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KYOTO UNIVERSITY, KYOTO, JAPAN

Publications of the Disaster Prevention Research Institute

The Disaster Prevention Research Institute has published the achievements of its research activities in two kinds of publications, namely "Annuals (in Japanese)" and "Bulletins". Bulletins having been monographs published on occasion. Annuals will continue to be published in the same style as before. Bulletin, however, has been changed into a new style with the title of "Bulletin of the Disaster Prevention Research Institute" as seen in this publication.

One Volume of the new Bulletin is divided into four Parts published quarterly, each Part including several articles. Bulletins to be published in this academic year (April, 1965~March, 1966) will constitute Volume 15. Corresponding to the new style of publication, Bulletins already published are re-numbered as seen in the end of this publication.

Bulletins Already Published

Volume 1 (1951-52)

- No. 1 On the Propagation of Flood Waves, by Shōitirō Hayami, 1951.
 No. 2 On the Effect of Sand Storm in Controlling the Mouth of the Kiku River, by Tōjirō Ishihara and Yūichi Iwagaki, 1952.

Volume 2 (1952-53)

- No. 3 Observation of Tidal Strain of the Earth (Part I), by Kenzo Sassa, Izuo Ozawa and Soji Yoshikawa. And Observations of Tidal Strain of the Earth by the Extensometer (Part II), by Izuo Ozawa, 1952.

Volume 3 (1953-54)

- No. 4 Earthquake Damages and Elastic Properties of the Ground, by Ryō Tanabashi and Hatsuo Ishizaki, 1953.
 No. 5 Some Studies on Beach Erosions, by Shōitirō Hayami, Tōjirō Ishihara and Yūichi Iwagaki, 1953.
 No. 6 Study on Some Phenomena Foretelling the Occurrence of Destructive Earthquakes, by Eiichi Nishimura, 1953.
 No. 7 Vibration Problems of Skyscraper. Destructive Elements of Seismic Waves for Structures, by Ryo Tanabashi, Takuji Kobori and Kiyoshi Kaneta, 1954.

Volume 4 (1954-55)

- No. 8 Studies on the Failure and the Settlement of Foundations, by Sakuro Murayama, 1954.

Volume 5 (1955-56)

- No. 9 Experimental Studies on Meteorological Tsunamis Traveling up the Rivers and Canals in Osaka City, by Shōitirō Hayami, Katsumasa Yano, Shōhei Adachi and Hideaki Kunishi, 1955.
 No. 10 Fundamental Studies on the Runoff Analysis by Characteristics, by Yūichi Iwagaki, 1955.
 No. 11 Fundamental Considerations on the Earthquake Resistant Properties of the Earth Dam, by Motohiro Hatanaka, 1955.
 No. 12 The Effect of the Moisture Content on the Strength of an Alluvial Clay, by Sakurō Murayama, Kōichi Akai and Tōru Shibata, 1955.
 No. 13 On Phenomena Forerunning Earthquakes, by Kenzō Sassa and Eiichi Nishimura, 1956.
 No. 14 A Theoretical Study on Differential Settlements of Structures, by Yoshitsura Yokoo and Kunio Yamagata, 1956.

Volume 6 (1956-57)

- No. 15 Study on Elastic Strain of the Ground in Earth Tides, by Izuo Ozawa, 1957.
 No. 16 Consideration on Mechanism of Structural Cracking of Reinforced Concrete Buildings Due to Concrete Shrinkage, by Y. Yokoo and S. Tsunoda, 1957.
 No. 17 On the Stress Analysis and the Stability Computation of Earth Embankments, by Kōichi Akai, 1957.

Volume 7 (1957-58)

- No. 18 On the Numerical Solutions of Harmonic, Biharmonic and Similar Equations by the Difference Method not Through Successive Approximations, by Hatsuo Ishizaki, 1957.
 No. 19 On the Application of the Unit Hydrograph Method to Runoff Analysis for Rivers in Japan, by Tōjirō Ishihara and Akiharu Kanamaru, 1958.
 No. 20 Analysis of Statically Indeterminate Structures in the Ultimate State, by Ryō Tanabashi, 1958.
 No. 21 The Propagation of Waves near Explosion and Fracture of Rock (I), by Sōji Yoshikawa, 1958.
 No. 22 On the Second Volcanic Micro-Tremor at the Volcano Aso, by Michiyasu Shima,

1958.

Volume 8 (1958-59)

- No. 23 On the Observation of the Crustal Deformation and Meteorological Effect on It at Ide Observatory, and On the Crustal Deformation Due to Full Water and Accumulating Sand in the Sabo-Dam, by Michio Takada, 1958.
- No. 24 On the Character of Seepage Water and Their Effect on the Stability of Earth Embankments, by Kōichi Akai, 1958.
- No. 25 On the Thermoelasticity in the Semi-infinite Elastic Solid, by Michiyasu Shima, 1958.
- No. 26 On the Rheological Characters of Clay (Part 1), by Sakurō Murayama and Tōru Shibata, 1958.
- No. 27 On the Observing Instruments and Tele-metrical Devices of Extensometers and Tiltmeters at Ide Observatory, and On the Crustal Strain Accompanied by a Great Earthquake, by Michio Takada, 1959.
- No. 28 On the Sensitivity of Clay, by Shinichi Yamaguchi, 1959.
- No. 29 An Analysis of the Stable Cross Section of a Stream Channel, by Yūichi Iwagaki and Yoshito Tsuchiya, 1959.

Volume 9 (1959-60)

- No. 30 Variations of Wind Pressure against Structures in the Event of Typhoons, by Hatsuo Ishizaki, 1959.
- No. 31 On the Possibility of the Metallic Transition of MgO Crystal at the Boundary of the Earth's Core, by Tatsuhiko Wada, 1960.
- No. 32 Variation of the Elastic Wave Velocities of Rocks in the Process of Deformation and Fracture under High Pressure, by Shōgo Matsushima, 1960.
- No. 33 Basic Studies on Hydraulic Performances of Overflow Spillways and Diversion Weirs, by Tōjirō Ishihara, Yoshiaki Iwasa and Kazune Iida, 1960.

Volume 10 (1960-61)

- No. 34 Volcanic Micro-tremors at the Volcano Aso, by Michiyasu Shima, 1960.
- No. 35 On the Safety of Structures Against Earthquakes, by Ryō Tanabashi, 1960.
- No. 36 On the Flow and Fracture of Igneous Rocks, and On the Deformation and Fracture of Granite under High Confining Pressure, by Shōgo Matsushima, 1960.
- No. 37 On the Physical Properties within the B-layer Deduced from Olivine-model and On the Possibility of Polymorphic Transition from Olivine to Spinel at the 20° Discontinuity, by Tatsuhiko Wada, 1960.
- No. 38 On Origins of the Region C and the Core of the Earth —Ionic-Intermetallic-Metallic Transition Hypothesis— by Tatsuhiko Wada, 1960.
- No. 39 Crustal Structure in Wakayama District as Deduced from Local and Near Earthquake Observations, by Takeshi Mikumo, 1960.
- No. 40 Earthquake Resistance of Traditional Japanese Wooden Structures, by Ryo Tanabashi, 1960.
- No. 41 Analysis with an Application to Aseismic Design of Bridge Piers, by Hisao Goto and Kiyoshi Kaneta, 1960.
- No. 42 Tilting Motion of the Ground as Related to the Volcanic Activity of Mt. Aso. and Micro-Process of the Tilting Motion of Ground and Structure, by Yoshiro Itō, 1961.
- No. 43 On the Strength Distribution of the Earth's Crust and the Upper Mantle, and The Distribution of the Great Earthquakes with Depth, by Shōgo Matsushima, 1961.
- No. 44 Observational Study on Microseisms (Part 1), by Kennosuke Okano, 1961.
- No. 45 On the Diffraction of Elastic Plane Pulses by the Crack of a Half Plane, by Michiyasu Shima, 1961.
- No. 46 On the Observations of the Earth Tide by Means of Extensometers in Horizontal Components, by Izuo Ozawa, 1961.

Volume 11 (1961-62)

- No. 47 Observational Study on Microseisms (Part 2), by Kennosuke Okano, 1961.
- No. 48 On the Crustal Movement Accompanying with the Recent Activity of the Volcano Sakurajima (Part 1), by Keizo Yoshikawa, 1961.
- No. 49 The Ground Motion Near Explosion, by Sōji Yoshikawa, 1961.
- No. 50 On the Crustal Movement Accompanying with the Recent Activity of the Volcano Sakurajima (Part 2), by Keizo Yoshikawa, 1961.
- No. 51 Study on Geomagnetic Variation of Telluric Origin, by Junichiro Miyakoshi, 1962.
- No. 52 Considerations on the Vibrational Behaviors of Earth Dams, by Hatsuo Ishizaki and Naotaka Hatakeyama, 1962.
- No. 53 Some Problems on Time Change of Gravity (Parts 1 and 2), by Ichiro Nakagawa, 1962.
- No. 54 Nature of the Volcanic Micro-Tremors at the Volcano Aso, Part 1. Observation of a New Type of Long-Period Micro-Tremors by Long-Period Seismograph, by Kōsuke Kamo, 1962.
- No. 55 Nature of the Volcanic Micro-Tremors at the Volcano Aso, Part 2. Some Natures of the Volcanic Micro-Tremors of the 1st kind at the Volcano Aso, by Kōsuke Kamo, 1962.
- No. 56 Nonlinear Torsional Vibration of Structures due to an Earthquake, by Ryō Tanabashi, Takuji Kobori and Kiyoshi Kaneta, 1962.

Volume 12 (1962-63)

- No. 57 Some Problems on Time Change of Gravity (Parts 3, 4 and 5), by Ichiro Nakagawa, 1962.
- No. 58 A Rotational Strain Seismometer, by Hikaru Watanabe, 1962.
- No. 59 Hydraulic Model Experiment Involving Tidal Motion (Parts 1, 2, 3 and 4), by Haruo Higuchi, 1963.
- No. 60 The Effect of Surface Temperature on the Crustal Deformations, by Shokichi Nakano, 1963.
- No. 61 An Experimental Study on the Generation and Growth of Wind Waves, by Hideaki Kunishi, 1963.
- No. 62 The Crustal Deformations due to the Source of Crack Type (1) by Shokichi Nakano, 1963.

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- No. 63 Basic Studies on the Criterion for Scour Resulting from Flows Downstream of an Outlet, by Yoshito Tsuchiya, 1963.
- No. 64 On the Diffraction of Elastic Plane Pulses by a Crack of a Half Plane (Three Dimensional Problem), by Michiyasu Shima, 1963.
- No. 65 A Study on Runoff Pattern and its Characteristics, by Tōjirō Ishihara and Takuma Takasao, 1963.
- No. 66 Application of Extreme Value Distribution in Hydrologic Frequency Analysis, by Mutsumi Kadoya, 1964.
- No. 67 Investigation on the Origin Mechanism of Earthquakes by the Fourier Analysis of Seismic Body Waves (I), by Yoshimichi Kishimoto, 1964.
- No. 68 Aseismic Design Method of Elasto-Plastic Building Structures, by Takuji Kobori and Ryoichiro Minai, 1964.
- No. 69 On the Artificial Strip Roughness, by Shōhei Adachi, 1964.
- No. 70 Application of Probability Theory of Two-Dimensions in Determining Design Flood, by Yasuo Ishihara and Masashi Nagao, 1964.

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- No. 71 On the Relation between the Activity of Earthquakes and the Crustal Deforma-

- tion in the Yoshino District (including the Short History of Professor Eiichi Nishimura), by Eiichi Nishimura.
- No. 72 On the Landslide Mechanism of the Tertiary Type Landslide in the Thaw Term, by Yūji Takada.
- No. 73 On River Bed Variations and Stable Channels in Alluvial Streams, by Kazuo Ashida.
- No. 74 On the Design Wind Force of Steel Stacks, by Yoshitsura Yokoo and Hatsuo Ishizaki.
- No. 75 Study on the Relation between Local Earthquakes and Minute Ground Deformation. Part 1. On Some Statistical Results from Local Earthquakes Occurred in the Wakayama District, by Torao Tanaka.

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- No. 76 Flow through Curved Open Channels. Part 1. On Characteristics of Upper Layer in Fully Developed Region, by Yoshio Muramoto.
- No. 77 The Geophysical Prospecting for Landslide. On the Kebioka Landslide Mainly, by Yūji Takada.
- No. 78 The Restoring Force Characteristics of Multi-story Frames, by Minoru Wakabayashi.
- No. 79 Statistical Properties of Earthquake Accelerogram and Equivalent Earthquake Excitation Pattern, by Ryō Tanabashi, Takuji Kobori, Kiyoshi Kaneta and Ryōichirō Minai.
- No. 80 Fundamental Study on Mud-flow, by Katsumasa Yano and Atsuyuki Daidō.

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- No. 81 On the Ground Deformation and Phenomena Forerunning Natural Disasters (Earthquake, Rock-falling and Landslide), by Michio Takada.
- No. 82 Studies on Explosion. I., by Yoshikazu Wakazono and Shigetaka Kitao.
- No. 83 Direct Measurement of Bottom Shear Stresses in Open Channel Flows, by Shōitirō Yokosi and Mutsumi Kadoya.
- No. 84 On Secular Change in Inflows to Lake Biwa, by Masashi Nagao.
- No. 85 Historical Development and Some Experiences of Energy Dissipator at Multiple-Purpose Projects in Japan, by Yoshiaki Iwasa and Hiroji Nakagawa.

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- Abstracts of Papers Published in 1964; Obituary Notice of Prof. Susumu Tomotika.

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- No. 86 The Distributions of Damaged Houses and Strong Winds by Typhoons, by Hatsuo Ishizaki.
- No. 87 On the Accuracy of Tripartite Method, by Michio Hashizume, Kazuo Oike and Yoshimichi Kishimoto.
- No. 88 Determination of Phase Velocity and Direction of Wave Approach from Station Arrays, by Takeshi Mikumo.
- No. 89 On the Resonance Effect in a Storm Surge (Part I), by Hikoji Yamada, Jun-ichi Okabe and Masako Kumazawa.
- No. 90 A Study on Photoelectric Current Meters, by Shigehisa Nakamura.

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- No. 91 On the Buckling Strength of Angles in Transmission Towers, by Minoru Wakabayashi and Taijiro Nonaka.
- No. 92 In Situ Determination of Variation of Poisson's Ratio in Granite Accompanied by Weathering Effect and its Significance in Engineering Projects, by Chōro Kitsunezaki.

- No. 93 On the Observations of the Long Period's Oscillations of the Earth by Means of the Extensometers and the Water-tube Tiltmeter, by Izuo Ozawa and Tsuneo Etō.
- No. 94 On the Resonance Effect in a Storm Surge (Part II), by Hikoji Yamada and Jun-ichi Okabe.
- No. 95 A Study on the Variation of Low Flow, by Tōjirō Ishihara and Fusetsu Takagi.

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