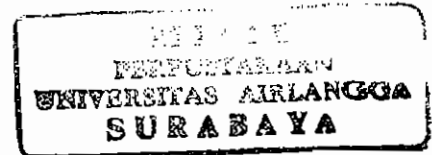


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**EKOR DAN PERIODE HASIL KALI TENSOR  
DUA DIGRAF MULTIPARTIT LENGKAP**

**SKRIPSI**



**EFENDI SAHAT MARTUA MANALU**

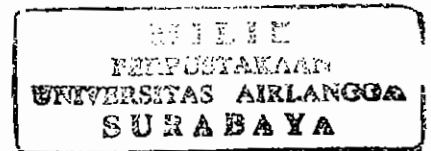
**JURUSAN MATEMATIKA  
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM  
UNIVERSITAS AIRLANGGA  
SURABAYA**

**2004**

**EKOR DAN PERIODE HASIL KALI TENSOR  
DUA DIGRAF MULTIPARTIT LENGKAP**

**SKRIPSI**

**Sebagai Salah Satu Syarat Untuk Memperoleh  
Gelar Sarjana Sains Bidang Matematika Pada Fakultas Matematika dan  
Ilmu Pengetahuan Alam Universitas Airlangga**



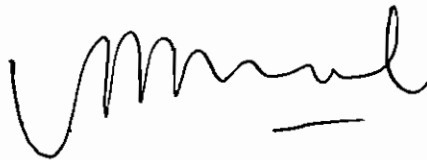
**Oleh :**

**EFENDI SAHAT MARTUA MANALU**  
**NIM. 089911996**

**Tanggal Lulus : 9 Pebruari 2004**

**Disetujui Oleh :**

**Pembimbing I,**

A handwritten signature in black ink, consisting of several loops and a horizontal line at the end.

**Dra. Rini Semiati**  
**NIP. 131 287 498**

**Pembimbing II,**

A handwritten signature in black ink, featuring a large, stylized initial 'Y' followed by a horizontal line.

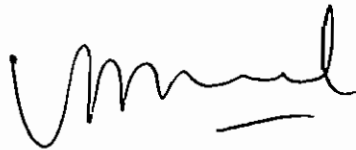
**Dra. Yayuk Wahyuni, M.Si**  
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## LEMBAR PENGESAHAN

**Judul** : EKOR DAN PERIODE HASIL KALI TENSOR DUA DIGRAF  
MULTIPARTIT LENGKAP  
**Penyusun** : EFENDI SAHAT MARTUA MANALU  
**NIM** : 089911996  
**Tanggal Ujian** : 9 Pebruari 2004

Disetujui Oleh :

Pembimbing I,



Dra. Rini Semiati  
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Pembimbing II,



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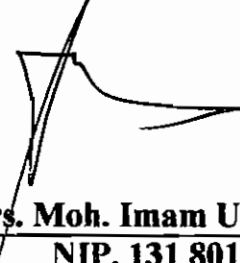
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Efendi Sahat Martua Manalu, 2003. **Tail and Period of Tensor Product of two Complete Multipartite Digraphs**. This Thesis under guidance of Dra.Rini Semiati and Dra.Yayuk Wahyuni, M.Si, Department of Mathematics, Faculty of Mathematics and Natural Science, Airlangga University.

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## ABSTRACT

The objective of this thesis is to find tail and period of tensor product of two complete multipartite digraphs.

Let  $K$  is the tensor product of two complete multipartite digraphs, for every digraph  $K$  there exist smallest integer numbers  $p > 0$  and  $t \geq 0$  such that  $ED^t(K) = ED^{p+t}(K)$ , where denotes  $p = p(K)$  period of  $K$  and  $t = t(K)$  the tail of  $K$ . By studying tensor product of two complete multipartite digraphs and eccentric digraph, then it is obtained tail and period of tensor product of two complete multipartite digraphs, which are :

1. If  $K = K_{m_1, m_2} \wedge K_{p_1, p_2}$ , then  $t(K) = 1$  and  $p(K) = 2$ .
2. If  $K = K_{m_1, m_2} \wedge K_{p_1, p_2, \dots, p_r}$ ,  $r \geq 3$ , then  $t(K) = 2$  and  $p(K) = 2$ .
3. If  $K = K_{m_1, m_2, \dots, m_n} \wedge K_{p_1, p_2, \dots, p_r}$ ,  $n \geq 3$  and  $r \geq 3$ , then  $t(K) = 0$  and  $p(K) = 2$ .

**Keywords :** Tensor Product, Complete Multipartite Digraphs, Eccentric Digraph, Tail and Period