#### SESSION II \*

AUCKLAND UNIVERSITY MONDAY, 25 January Room "A"

### Analysis of Structural Response and Instruments

Chairman; N.M. Newmark (U.S.A.) Co-Chairman: J. Krishna (India)

G.W. Housner	Session Report
S. Balan, M. Ifrim, C. Pacoste	Direction Determination of Equivalence Coefficients of Masses in the Anti-Seismic Computation of Structures
S. Cherry, A.G. Brady	Determination of Structural Dynamic Properties by Statistical Analysis of Random Vibrations
R.W. Clough, K.L. Benusks, E.L. Wilson	Inelastic Earthquake Response of Tall Buildings
I. Funahashi, K. Kinoshita	The Vibrational Analysis of the Tower Building
H. Goto, K. Toki	Vibrational Characteristics and Aseimic Design of Submerged Bridge Piers
T. Hatano	Vibration of Visco-Elastic Body
S. Hayashi, N. Miyajima, I. Yamashita	Horizontal Resistance of Steel Piles under Static and Dynamic Loads
T. Hisada, K. Nakagawa, M. Izumi	Earthquake Response of Idealized Twenty Story Buildings Having Various Elasto- Plastic Properties

<sup>\*</sup> This programme includes only papers actually presented at the Conference by the author (or his deputy). It does not include accepted papers which were not presented, nor does it include supplementary papers presented during the discussion. For complete details of accepted papers and abstracts for this Theme, please refer to Vol II, pp II-1, "INDEX".

# SESSION II (cont'd)

AUCKLAND UNIVERSITY TUESDAY, 26 January Room "A"

# Analysis of Structural Response and Instruments

D.E. Hudson	Equivalent Viscous Friction for Hysteretic Systems with Earthquake-like Excitations
J. Ibanez	Displacement Spectrum in the Dynamic Response of Inelastic Structures, for Design Purposes
P.C. Jennings	Response of Yielding Structures to Statistically Generated Ground Motion
K. Kanai	Some New Problems of Seismic Vibrations of a Structure
H. Kawasumi, E. Shima	Some Applications of a Correlator to Engineering Problems
H. Kobayashi	The Deflection of Tall Building due to Earthquake
K. Kubo	Response of a System of Two Degree Freedom
J. Penzien, A.K. Chopra	Earthquake Response of Appendage on a Multi-Story Building
T. Naka, T. Kato, M. Yuasa- Watabe	Dynamical Analysis of Steel Structure by Electronic Analogy
T. Odaka, F. Horie	A Study on the Optimum Value of a Seismic Coefficient
M. Ihara, C. Ueda	Horizontal Loading and Vibration Test on 2-Storied Reinforced Concrete Structures
S. Okamoto, M. Hakuno, K. Kato, F. Kawakami	On the Dynamical Behaviour of an Earth Dam during Earthquake
Y. Osawa	Seismic Analysis of Core-Wall Buildings
J.M.J. Pereira	Behaviour of an Elasto-Plastic Oscillator Acted by Random Vibration

## SESSION II (cont'd)

WELLINGTON UNIVERSITY FRIDAY, 29 January Room "A"

## Analysis of Structural Response and Instruments

M.F. Rubinstein	An Engineering Approach to Computing the Natural Modes and Frequencies of a Tall Building
W.E. Saul, J.F. Fleming, S.L. Lee	Dynamic Analysis of Bilinear Inelastic Multiple Story Shear Buildings
R.J. O'Driscoll, R. Shepherd, J.H. Wood	The Determination of the Normal Mode Properties of Multistory Rectangular Rigid Framed Structures Using an Electrical Analogy
R.I. Skinner, D.W.C.Skilton D.A. Laws	Unbalanced Buildings, and Buildings with Light Towers, under Earthquake Forces
T. Shiga	Torsional Vibration of Multi-Storied Buildings
R. Szilard	Dynamic Response of Multi-Level Guyed Towers to Earthquake Considering Non-Linearity of the Elastic Supports
H. Tajimi, M. Ohmura T. Uchida, K. Akino	Observed Vibrations of a Nuclear Reactor Building during Some Weak Earthquakes
S.S. Tezcan	Earthquake Analysis of Space Structures by Digital Computers
E. del Valle, J. Prince	Analytical and Exgerimental Studies of Vibration in Two Buildings
A.S. Veletsos, N.M.Newmark, C.V. Chelapati	Deformation Spectra for Elastic and Elasto- Plastic Systems Subjected to Ground Shock and Earthquake Motions
G.R. Walker	Earthquake Resistant Design - The Pulse Method

### SESSION II (cont'd)

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### Analysis of Structural Response and Instruments

The Vibrational Analysis of a Steel Structure S. Watanabe, Y. Kida, M. Higuchi (The Vibrational Test of Ohbayashi-Gumi Building) Dynamic Analysis of Elasto-Inelastic Frames R.K. Wen, J.G. Janssen S. Yamamoto, N. Suzuki Experimental and Theoretical Analysis of Response Against Earthquakes of Tower Structures Having Non-Uniform Sections Governed by Bending Vibrations T. Yoshida, K. Baba Dynamic Response of Dams G.W. Housner Summary Report