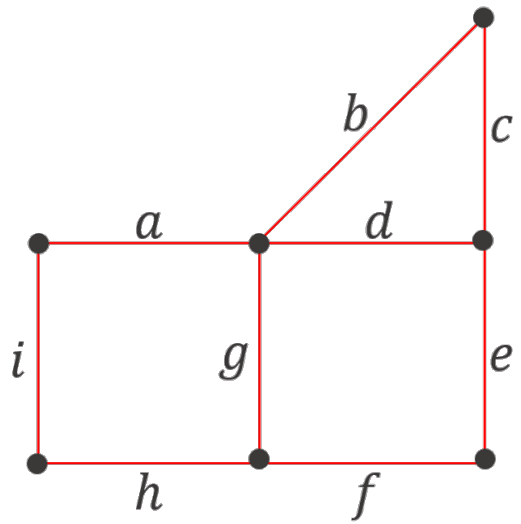

Figura 1: A graph G with $\gamma_e(G) = 2$.

Results

Remark 3.1

A set S is an outer-connected edge dominating set of a graph G if S is an edge dominating set such that $H_{E(G)\setminus S}$ does not have component isomorphic to K_2 or $S = E(G)$.

Results

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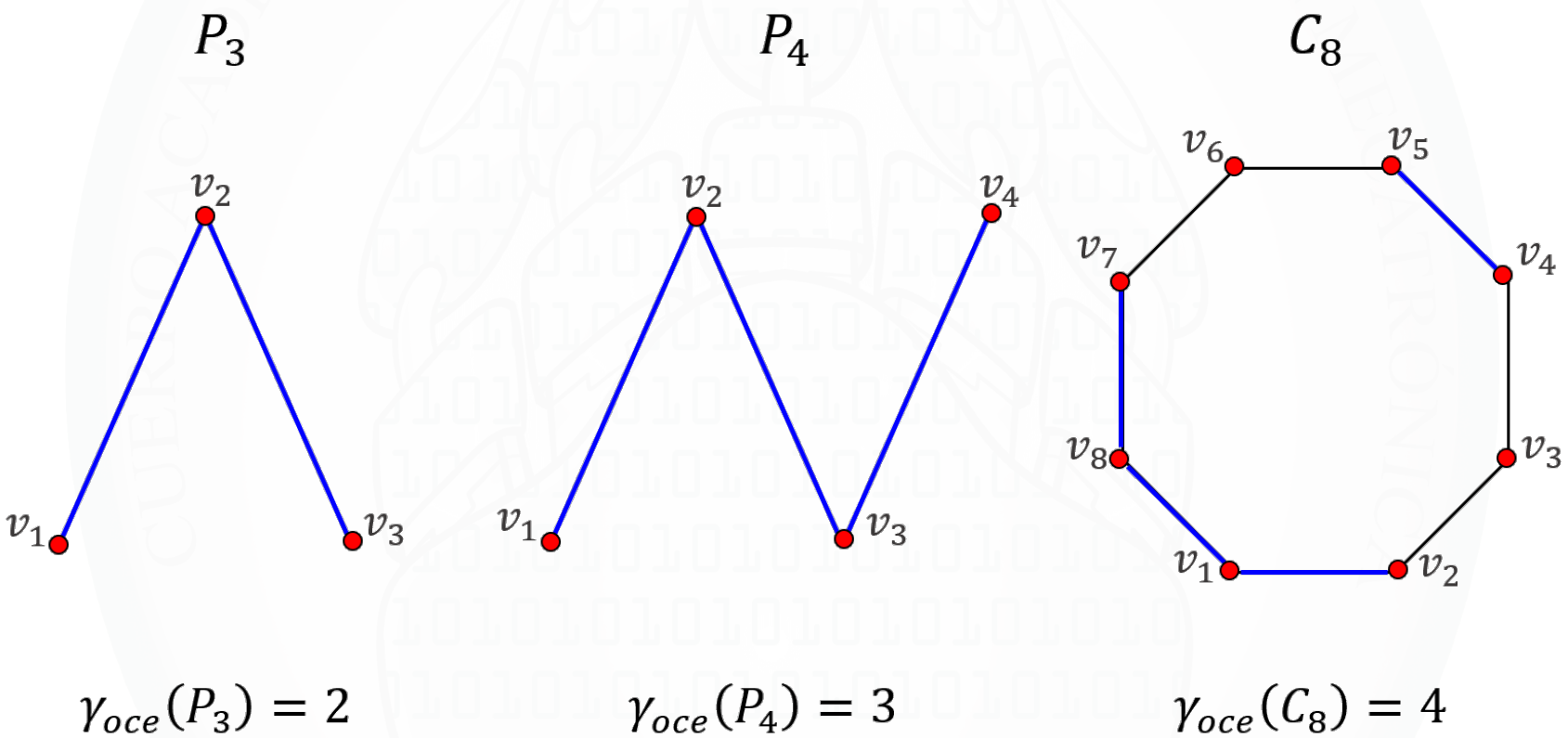
A set S is an outer-connected edge dominating set of a graph G if S is an edge dominating set such that $H_{E(G)\setminus S}$ does not have component isomorphic to K_2 or $S = E(G)$.

To see this, consider graphs $G_1 = P_3, G_2 = P_4$, and $G_3 = C_8$ in Figure 2. Then, $\gamma_{oce}(P_3) = 2, \gamma_{oce}(P_4) = 3$, and $\gamma_{oce}(C_8) = 4$.

Results (Cont'n)



$\gamma_{oce}(P_3) = 2$ $\gamma_{oce}(P_4) = 3$ $\gamma_{oce}(C_8) = 4$

Figura 2: Graphs with $\gamma_{oce}(P_3) = 2, \gamma_{oce}(P_4) = 3$, and $\gamma_{oce}(C_8) = 4$.

Recommendations

The following problems are suggested for further study:
Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetuer.

List of References

[1] Erick Ordaz-Rivas, Angel Rodriguez-Liñan y L. Torres-Treviño. «Autonomous foraging with a pack of robots based on repulsion, attraction and influence». En: *Autonomous Robots* 45 (sep. de 2021), págs. 1-17. DOI: 10.1007/s10514-021-09994-5.

[2] Erick Ordaz-Rivas, Angel Rodriguez-Liñan y L. Torres-Treviño. «Flock of Robots with Self-Cooperation for Prey-Predator Task». En: *Journal of Intelligent & Robotic Systems* 101 (feb. de 2021). DOI: 10.1007/s10846-020-01283-0.

[3] Erick Ordaz-Rivas et al. «Collective Tasks for a Flock of Robots Using Influence Factor». En: *Journal of Intelligent & Robotic Systems* 94 (mayo de 2019). DOI: 10.1007/s10846-018-0941-2.

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