

**A NEW TRANSMISSION LINE MODEL
FOR THE PERFORMANCE ANALYSIS OF
RECTANGULAR MICROSTRIP PATCH ANTENNA
ELEMENT AND ARRAY**

B 16944 By

Eng. MAMDOUH SHAKER YACOUB

**A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
DOCTOR OF PHILOSOPHY**

**in
Electronics & Communications Engineering**

**Under the Supervision of
A. Prof. Dr. ADEL ZAKY BOTROS**

**FACULTY OF ENGINEERING
CAIRO UNIVERSITY
GIZA, EGYPT**

2000

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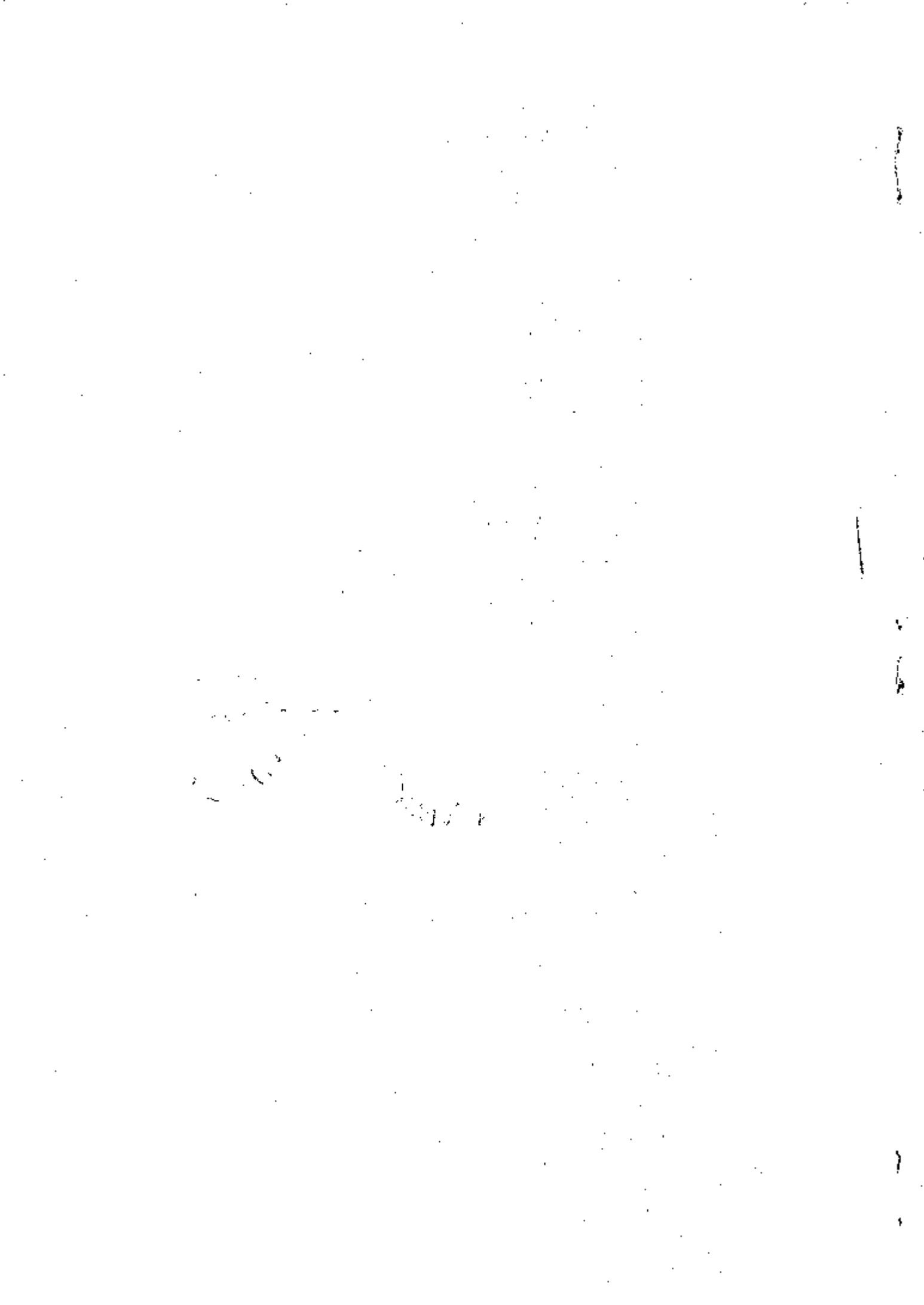
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FACULTY OF ENGINEERING

CAIRO UNIVERSITY

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