LIST OF PAPERS BY THE MEMBERS OF

EARTHQUAKE RESISTANT STRUCTURE RESEARCH CENTER

(Jan. through Dec., 1980)

SEISAN-KENKYU: Monthly Journal of the Institute of Industrial Science,

University of Tokyo

JSCE: The Japan Society of Civil Engineers

JSME: The Japan Society of Mechanical Engineers

AIJ: The Architectural Institute of Japan

JSSC: The Japan Society of Steel Construction

WCEE: The World Conference on Earthquake Engineering

* : Written in Japanese

- S. Okamoto, C. Tamura and K. Kato: "Design Seismic Coefficient in Seismic Coefficient Method and Actual Damage," Proc. of 7 WCEE, Vol. 4, Sept., 1980
- * C. Tamura, K. Kato and K. Sakai: "A Study on Deformation of Tunnels during Earthquakes," Pre-print of 35th Annual Meeting of JSCE, Sept., 1980
- * C. Tamura and A. Fukuhara: "Vibration Failure Tests on Small Embankment Models built by Metal Cylinders," Pre-print of 35th Annual Meeting of JSCE, Sept., 1980
 - C. Tamura and K. Kato: "A Study on Deformation of Tunnels during Earthquake," Recent Advances in Lifeline Earthquake Engineering in Japan, 1980 PVP Conference, ASME, Aug., 1980
- * T. Okada, M. Teshigawara and M. Seki: "Earthquake Response Simulation on Reinforced Concrete Two-story Building Models by IIS Computer -Actuator On-line System (Part 2)," Proc. of the Annual Convention of AIJ, Sept., 1980
- * M. Teshigawara, T. Okada and M. Seki: "Earthquake Response Simulation on Reinforced Concrete Two-Story Building Models by IIS Computer -Actuator On-line System (Part 3)," Proc. of the Annual Convention of AIJ, Sept., 1980

- * M. Kawamura, M. Seki and T. Okada: "Bi-directional Earthquake Response Simulation on Reinforced Concrete Building Frames by IIS Computer-Actuator On-line System (Part 5)," Proc. of the Annual Convention of AIJ, Sept., 1980
- * K. Okada, M. Kawamura and T. Okada: "Numerical Analysis on Moment-Curvature Relationships of Reinforced Concrete Columns," Proc. of the Annual Convention of AIJ, Sept., 1980
- * H. Umemura, T. Okada and M. Murakami: "Decision Criteria of Seismic Performance of Reinforced Concrete Buildings," Proc. of the Annual Convention of AIJ, Sept., 1980
 - T. Okada and M. Seki: "A Simulation of Earthquake Response of Reinforced Concrete Building Frames to Bi-directional Ground Motion by IIS Computer-Actuator On-line System," Proc. of the 7th WCEE, Istanbul, TURKEY, Sept., 1980
 - M. Seki and T. Okada: "Non-linear Earthquake Response of Reinforced Concrete Building Frames by the Equivalent Linear Method," Proc. of the 7th WCEE, Istanbul, TURKEY, Sept., 1980
 - H. Shibata, T. Watanabe and S. Mezawa: "Stability Analysis of Steady Impact Vibration in Mechanical System with Broken-line Collosion Characteristics," Proc. of 8th International Conference on Nonlinear Osillations, Oct., 1978, p. 733
- * H. Shibata, T. Kawai, S. Nakagiri, T. Fujita and T. Shigeta: "Study on Faiture Mechanism of Equipment Using High Velocity Shaking Table," Report of ERS, III-3, March, 1980
- * H. Shibata, T. Fujita and M. Shintani: "Analysis of Seismic Response and Damage Accumulation of Nuclear Piping System," Pre-print JSME, No. 800-3, April, 1980, p. 82
- * H. Shibata, T. Fujita, T. Shigeta, A. Sone and M. Shintani: "Study on Relation on Response of Equipment to Sinusoidal Components of Artificial Earthquake Motions," Pre-print JSME, No. 800-3, April, 1980 p. 85
- * H. Shibata: "Diagonosis on Abnormality of Plants Caused by Structural Damage," Jour. of JSME, Vol. 83, No. 739, June, 1980, p. 709
- * H. Shibata: "What is the Safety of Industrial Facilities?," Report of Safety Research Group Sponsored by Ministry of Education, June, 1980, p. 57

- H. Shibata: Abnormally High-Response and Damage Accumulation of A Piping System," Recent Advance in Lifeline Earthquake Engineering in Japan, ASME, PVP-43, Aug., 1980, p. 77
- H. Shibata: "What Research is Needed in Reliability and Failure Prevention? in the Field of Anti-Earthquake Design of Industrial Facilities," Prep. of RASAFP Panel, ASME, Aug., 1980
- H. Shibata: "The Basic Research of Design Analysis and Testing Based an the Failure Rate for Pipings and Equipment under Earthquake Conditions," Nucl. Eng'g. and Design, Vol. 60, No. 1, Sept., 1980, p. 79
- H. Shibata: "On a Method of Evaluation of Anti-Earthquake Design Code of Industrial Facilities," Proc. of 7th WCEE, 4/613, Sept., 1980
- H. Shibata: "On a Procedure of Response Analysis and its Response Observation of Three-Dimensional Piping System to Earthquake," Proc. of 7th WCEE, 8/209, Sept., 1980
- H. Shibata: "Anti-Earthquake of Equipment and Piping Systems in Industrial Facilities," Prep. of Panel, 7th WCEE, Sept., 1980
- H. Shibata: "Recent Tendency of Anti-Earthquake Design of Equipment and Piping Failure Mode and Failure Rate Analysis, Comparison of New Codes," Prep. of 8th Regional Seminar of Earthquake Eng'g.— 1980—(Varna), Sept., 1980
- H. Shibata: "Seismic Safety Margin Produced by Artificial Time History," Proc. of OECD, CSNI Specialist Meeting (Lisboa), AD 4-18, Oct., 1980
- * H. Shibata, K. Sogabe and H. Kondo: "Some Problems on Anti-Earth-quake Design of a Liquid Containment," Report of Research Committee on Fluid Related Structural Vibration, JSME, Jan., 1981
- * T. Kawai and N. Takeuchi: "A Discrete Limit Analysis of Rock Mechanics Problems," Proc. of 1980 Spring Meeting of the Mining and Metalurgical Institute of Japan, pp. 299-300, March, 1980
- * T. Kawai and N. Takeuchi: "Limit Analysis of Soil and Rock Foundation by Means of New Discrete Models,"
 - (1st Report) An Analysis of No-Tension Material —
 - (2nd Report) Bearing Capacity Problem —
 - (3rd Report) Slope Stability —
 - (4th Report) Flexible Sheet Pile —
 - Journal of the SEISAH-KENKYU, Institute of Industrial Science, University of Tokyo, Vol. 32, No. 6, 8, 10, 1980

- T. Kawai, N. Takeuchi and Y. Kamio: "A New Discrete Limit Analysis of Underground Structures," ASME, A CENTURY 2 PUBLICATION, PVP_43, Aug. 12 23, 1980
- * T. Kawai, T. Kumeta and N. Takeuchi: "Stability Analysis of an Excavated Tunnel in the Vicinity of the Embankment," Preprint of the 8th Kanto Regional Meeting of the JSCE, III-41, pp. 157-158, Jan., 1981
- * T. Kawai, N. Takeuchi and Y. Kamio: "An Analysis of Beam Bending Problems on the Elastic Foundation by Means of New Discrete Beam Element," Journal of SEISAN-KENKYU, Institute of Industrial Science, University of Tokyo, Vol. 33, No. 1, 1981
- * T. Kawai, N. Takeuchi and Y. Kamio: "A Discrete Limit Analysis of Framed Structures Including the Effects of Foundation by using New Beam Elements," Preprint of the 27th JSCE Symposium on the Structural Engineering, Feb., 1981
- * T. Fujita and S. Hattori: "Nonstationary Random Vibration of a Nonlinear System with Collision", Trans. JSME, Ser. C, Vol. 46, No. 403, March, 1980
 - T. Fujita and S. Hattori: "Periodic Vibration and Impact Characteristics of a Nonlinear System with Collision", Bulletin of the JSME, Vol. 23, No. 177, March, 1980
- * T. Fujita: "Earthquake Engineering for Equipment and Piping Systems in Industrial Facilities", Quarterly COLUMN, No. 76, April, 1980
 - T. Fujita and S. Hattori: "Stationary Random Vibration of a Nonlinear System with Collision", Bulletin of the JSME, Vol. 23, No. 179, May, 1980
- * T. Fujita and H. Shimosaka: "A Dynamical Model and Stochastic Response Analysis for Leg-Supported Liquid Containers under a Random Earthquake-Type Excitation", Trans. JSME, Ser. C, Vol. 46, No. 407, July, 1980
- * T. Fujita, S. Hattori and J. Ishida: "An Earthquake Isolation Floor Using Pre-Tensed or Pre-Compressed Springs -- 1st Report", Prep. JSME, No. 800-12, Aug., 1980
- * T. Fujita, S. Hattori and J. Ishida: :An Earthquake Isolation Floor Using Pre-Tensed or Pre-Compressed Springs (1st Report; Vibration Characteristics and Performance of Reducing Acceleration -- Part 1 --)", SEISAN-KENKYU, Vol. 32, No. 8, Aug., 1980

- * T. Fujita: "An Earthquake Isolation Floor Using Pre-Tensed or Pre-Compressed Springs (2nd Report; Vibration Characteristics and Performance of Reducing Acceleration -- Part 2 --)", SEISAN-KENKYU, Vol. 32, No. 10, Oct., 1980
 - T. Fujita and S. Hattori: "Nonstationary Random Vibration of a Nonlinear System with Collision", Bulletin of the JSME, Vol. 23, No. 185, Nov., 1980
- * T. Fujita, S. Hattori and J. Ishida: "An Earthquake Isolation Floor Using Pre-Tensed or Pre-Compressed Springs (3rd Report; Vibration Characteristics and Performance of Reducing Acceleration -- Part 3 --)", SEISAN-KENKYU, Vol. 32, No. 12, Dec., 1980
- * H. Taniguchi, K. Takanashi and H. Tanaka: "Non-linear Earthquake Response Analysis of Structures by a Computer-Actuator On-line System, Part IV: Response Analyses of One Bay-One Story Frames with High Strength Bolted Connections," Trans. AIJ, No. 291, April, 1980
- * H. Taniguchi, K. Takanashi and H. Tanaka: "Non-linear Earthquake Response Analysis of Structures by a Computer-Actuator On-line System, Part V: Response Analyses of Multi-Story Frames with High Strength Bolted Connections," Trans. AIJ, No. 295, Sept., 1980
 - K. Takanashi, K. Udagawa and H. Tanaka: "Pseudo-Dynamic Tests on a 2-Story Steel Frame by Computer-Load Test Apparatus Hybrid System," Preprint of 7 WCEE, Istanbul, Sept., 1980
 - K. Takanashi and H. Taniguchi: "Pseudo-Dynamic Tests on Frames Including High Strength Bolted Connections," Preprint of 7 WCEE, Istanbul, Sept., 1980
 - K. Udagawa and H. Tanaka: "Strength Deterioration of H-Shaped Steel Beams under Random Loadings," Preprint of 7 WCEE, Istanbul, Sept., 1980
- * H. Tanaka, K. Takanashi, H. Taniguchi and T. Yamaguchi: "Elasto-Plastic Behavior of Steel H-columns under Two Directional Horizontal Force and Constant Axial Force, Part 1: Cyclic Loading Tests and Numerical Analysis, Part 2: Inelastic Response of H-shaped Columns to Two Directional Earthquake Motions," Proc. Annual Convention of AIJ, Sept., 1980
- * H. Tanaka, K. Takanashi, K. Ohi and Y. Maeda: "Studies on Elasto-Plastic Behavior of Simple Column Bases in Steel Structures, Part 1: Bending Tests of H-shaped Column Bases, Part 2: Rigid-Plastic Analysis," Proc. Annual Convention of AIJ, Sept., 1980

- * H. Tanaka, K. Takanashi, K. Yamaguchi and T. Yamada: "Experimental Model Analysis of Spherical Tank Support Systems, Part 1 Elasto-Plastic Behavior of Various Support Systems, Part 2 Comparison of Numerical Results with Experiments," Proc. Annual Convention of AIJ, Sept., 1980
- * T. Katayama and R. Isoyama: "Seismic Disaster Prevention of Lifeline Systems," Quarterly Column, No. 76, April, 1980
- * T. Katayama and R. Isoyama: "A Review of Seismic Risk Analysis and Earthquake Countermeasure Policy of Lifeline Systems," SEISAN-KENKYU, Vol. 32, No. 6, June, 1980
- * Y. Inokuma, T. Katayama and K. Kubo: "Basic Studies on Seismic Damage Ratio of Highway Bridges," SEISAN-KENKYU, Vol. 32, No. 7, July, 1980
- * Y. Inokuma, T. Katayama and K. Kubo: "A Method for Selecting Design Horizontal Seismic Coefficient of Highway Bridges," SEISAN-KENKYU, Vol. 32, No. 7, July, 1980
- * T. Katayama: "Earthquake-Resistant Design Considerations for Buried Pipelines," Journal of JSME, Vol. 83, No. 744, Nov., 1980
- * T. Katayama: "Characteristics of Input Seismic Motions at Bedrock," Report of Natural Disaster Prevention Research (Ministry of Education), No. A-55-2, June, 1980
- * T. Katayama: "A Quantitative Study on the Seismic Damage to Buried Pipelines," Report of Natural Disaster Prevention Research (Ministry of Education), No. A-55-2, June, 1980
- * T. Katayama and N. Ohbo: "Properties of Ground Vibration Caused by Running Vehicles," Journal of the Society of Automotive Engineers of Japan, Vol. 34, No. 12, Dec., 1980
- * N. Ohbo and T. Katayama: "Comparison of Numerical Methods on the Generation and Propagation of Elastic Waves," SEISAN-KENKYU, Vol. 32, No. 12, Dec., 1980
 - T. Katayama and R. Isoyama: "Damage to Buried Distribution Pipelines During the Miyagi-ken-oki Earthquake," in "Recent Advances in Lifeline Earthquake Engineering in Japan (coedited by H. Shibata, T. Katayama and T. Ariman)," PVP-43, the American Society of Mechanical Engineers, Aug., 1980
 - T. Katayama: "Distribution of Syructure's-Period-Dependent Seismic Risk in Japan," Proc. 7WCEE, Sept., 1980

- T. Katayama, Y. Masui and R. Isoyama: "Restoration of Lifelines in Sendai After the Damage Caused by the 1978 Miyagi-ken-oki Earthquake," Proc. 7WCEE, Sept., 1980
- * M. Toh, N. Ohbo and T. Katayama: "Attenuation with Distance of Traffic-Induced Ground Vibration", Reprint of JSCE Annual Meeting, Sept., 1980
- * N. Ohbo: "Propagation of Ground Vibration Caused by Running Vehicle", Reprint of JSCE Annual Meeting, Sept., 1980
- * M. Nakamura and B. Hashimoto: "A Simple Method of Calculation to Estimate Strains in Ground during Earthquake by Theory of Elastic Wave Propagation", Bulletin of Science and Engineering Research Laboratory, Waseda University, No.92, May, 1980
- * M. Nakamura, T. Katayama and K. Kubo: "A Simple Method of Calculation to Estimate Strains in Ground during Earthquake by Theory of Elastic Wave Propagation", Reprint of JSCE Annual Meeting, Sept., 1980
- * M. Nakamura, T. Katayama and K. Kubo: "An Engineering Method to Estimate Strains in Ground during Earthquakes", Reprint of the 30th Applied Mechanics Annual Meeting, Nov., 1980
 - Y. Hangai: "Oscillation Analysis of Wall Structures Considering Up-Lift of Foundation", Proc. International Symposium of Nonlinear Design of Concrete Structures, Univ. Waterloo, Waterloo, Ontario, Canada
 - H. Goto and Y. Hangai: "Nonlinear Oscillative Analysis of the Elastic Body under the Nonconservative Force", ERS Bulletin, No.13, March, 1980, pp.3-13
- * N. Matsui and Y. Hangai: "Dynamic Analysis of Offshore Shell Structures", Pre-Print of Kanto Meeting of AIJ, July, 1980, pp.33-36
- * H. Goto and Y. Hangai: "Stability Analysis of Elastic Arches under Hydrostatic Pressure", Pre-Print of Kanto Meeting of AIJ, 1980, pp.77-80
- * Y. Hangai: "Oscillation and Stability of Soil-Structure Interaction Problems Considering Up-Lift of Foundations", Proc. Annual Convention of AIJ, Sept., 1980, pp. 2029-2030
- * H. Goto and Y. Hangai: "Stability Analysis of Circular Arches under Hydrostatic Pressure", Proc. Annual Convention of AIJ, Sept., 1980, pp.971-972

- * N. Matsui and Y. Hangai: "Dynamic Interaction Problems between Fluid and Shell Structures (I)", Proc. Annual Convention of AIJ, Sept., 1980, pp.1055-1056
- * H. Goto and Y. Hangai: "Elastic Stability Analysis of Circular Arches under Hydrostatic Pressure", Proc. 30th Japan National Congress for Theoretical and Applied Mechanics, Nov., 1980, pp.125-126
- * N. Matsui and Y. Hangai: "Dynamic Analysis of Hydromechanically Loaded Shells", Proc. 30th Japan National Congress for Theoretical and Applied Mechanics, Nov., 1980, pp.67-68
 - Y. Hangai: "Application of the Generalized Inverse to the Geometrically Nonlinear Problem", Solid Mechanics Archives, Vol.1, No.1, March 1981
 - H. Goto: "On the Critical Load of Beck's Problem", Proc. 29th Japan National Congress for Applied Mechanics, March, 1981, pp.33-49
 - F. Tatsuoka and M. L. Silver: "New Method for the Calibration of the Inertia of Resonant Column Device", ASTM Geotechnical Testing Journal, Vol. 3, No. 1, pp. 30-34, March, 1980
 - M. L. Silver, F. Tatsuoka, A. Phukunhaphan and A. Anestis: "Cyclic Undrained Strength of Sand by Triaxial Test and Simple Shear Test", Proc. of the 7th World Conference on Earthquake Engineering, Sept., 1980
 - S. Okusa, F. Tatsuoka, E. Taniguchi and Y. Ohkochi: "Natural Slope Failures during Earthquake: A Case Study", Proc. of the 7th World Conference on Earthquake Engineering, pp. 3.49-56, Sept., 1980
 - F. Tatsuoka, S. Yasuda, T. Iwasaki and K. Tokida: "Normalized Dynamic Undrained Strength of Sands Subjected to Cyclic and Random Loading", Soils and Foundations, Vol. 20, No. 3, Sept., 1980, pp. 1-16
 - F. Tatsuoka: "Stress-Strain Behavior of an Idealized Anisotropic Granular Material", Soils and Foundations, Vol. 20, No. 3, Sept., 1980, pp. 75-90
 - F. Tatsuoka, T. Iwasaki, K. Tokida, S. Yasuda, M. Hirose, T. Imai and M. Kon-no: "Standard Penetration Tests and Soil Liquefaction Potential Evaluation", Soils and Foundations, Vol. 20, No. 4, Dec., 1980, pp. 95-111