

**SIFAT SUBSTITUSI MATRIKS ATAS RING PADA
POLINOMIAL MATRIKS DAN
POLINOMIAL RASIONAL MATRIKS ATAS RING**

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SKRIPSI

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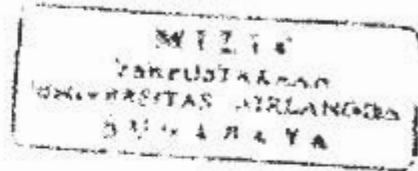


ELOK SAHARANI

**JURUSAN MATEMATIKA
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS AIRLANGGA
SURABAYA
2004**

**SIFAT SUBSTITUSI MATRIKS ATAS RING PADA
POLINOMIAL MATRIKS DAN
POLINOMIAL RASIONAL MATRIKS ATAS RING**

SKRIPSI



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



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Judul : Sifat Substitusi Matriks Atas Ring Pada Polinomial
Matriks dan Polinomial Rasional Matriks Atas Ring
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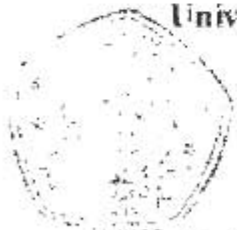


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Elok Saharani, 2004. Characteristic Substitution of Matrix Over Ring into Matrix Polynomial and Matrix Rational Polynomial Over Ring. This script is under supervised of Dra. Inna Kuswandari, M.Si. and Dra. Yayuk Wahyuni, Msi. Departement Mathematics Faculty of Mathematics and Natural Science Airlangga University.

ABSTRACT

The purpose this script study what characteristic matrix polynomial over ring use too in substitution of matrix over ring into matrix polynomial over ring. Also, in matrix rational polynomial over ring. Moreover, using characteristic matrix polynomial and matrix rational polynomial over ring will be studies characteristic substitution of matrix over ring into matrix polynomial and matrix rational polynomial over ring. From the discuss can be determined that characteristic matrix polynomial over ring use too in substitution of matrix over ring into matrix polynomial over ring are addition of matrix polynomial over ring and multiplication of constant matrix from left with matrix polynomial over ring. Moreover, let $F(z) \in R^{n \times n}[z]$, then remainder in division of $F(z)$ by $(zI - A)$ from right is the right value. That characteristic use too in matrix rational polynomial over ring.

Key words : matrix over ring, matrix polynomial over ring, matrix rational polynomial over ring.

