# Memoirs of the FACULTY OF ENGINEERING KYOTO UNIVERSITY 

VOLUME XLV PART 2<br>APRIL 1983

Published by
KYOTO UNIVERSITY KYOTO, JAPAN

# MEMOIRS OF THE FACULTY OF ENGINEERING KYOTO UNIVERSITY 

VOLUME XLV

PART 2
APRIL 1983

## CONTENTS

Yoshiji Niwa, Eiichi Watanabe, and Hidenori Isami
Catastrophes of Elastic Column Structures ..... 71
Yasuharu Ohsawa, Hajime Miyauchi, Muneaki Hayashi and Toyohiko Honda
Stabilization of Longitudinal Power System by Means of Superconducting Magnetic Energy Storage ..... 98
Koichi Akaf, Yuzo Ohnishi and Shinji Konishr
Static and Cyclic Triaxial Loading Tests of $K_{0}$-Consolidated Clay ..... 108
Eiji Matsumoto and Tatsuo Tokuoka
Note on Weak and Short Waves in One-dimensional Inhomogeneous Nonlinear Elastic Materials ..... 126
Osamu Yamamoto, Toshihiko Kouno and Chikasa Uenosono
Behavior of The Space Charge Produced by The Positive Impulse Corona in Air .. ..... 132
Hiroyuki Kameda and Kazunori Kohno
Effect of Ground Motion Duration on Seismic Design Load for Civil Engineering Structures -Development of Equivalent Ground Acceleration (EQA) ..... 140

This memoirs is issued quarterly by the University to publish the original contributions to engineering science made or communicated by the members of the faculty. The faculty consists of following departments:

Dept. of Civil Engineering
Dept. of Mechanical Engineering
Dept. of Electrical Engineering
Dept. of Mineral Science and Technology
Dept. of Metallurgy
Dept. of Industrial Chemistry
Dept. of Architecture
Dept. of Hydrocarbon Chemistry
Dept. of Chemical Engineering
Dept. of Polymer Chemistry
Dept. of Electronics
Dept. of Aeronautical Engineering
Dept. of Nuclear Engineering

Dept. of Sanitary Engineering
Dept. of Applied Mathematics and Physics
Dept. of Precision Mechanics
Dept, of Synthetic Chemistry
Dcpt. of Electrical Engineering, II
Dept. of Metal Science and Technology
Dept. of Transportation Engineering
Dept. of Architectural Engineering
Dept. of Information Science
Dept. of Engineering Science
Automation Research Laboratory
Ion Beam Engineering Experimental
Laboratory

All communications regarding the memoirs should be addressed to the dean of the faculty.


