## LIST OF PAPERS BY MEMBERS OF EARTHQUAKE RESISTANT STRUCTURE RESEARCH CENTER

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

versity of Tokyo

JSCE : The Japan Society of Civil Engineers

JSME : The Japan Society of Mechanical Engineers

AIJ : The Architectural Institute of Japan

JCI : Japan Concrete Institute

JSSC : The Japan Society of Steel Construction

JSSMFE : The Japan Society of Soil Mechanics and Foundation Engineering

\* : Written in Japanese

F. Kumazawa and T. Okada: "Flexural Behavior of RM Concrete Block Wall Girders With Large Size Reinforcing Bars," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 77-92, Institute of Industrial Science, University of Tokyo, March 1991.

- \* M. Tajima, F. Kumazawa, T. Okada and others: "A Study on Sensory Tests for Horizontal Vibration -Part I Outline of the Test and an Analysis Paying Attention to Evaluation Absolute Standard-," Summaries of Technical Papers of Annual Meeting, AIJ, Vol.B, pp. 49-50, September 1991.
- \* R. Numata, F. Kumazawa, T. Okada and others: "A Study on Sensory Tests for Horizontal Vibration -Part II An Analysis Paying Attention to Evaluation by Relative Standard-," Summaries of Technical Papers of Annual Meeting, AIJ, Vol.B., pp. 51-52, September 1991.
- \* Y. Kubota, F. Kumazawa, T. Okada and others: "A Study on Vibration Test and Research on the Actual Condition of Horizontal Vibration Sensation—Part II An Analysis Paying Attention to Changes in the Condition of Articles—," Summaries of Technical Papers of Annual Meeting AIJ, Vol. D, pp. 317-318, September 1991.
- \* K. Kajita, F. Kumazawa, T. Okada and others: A Study on Vibration Test and Research on the Actual Condition of Horizontal Vibration Sensation -Part III An Analysis of Sensory Expressions by Semantic Differential Method-, Summaries of Technical Papers of Annual Meeting AIJ, Vol. D, pp. 319-320, September 1991.
- \* C. Noda, F. Kumazawa, T. Okada and others: "A Study on an Evaluation of Sensibility for Horizontal Vibration," Kanto Branch, pp. 13-16, January

1991.

- \* K. Nakayama, F. Kumazawa, T. Okada and others: "A Study on Sensitiveness to Vertical Vibration," Proceedings of the Annual Transactions of AIJ, Kanto Branch, Structural and Construction Engineering, pp. 5-8, January 1991.
- \* T. Okada, Y. Nakano, F. Kumazawa and others: "Handbook for Seismic and Fire-Proof Design," KENSETU-SANGYO-CHOSAKAI Press, December 1991.
- \* Y. Nakano: "Recent Studies on Damage Assessment of Reinforced Concrete Structures," Concrete Journal Vol. 29, No. 5, pp. 67-71, May 1991.
- \* Y. Nakano: "Reconstruction of Damaged Structures Due to 1989 Loma Prieta Earthquake," SEISAN-KENKYU, Vol. 43, No. 2, pp. 7-11, February 1991.
  - Y. Nakano, F. Kumazawa and T. Okada: "Bidirectional Horizontal Behavior of Reinforced Concrete Weak-Beam Model Structure," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 65-76, March 1991.
  - T. Inoue, M. G. Melkumian, F. Kumazawa, Y. Nakano and T. Okada: "Earthquake Response Analysis of Precast Reinforced Concrete Buildings Damaged Due to Armenia Spitak Earthquake," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 57-64, March 1991.
  - M. G. Melkumian, T. Inoue, F. Kumazawa, Y. Nakano and T. Okada: "Hysteresis Model for the Shear Behavior of R/C Multistory Frame Buildings with Diaphragms Under Seismic Actions (Part 2 Rules of Formation)," SEISAN-KENKYU, Vol. 43, No. 4, pp. 28-31, April 1991.
- \* T. Okada, H. Katsumata, M. Seki, F. Kumazawa and Y. Nakano: "Seismic Tests of 1/10 Scaled R/C Frames Retrofitted with Y-Shaped Steel Bracing (Part 1 Outline of Specimens)," Summaries of Technical Papers of Annual Meeting of Alj, Vol. C, pp. 235-236, October 1991.
- \* Y. Nakano, H. Katsumata, M. Seki, F. Kumazawa and T. Okada: "Seismic Tests of 1/10 Scaled R/C Frames Retrofitted with Y-Shaped Steel Bracing (Part 2 Static Loading Tests)," Summaries of Technical Papers of Annual Meeting of AIJ, Vol. C., pp. 237-238, October 1991.
- \* F. Kumazawa, H. Katsumata, M. Seki, Y. Nakano and T. Okada: "Seismic Tests of 1/10 Scaled R/C Frames Retrofitted with Y-Shaped Steel Bracing (Part 3 Shaking Table Tests)," Summaries of Technical Papers of Annual Meeting of AIJ, Vol. C, pp. 239-240, October 1991.

- \* T. Inoue, F. Kumazawa, Y. Nakano and T. Okada: Earthquake Response Analysis of Nine-Story Prefabricated Reinforced Concrete Buildings to 1988 Spitak Earthquake (Part. 2 Response Analysis with Multi-mass Shear System), Summaries of Technical Papers of Annual Meeting of All, Vol. C, pp. 535-536, October 1991.
- \* Y. Nakano: "Limit State Design -Part 7: Reliability of R/C Structures-," Monthly Journal of KENCHIKU-GIJUTSU, No. 489, pp. 229-236, October 1991.
- \* T. Ohkuma, Y. Ohhashi, J. Kanda, T. Ono and Y. Nakano: "Limit State Design-Final: For the Future Development of Limit State Design-," Monthly Journal of KENCHIKU-GIJUTSU, No. 491, pp. 254-264, December 1991.
- \* Y. Nakano et al.: "Summary of Revision of ACI Building Code Requirements for Reinforced Concrete in 1989," Concrete Journal (Monthly Journal of JCI), Vol. 29, No. 9, pp. 58-60, September 1991.
- \* F. Kumazawa, Y. Nakano and others: "Technical Report on Splicing Technique of Steel Reinforcement," Monthly Journal of KENCHIKU-GIJUTSU, No. 494, pp. 71-136. February 1992.
- \* Y. Nakano: "Recent Studies on Seismic Retrofitting of Reinforced Concrete Structures," Concrete Journal (Monthly Journal of JCI), Vol. 30, No. 2, February 1992.
  - K. Konagai and C. Tamura: "Visualization of Dynamic Change in Configuration of Underwater Particle Assemblage," Structural Dynamics, A. A. Balkema, Vol. 2. pp. 837-841, February 1991.
  - C. Tamura and K. Konagai: "Simple Approach for Evaluation of Earthquake Response of Irregularly Bounded Surface Layer," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 47-56, March 1991.
- \* C. Tamura and K. Konagai: "On Some Hypotheses for Simple Response Analysis of Irregularly Bounded Surface Layer," 21th JSCE Conference on Earthquake Engineering, pp. 101-104, July 1991.
- \* Zhen JingZhe, K. Konagai and C. Tamura: "Nonlinear Response Analysis of a Soft Surface Deposit with a Thin Soft Layer in between," 21th JSCE Conference on Earthquake Engineering, pp. 105-108, July 1991.
- \* C. Tamura, K. Konagai and Zhen JingZhe: "On Similarity of Seismic Waves," 21th JSCE Conference on Earthquake Engineering, pp. 157-160, July 1991.

- Daniel Jose Ortiz, K. Konagai and C. Tamura: "Three-Dimensional Photoelastic Method using Laser-Light-Sheet," 21th JSCE Conference on Earthquake Engineering, pp. 501-504, July 1991.
- \* Kong XianJing, C. Tamura and K. Konagai: "Earthquake Response of a Concrete-Facing Rockfill Dam," 21th JSCE Conference on Earthquake Engineering, pp. 597-600, July 1991.
  - C. Tamura and K. Konagai: "Simplified Numerical Analysis on earthquake Response of Irregularly Bounded Surface Layer," 2nd International Conference, Applications of Advanced Technologies in Transportation Engineering, pp. 227-236. August. 1991.
- \* C. Tamura and K. Konagai: "Evaluation of Similarity of Seismic Waves," Annual Convention of JSCE, I, pp. 1008-1009, September 1991.
- \* Kong XianJing, C. Tamura and K. Konagai: "Natural Frequencies of Concrete-Facing Rockfill Dam," Annual Convention of JSCE, I, pp.1094-1095, September 1991.
- \* Zhen JingZhe, C. Tamura, and K. Konagai: "Earthquake Response of a Soft Soil Deposit with a Thin Nonlinear Layer in between," Annual Convention of JSCE, I, pp. 1302-1303, September 1991.
- \* K. Konagai and C. Tamura: "Simple Approach for Evaluation of Soft Soil Deposit on Undulating Bedrock, "Annual Convention of JSCE, I, pp. 1322-1323, September 1991.
  - C. Tamura, K. Konagai and T. Suzuki: "Earthquake Response Analysis of Soft Soil Deposit on Undulating Bedrock," Report of the Institute of Industrial Science, University of Tokyo, Vol. 36-5, pp. 227-261, December 1991.
  - T. Nogami, J. Otani, K. Konagai and Hsiao-Lian Chen, "Nonlinear Soil-Pile Interaction Model for Dynamic Lateral Motion, Jour., Geotechnical Engineering, ASCE, Vol.118-1, January 1992.
  - T. WATANABE and H. SHIBATA: "On Nonlinear Vibration of a Beam --- Response of a Beam with a Gap at One End," Report of Institute of Industrial Science, University of Tokyo, Vol. 36, No. 1, pp. 1-25, January 1991.
- \* M. FUTAGAWA, K. KUKUCHI, Y. MUTO and H. SHIBATA: "Bending Strength and Fatigue Behavior of Nuclear Grade Graphite under Impact Load," Journal of Society of Material Science, Japan, Vol. 40, No. 449. pp. 178-184, February

1991.

- H. SHIBATA: "Uncertainty in Earthquake Engineering in Relation to Critical Facilities," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 93-104, March 1991.
- H. SHIBATA: "Assumed Process of Piping Failure in Nuclear Power Plants Under Destructive Earthquake Conditions," Trans. of ASME, Journal of Pressure Vessel Technology, Vol. 113, pp. 268-272, May 1991.
- H. SHIBATA: "How to Keep the Electric Power Output from Nuclear Power Plant Complex --- Damage Evaluation of Piping and Equipment in Buildings and Post-earthquake Inspection," Preprint for 6th International Seminar on Earthquake Prognostics (Berlin, Germany), pp. 1-13, June 1991.
- N. KOBAYASHI, F. HARA and H. SHIBATA: "A Method of Seismic Risk Assessment for Storage Vessels by a Probabilistic Model." Trans of ASME, Seismic Engineering, PVP-220, pp. 191-196, June 1991.
- H. SHIBATA: "Uncertainty of the Event an Fuzzy Approach," Preprint for US-Italy-Japan Seminar on Intelligent Structure (Perugia, Italy), pp. 1-6, June 1991.
- H. SHIBATA, H. OKAMURA, T. TAKAGI, K. UKAJI, H. ITO and H. OUCHI: "Ductility of Prestressed Concrete at Extremely Low Temperature for PC-LNG-Aboveground Storage Tank," Trans. of SMiRT-11, Vol.H, No.3/6, pp.91-96, August 1991.
- H. SHIBATA, H. AKIYAMA, T. TAKAGI, K. ISHIDA, T. TANAKA and H. OHYA: "Design Method of Steel Linear on Inner Surface of PC Cylindrical Vessel for PC LNG Storage Tank," Trans. of SMiRT-11, Vol.H, H9/5, pp. 229-234, August 1991.
- N. OGAWA, C. MINOWA, T. MIKOSHIBA and H. SHIBATA: "Liquid Behaviors in Piping System during Strong Earthquakes," Trans. of SMiRT-11, Vol. J, J12/2, pp. 237-242, August 1991.
- H. AKIYAMA, H. SHIBATA, M. KATO, S. KAWAKAMI, T. OHNO, K. KOYAMA, S. WADA, M. OUHASHI and K. FUJITA: "Proving Test on the Seismic Reliability of the PWR Reactor Vessel," Trans. of SMiRT-11, Vol.K1, K16/1, pp. 427-432, August 1991.
- H. AKIYAMA, H. SHIBATA, M. KATO, S. KAWAKAMI, T. OHNO, K. KOYAMA, K. TAI, E. YOSHIKAWA and T. NAKAMURA: "Proving Test on the Seismic Reliability of

- the PWR Primary Coolant Loop System, Trans. of SMiRT-11, Vol. K1, K16/2, pp. 433-438, August 1991.
- T. TAIRA, Y. SASAKI, H. SHIBATA, H. SATO, T. KUBO, S. KAWAKAMI, T. OHNO and Y. KARASAWA: "Large Scale Seismic Proving Test of BWR Reactor Pressure Vessel by TADOTSU Table," Trans. of SMiRT- 11, Vol. K2, K29/1, pp. 349-355, August 1991.
- H. SHIBATA, M. KUNIEDA, F. HARA, K. SUZUKI, I. ICHIHASHI, H. YOSHIMURA, T. ZAITSU, T. ONO, E. KOKUBO, K. FUJITA and T. NAKATOGAWA: "Development of a Friction Damper and Application to Piping Systems in Nuclear Power Plants," Trans. of SMiRT-11, Vol. K2, K33/2, pp. 481-486, August 1991.
- H. SHIBATA, F. HARA, K. SUZUKI, M. KUNIEDA, I. ICHIHASHI, T. FUKUDA, A. SATOU, K. TAKADA, S. FURUKAWA and H. KOBAYASHI: "Development of the Elasto-Plastic Damper and its Application to the Piping System in Nuclear Power Plants," Trans. of SMiRT-11, Vol.K2, K33/3, pp.487-492, August 1991.
- Y. NAMITA, H. SHIBATA, F. HARA, I. ICHIHASHI, T. MATSUDA, T. YOSHINAGA, M. KUNIEDA, K. SUZUKI, K. IIYAMA and M. MUROTA: "A Study on Application of Energy Absorber to Piping System in Nuclear Power Plant," Trans. of SMIRT-11, Vol. K2, K33/5, pp. 499-504, August 1991.
- M. TAKAYANAGI, H. SHIBATA, S. OTANI, H. SATO, S. KAWAKAMI, T. OHNO, Y. KARASAWA and T. MORIYAMA: "Liquid Sloshing in Suppression Pool of BWR Primary Containment Vessel," Trans. of SMiRT-11, Vol. K2, K36/3, pp. 589-594, August 1991.
- H. SHIBATA, H. AKIYAMA, T. TAKAGI, F. SAKAI, K. KUBOYAMA, N. KOBAYASHI and K. ISHIDA: "Aseismic Performance of Compact Cylindrical LNG Storage Tanks," Trans. of SMiRT-11, Vol. K2, K36/4, pp. 595-600, August 1991.
- H. SHIBATA: "How to Utilize Experienced Data on Seismic Failures of Components for Regulatory Purpose," Trans. of SMiRT-11, Vol.M-SDO, SDO/3(K)\*, pp. 347-358, August 1991.
- \* H. SHIBATA: "On Probabilistic Assessment of Structural Design and Construction of Fuzziness of Human Factor," Proc. of JCOSSAR'91, pp. 213-220, November 1991.
- \* T. Fujita, K. Kabeya, Y. Hayamizu, S. Aizawa, M. Higashino, T. Kubo, N. Haniuda and T. Mori: "Semi-Active Seismic Isolation System Using Controllable Friction Damper (1st Report, Development of Controllable Friction Damper and Fundamental Study of Semi-Active Control System)," Trans. of

- JSME, Vol. 57, No. 536, pp. 1122-1128, April 1991.
- \* S. Suzuki, T. Fujita, S. Fujita and M. Shimazaki: "Seismic Response of Base-Isolated Buildings Using High Damping Rubber Bearings," Trans. of JSME, Vol. 57, No. 536, pp. 1129-1136, April 1991.
- \* T. Fujita: "Research, Development and Applications of Vibration Control System for Tall Building in United States of America," SEISAN-KENKYU, Vol. 43, No. 5, pp. 223-226, Institute of Industrial Science, University of Tokyo, May 1991.
  - Q. Feng, S. Fujii, M. Shinozuka and T. Fujita: "HYBRID ISOLATION SYSTEM USING FRICTION-CONTROLLABLE SLIDING BEARINGS," 8th VBI & SU Symposium on Dynamics and Structures, May 1991.
  - T. Fujita: "RESEARCH, DEVELOPMENT AND APPLICATIONS OF SEISMIC ISOLATION SYSTEMS IN JAPAN," INTERNATIONAL MEETING ON EARTHQUAKE PROTECTION OF BUILD-INGS. pp. 77-90, June 1991.
- \* M. Hayatu, S. Shibuya, S. Takeshita and T. Fujita: "Reduction of Rotational Motion in Micro-Vibration Isolation Floors by Means of Cantilever-Type Dynamic Absorber," Dynamics and Design Conf. JSME, No. 910-39, pp.17-20, July 1991.
- \* S. Suzuki, T. Fujita and S. Fujita: "Ultimate Strength of Seismic Isolation System Using High Damping Rubber Bearing for Buildings," Dynamics and Design Conf. JSME, No. 910-39, pp. 21-26, July 1991.
- \* S. Fujita, T. Fujita, S. Morikawa and Y. Suizu: "Vibration Control of High-Rise Buildings Using High Damping Rubber Damper," Dynamics and Design Conf. JSME, No. 910-39, pp. 27-31, July 1991.
- \* T. Fujita, M. Katu, H. Miyano and S. Takanashi: "Fundamental Study of Active-Passive Mass Damper Using XY-Motion Mechanism and Hydraulic Actuator for Vibration Control of Tall Buildings," Dynamics and Design Conf. JSME, No. 910-39, pp. 62-65, JSME, July 1991.
- \* T. Fujita, M. Kamata, and N. Masaki: "Fundamental Study of Active Mass Damper Using Multistage Rubber Bearing and Hydraulic Actuator for Vibration Control of Tall Buildings (Study of Control Law for the Active Mass Damper)," Dynamics and Design Conf. JSME, No. 910-39, pp. 66-69, JSME, July 1991.
- \* T. Fujita, Y. Tagawa, N. Murai, S. Shibuya, S. Takeshita and Y. Takahashi:

- "Study of Active Microvibration Control Device Using Piezoelectric Actuator (1st Report, Fundamental Study of One-Dimensional Microvibration Control)," Trans. of JSME Vol. 57, No. 540, pp. 68-73, August 1991.
- T. Fujita: "Seismic isolation rubber bearings for nuclear facilities," Nuclear Engineering and Design, No. 127, pp. 379-391, North-Holland, August 1991.
- T. Koizumi, N. Tsujiuchi, F. Kishimoto, H. Iida and T. Fujita: "Base Isolation Technique for Tokamak Type Fusion Reactor Using Adaptive Control," Trans. of SMiRT 11, Vol. K, pp. 49-54, August 1991.
- S. Fujita, T. Fujita, S. Morikawa and Y. Suizu: "Seismic Response of Steel Framed Buildings Using Viscoelastic Damper," Trans. of SMiRT 11, Vol. K, pp. 109-114, August 1991.
- T. Mazda, M. Moteki, K. Ishida, H. Shiojiri and T. Fujita: "Test on Large-Scale Seismic Isolation Elements Part 2 Static Characteristics of Laminated Rubber Bearing Type," Trans. of SMiRT 11, Vol. K, pp. 235-240, August 1991.
- T. Fujita: "Overview of Recent Activities on Base Isolation in Japan," Seismic Isolation of Nuclear and Non-Nuclear Structures (Post Conference Seminars of SMiRT 11), August 1991.
- Q. Feng, M. Shinozuka, S. Fujii and T. Fujita: "A HYBRID SLIDING ISOLATION SYSTEM FOR BRIDGES," First US-JAPAN Workshop on Earthquake Protective Systems for Bridges, September 1991.
- \* S. Takanashi, T. Fujita, H. Miyano and M. Nemoto: "Study of Mass Damper with Convertible Active and Passive Modes (Part1 Shaking Table Test of Small Model Structure)," Summaries of Technical papers of Annual Meeting of AIJ, pp. 1107-1108, September 1991.
  - K. Ishida, H. Shiojiri, H. Shibata and T. Fujita: "SEISMIC ISOLATION TEST PROGRAM FOR FBR-INTRODUCTION ON DESIGN AND TECHNICAL GUIDELINES (DRAFT)," INTERNATIONAL CONFERENCE ON FAST REACTORS AND RELATED FUEL CYCLES, October 1991.
  - T. Fujita, M. Katu, H. Miyano and S. Takanashi: "Fundamental Study of Active-Passive Mass Damper Using XY-Motion Mechanism and Hydraulic Actuator for Vibration Control of Tall Buildings," Trans. of JSME, Vol. 57, No. 543, pp. 3532-3539, November 1991.

- T. Fujita, Y. Tagawa, N. Murai, S. Shibuya, A. Takeshita and Y. Takahashi: "Active Microvibration Control System Using Piezoelectric Actuator," 2nd U.S./JAPAN Conference on Adaptive Structures, November 1991.
- T. Fujita, N. Masaki and Y. Suizu: "TUNED MASS DAMPER USING A MULTI-STAGE RUBBER BEARING FOR VIBRATION CONTROL OF TALL BUILDINGS," Proceedings of the 1991 Asia-Pacific Vibration Conference, November 1991.
- T. Fujita, M. Katu, H. Miyano and S. Takanashi: "Development of Active-Passive Mass Damper Using XY-Motion Mechanism and Hydraulic actuator for Vibration Control of Tall Buildings," Proceedings of the 1991 Asia-Pacific Vibration Conference, November 1991.
- T. Fujita, N. Murai, S. Shibuya, A. Takeshita and Y. Takahashi: "FUNDAMENTAL STUDY OF AN ACTIVE MICROVIBRATION CONTROL DEVICE USING A PIEZOELECTRIC ACTUATOR," Proceedings of the 1991 Asia-Pacific Vibration Conference, November 1991.
- S. Suzuki, T. Fujita and S. Fujita: "Ultimate Strength of Seismic Isolation System Using High Damping Rubber Bearing for Buildings (1st Report, Analytical Method for Ultimate Strength)," Trans. of JSME, Vol. 57, No. 544, pp. 3769-3776 December 1991.
- T. Fujita, M. Kamata and N. Masaki: "Fundamental Study of Active Mass Damper Using Multistage Rubber Bearing and Hydraulic Actuator for Vibration Control of Tall Buildings (1st Report, Study of Control Law for the Active Mass Damper)," Trans. of JSME Vol. 58, No. 545, pp. 87-91, January 1992.
- S. Suzuki and T. Fujita: "Ultimate Strength of Seismic Isolation System Using High Damping Rubber Bearing for Buildings (2nd Report, Ultimate Strength Analysis for a Full-Scale Seismic Isolation System)," Trans. of JSME, Vol. 58, No.545, pp.62-67, January 1992.
- \* Y. Hangai and K. Kawaguchi: "Shape Analysis of Structures. Generalized Inverse and its Application," Baifukan Press, April 1991.
- \* Y. Hangai, K. Kawaguchi and K. Oda: "Structural Behaviour and Design of Truss Structures Stabilized by Cable Tension," Report of the Institute of Industrial Science, University of Tokyo, Vol. 36, No. 2, May 1991.
  - Y. Hangai and Y. Kanai: "Shape Analysis of Structures under Prescribed Displacement and/or Stress," Proceedings of International Conference on Computational Engineering Science, Melbourne, Australia, August 1991.

- K. Kawaguchi and Y. Hangai: "Analytical Procedure for Stabilizing Paths and Stability of Kinematically Indeterminate Frameworks," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991
- K. Oda, K. Kawaguchi and Y. Hangai: "Experiments of Unit Structures for Truss Structures Stabilized by Cable Tension," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991.
- Y. Hangai: "Theoretical Analysis of Structures in the Unstable State and Shape Analysis of Unstable Structures," IASS Symposium on Spatial Structures at the Turn of the Millennium Copenhagen, September 1991.
- S. D. Kim and Y. Hangai: "Direct and Indirect Snappings of Shallow E. P. Shells under the Up-and-Down Earthquake Excitations," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991.
- T. Tanami and Y. Hangai: "Shape Analysis of Structures with Constraint Conditions for Eigen-Values and -Modes in the Eigen-Value Problems," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991.
- T. Suzuki and Y. Hangai: "Shape Analysis of Minimal Surface by the Finite Element Method," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991.
- M. Takayama and Y. Hangai: "Effect of Imperfection on Buckling Behaviours of Reinforced Concrete Shallow Domes," IASS Symposium on Spatial Structures at the Turn of the Millennium, Copenhagen, September 1991.
- Y. Hangai and Y. Kanai: "Shape Analysis of Structures under Prescribed Stress Modes," Computer Applications in Civil and Building Engineering, Proceedings of the 4th International Conference on Computing in Civil and Building Engineering, Tokyo, pp. 419-426, November 1991.
- S. K. Ampadu and F. Tatsuoka: "Overconsolidated kaolin in torsional simple shear," Proc. of 26th Annual Conference of JSSMFE, pp. 663-666, July 1991.
- J. Dong, F. Tatsuoka, C. Tamura and D. M. Shi: "Shear modulus and Poisson's ratio of wet-tamped sand at small strains," Proc. of 26th Annual Conference of JSSMFE, pp. 499-502, July 1991.
- J. N. Mukabi, F. Tatsuoka and K. Hirose: "Effect of strain rate on small

- strain stiffness of kaolin in CU triaxial compression," Proc. of 26th Annual Conference of JSSMFE, pp. 659-662, July 1991.
- S. A. Siddiquee, T. Tanaka and F. Tatsuoka: "An FEM simulation of model footing tests on sand," Proc. of 26th Annual Conference of JSSMFE, pp. 1309-1312, July 1991.
- S. Teachavorasinskun, D. C. F. Lo Presti, and F. Tatsuoka: "Effect of cyclic prestraining on the stiffness and damping of sands," Proc. of 26th Annual Conference of JSSMFE, pp. 483-486, July 1991.
- J. Dong, C. Tamura, F. Tatsuoka and K. Konagai: "Effect of anisotropy on dynamic failure mechanism of fill-type dam model," Proc. of 46th Annual Conference of JSCE, Vol. 1, pp. 1092-1093, September 1991.
- J. N. Mukabi, F. Tatsuoka and K. Hirose: "Drained and undrained stiffness of Kaolin in triaxial compression," Proc. of 46th Annual Conference of JSCE, Vol. III, pp. 296-297, September 1991.
- S. Teachavorasinskun and F. Tatsuoka: "Effect of bedding error on the measured hysteresis damping ratio of sand," Proc. of 46th Annual Conference of JSCE. Vol. III, pp. 262-263, September 1991.
- F. Tatsuoka, S. Shibuya and S. Teachavorasinskun: Discussion on the paper by Alarcon-Guzman et al., Soils and Foundations, Vol. 31, No. 2, pp. 202-209, June 1991.
- F. Tatsuoka, C. C. Huang, T. Morimoto and K. Tani: Discussion on the paper by Saran et al., Journal of Geotechnical Engineering, ASCE, Vol. 117, No. 7, pp. 1127-1131, July 1991.
- F. Tatsuoka and C. C. Huang.: Discussion on the paper by Shields et al., ASCE, Journal of Geotechnical Engineering, Vol. 117, No. 12, pp. 1970-1974, December 1991.
- S. Shibuya, F. Tatsuoka, F. Abe, S. Teachavorasinskun and C-S. Park (1991.5): "Elastic properties of granular materials measured in the laboratory," Proc. of 10th European Regional Conference on SMFE, Vol. 1, pp. 163-166, May 1991.
- S. Shibuya, F. Tatsuoka, F. Abe, Y-S. Kim, C-S. Park and J. N. Mukabi: "A new look into stress and strain relation of soils and rocks," Proc. of 9th Asian Regional Conference on SMFE, Vol. I, pp.63-66, December 1991.

- F. Tatsuoka and S. Shibuya: "Deformation characteristics of soils and rocks from field and laboratory tests," Keynote Lecture for Session No. 1, Proc. of 9th Asian Regional Conference on SMFE, Vol. II, pp. 53-114.
- S. Teachavorasinskun, S. Shibuya and F. Tatsuoka: "Stiffness of sands in monotonic and cyclic loading in simple shear," Proc. of the ASCE Geotechnical Engineering Congress 1991, ASCE, Geotechnical Special Publication No. 27, Vol. II, pp. 863-878, June 1991.
- O. Murata, M. Tateyama, F. Tatsuoka, K. Nakamura and Y. Tamura: "A reinforcing method for earth retaining walls using short reinforcing members and a continuous rigid facing," Proc. of the ASCE Geotechnical Engineering Congress 1991, ASCE, Geotechnical Special Publication No. 27, Vol. II, pp. 935-946, June 1991.
- F. Tatsuoka, M. Okahara, T. Tanaka, K. Tani, T. Morimoto and M. S. A. Siddiquee: "Progressive failure and particle size effect in bearing capacity of footing on sand," Proc. of the ASCE Geotechnical Engineering Congress 1991, ASCE, Geotechnical Special Publication No. 27, Vol. II, pp. 788-802, June 1991.
- F. Tatsuoka, O. Murata and M. Tateyama: "Permanent geosynthetic-reinforced soil retaining walls used for railway embankments in Japan," Proc. of International symposium on Geosynthetic-Reinforced soil retaining walls, August 1991 (in press).
- H. I. Ling and F. Tatsuoka: "Nonlinear analysis of reinforced soil structures by Modified CANDE(M-CANDE)," Proc. of International symposium on Geosynthetic-Reinforced soil retaining walls, August 1991 (in press).
- H. I. Ling and F. Tatsuoka: Post-symposium discussions: Applicability of CANDE for analyzing the behavior of Geosynthetics-Reinforced soil structures, Proc. of International symposium on Geosynthetic-Reinforced soil retaining walls, August1991 (in press).
- S. Shibuya, F. Tatsuoka, F. Abe, Y-S. Kim and C-S. Park: "Nonlinearity in stress-strain relations of a wide range of geotechnical engineering materials Part 1 Experimental results ," SEISAN-KENKYU, Vol. 43, No. 2, pp. 35-38, February 1991.
- S. Shibuya, F. Tatsuoka, F. Abe and S. Teachavorasinskun: "Nonlinearity in stress-strain relations of a wide range of geotechnical engineering materials Part II Effects of stress history -," SEISAN-KENKYU, Vol. 43, No. 4, pp. 16-19, April 1991.

- S. Teachavorasinskun, D. C. F. Lo Presti, F. Tatsuoka and S. Shibuya: "Effect of cyclic prestraining on stiffness of sands I -Testing method-," SEISAN-KENKYU, Vol. 43. No. 5, pp. 9-12, May 1991.
- S. Teachavorasinskun, D. C. F. Lo Presti, F. Tatsuoka and S. Shibuya: "Effect of cyclic prestraining on stiffness of sands II -Testing results-," SEISAN-KENKYU, Vol. 43, No. 6, pp. 12-14, June 1991.
- J. Dong, F. Tatsuoka and C. Tamura: "Anisotropic deformation and strength properties of wet-tamped sand in plane strain compression at low pressures (Part V) -Shear deformation characteristics-," SEISAN-KENKYU, Vol. 43, No. 6, pp. 23-26, June 1991.
- F. Tatsuoka and S. Shibuya: "Modeling of non-linear of stress-strain relations of soils and rocks Parts 1, Discussion of hyperbolic equation -," SEISAN-KENKYU, Vol. 43, No. 9, pp. 23-26, September 1991.
- F. Tatsuoka and S. Shibuya: "Modeling of non-linear of stress-strain relations of soils and rocks Parts 2, New equation -," SEISAN-KENKYU, Vol. 43, No. 10, pp. 13-15, October 1991.
- J. Dong and F. Tatsuoka: "Anisotropic deformation and strength properties of wet-tamped sand in plane strain compression at low pressures (Part IV) On non-linearity of stress-strain relation -, "SEISAN-KENKYU, Vol. 43, No. 10, pp. 20-23, October 1991.
- J. Dong and F. Tatsuoka: "Anisotropic deformation and strength properties of wet-tamped sand in plane strain compression at low pressures (Part V) Modesto of stress-strain relation -," SEISAN-KENKYU, Vol. 43, No. 12, pp. 23-26. December 1991.
- H. I. Ling, J. T. H. Wu and F. Tatsuoka: "Short-term strength and deformation characteristics of geotextiles under typical operational conditions," Geotextiles and Geomembranes, Vol. 11, No. 2, February 1992 (in press).
- H. I. Ling, F. Tatsuoka and J. T. H. Wu: "Measuring in-plane hydraulic conductivity of geotextiles," Geosynthetic testing for waste containment applications, ASTM STP 1081, pp. 257-272, December 1990.
- H. I. Ling, J. T. H. Wu and F. Tatsuoka: "Effectiveness of inmembrane test in simulating strength and deformation characteristics of nonwoven geotextiles under operational conditions," Proc. of the North American regional Conference on geosynthetics, pp. 601-614, February 1991.

- L. Lu, F. Yamazaki and T. Katayama: "Soil Amplification Based on Array Observation in Chiba, Japan," Proceedings: 2nd International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, Vol. 2, pp. 1181-1188, University of Missouri-Rolla, 1991.
- G. Molas and F. Yamazaki: "Reconnaissance Report on Structural Damage in Baguio by the July 16, 1990 Luzon Earthquake," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 19-45, Institute of Industrial Science, University of Tokyo, 1991.
- F. Yamazaki and T. Turker: "Stochastic Modeling of Earthquake Ground Motion Based on Chiba Array Records," Proc. of the 6th International Conference on Applications of Statistics and Probability in Civil Engineering, Vol. 1, pp. 580-587, 1991.
- S. Nagata: "Identification of System Failure Modes of Frame Structures," Proc. of the 6th International Conference on Applications of Statistics and Probability in Civil Engineering, Vol. 1, pp. 391-398, 1991.
- T. Turker, F. Yamazaki and T. Katayama: "Simulation of Earthquake Ground Motion Based on Frequency-Wavenumber Spectrum," Trans. of the 11th International Conference on Structural Mechanics in Reactor Technology, Vol.K1, pp. 21-26, 1991.
- T. Katayama, F. Yamazaki, S. Nagata and R. Isoyama: "Fuzzy Reasoning for Earthquake Damage Assessment of Large-Scale City Gas Systems," Proc. of the 3rd U.S. Conference on Lifeline Earthquake Engineering, Los Angeles, California, pp. 639-650, ASCE, 1991.
- T. Katayama: "Lifeline Earthquake Engineering in Japan: A State of the Art," Proc. of the Third U.S. Conference on Lifeline Earthquake Engineering, Los Angeles, California, pp. 17-32, ASCE, 1991.
- T. Katayama: "Zonation Issues in Lifeline Earthquake Engineering," Proceedings: 4th International Conference on Seismic Zonation, Stanford, California, Vol. 1, pp. 323-353, EERI, 1991.
- Y. Tomatsu, T. Katayama and S. Nagata: "Development of the <ERISA-P> Seismic Hazard Analysis System for Personal Computer," Proceedings: 4th International Conference on Seismic Zonation Stanford, California, Vol. 3, pp. 673-680, EERI, 1991.
- C. Villacis, F. Yamazaki and T. Katayama: "Comparison of Ground and Pipe

- Strains During Earthquakes," Proc. of the 21st Japan Society of Civil Engineers Earthquake Engineering Symposium, pp.193-196, JSCE, 1991.
- F. Yamazaki and L. Lu: "Stochastic Estimation of Orientation Error in Buried Seismometers," Proceedings: 1st International Conference on Computational Stochastic Mechanics, pp. 571-582, Computational Mechanics Publications and Elsevier Applied Science, 1991.
- T. Turker, F. Yamazaki and T. Katayama: "Spatial Correlation Study on Earthquake Ground Motion Based on Array Data," Proceedings: International Symposium on Natural Disaster Reduction and Civil Engineering, pp. 197-206, JSCE Kansai Chapter, 1991.
- C. Villacis, F. Yamazaki and T. Katayama: "Analysis of Seismic Ground Strain Observed at the Chiba Experiment Station," Proceedings: International Symposium on Natural Disaster Reduction and Civil Engineering, pp. 207-216, JSCE Kansai Chapter, 1991.
- M. Fatima, F. Yamazaki and K. Konagai: "Reconnaissance Report of Pakistan-Afghanistan Earthquake on February 1, 1991," Proceedings: International Symposium on Natural Disaster Reduction and Civil Engineering, pp. 227-236, JSCE Kansai Chapter, 1991.
- G. Molas and F. Yamazaki: "Characteristics of the July 1990 Philippine Earthquake and Related Damages," Proceedings: International Symposium on Natural Disaster Reduction and Civil Engineering, pp. 237-246, JSCE Kansai Chapter, 1991.
- L. Cret, F. Yamazaki, S. Nagata and T. Katayama: "Earthquake Damage Estimation for Lifeline Systems Using Fuzzy Reasoning," Proceedings: International Symposium on Natural Disaster Reduction and Civil Engineering, pp. 387-396, JSCE Kansai Chapter, 1991.
- L. Cret, F. Yamazaki, S. Nagata and T. Katayama: "Fuzzy Inference for Earthquake Damage Estimation in Buried Pipeline Networks," SEISAN-KENKYU, Vol. 43, No. 12, pp. 623-628, 1991.
- L. Lu, F. Yamazaki and T. Katayama: "Soil Amplification Based on Seismometer Array and Microtremor Observations in Chiba, Japan," Earthquake Engineering and Structural Dynamics, Vol. 21, No. 1, 1992.
- L. Cret, F. Yamazaki, S. Nagata and T. Katayama: "Fuzzy Decision Analysis for Earthquake Induced Shut-off of City Gas Networks," SEISAN-KENKYU, Vol.44, No.3, 1992.

- T. Katayama: "Use of Dense Array Data in the Determination of Engineering Properties of Strong Motions," Structural Safety, pp. 27-51, 1991.10.
- T. Katayama and R. K. Eisner: "What were the Lessons of the 1989 Loma Prieta?," Bulletin of Earthquake Resistant Structure Research Center No. 24, pp. 3-18, 1991.3.
- K. Meguro, K. Iwashita and M. Hakuno: "Fracture Analyses of Media Composed of Irregularly Shaped Regions by the Extended Distinct Element Method," Structural Eng./Earthquake Eng. Vol.8, No.3, (Proc. of JSCE No.437/T-17), pp. 131-142, 1991.10.
- M. Hakuno and K. Meguro: "Collapse Process Simulation of Concrete Frame and Stone Masonry Structure by the Extended Distinct Element Method," Proceedings of the 1st International Conference on Seismology and Earthquake Engineering, Tehran, Islamic Republic of Iran, pp. 859-868, 1991.5.
- M. Hakuno and K. Meguro: "Collapse Process Simulation of Concrete Frame and Stone Masonry Structure by the Extended Distinct Element Method," Extended Abstracts, The International Conference on Computing in Civil and Building Engineering (W-ICCCBE), p.113, 1991.7.
- M. Hakuno and K. Meguro: "Simulation of Collapse Process of Concrete Frame and Volcanic Eruption," Micromechanics of Granular Materials, Edited by M. Satake and J.T. Jenkins, 1991.8.
- M. Hakuno and K. Meguro: "An Extended Distinct Element Simulation of Collapse Process of Concrete Structure," Proc. of the 11th International Conference on Structural Mechanics in Reactor Technology, 1991.8.
- M. R. Rimal, K. Meguro, M. Hakuno and H. Higashihara: "Study of Fracture of an Earthquake Fault using the MDEM," Proc. of the 46th Annual Conference of the JSCE No. 1, 1206-1207, 1991. 9.
- K. Ohi and K. Takanashi: "Multi-spring Joint Model for Inelastic Behavior of Steel Members with Local Buckling," Bulletin of Earthquake Resistant Structure Research Center, No. 24, pp. 105-114, Institute of Industrial Science, University of Tokyo, March 1991.
- K. Takanashi (Editor): "Journal of Constructional Steel Research," Vol. 17, ELSEVIER APPLIED SCIENCE, 1991.
- A. S. Elnashai, K. Takanashi, A. Y. Elghazoul and P. J. Dowling: "Experi-

- mental behaviour of partially encased composite beam-columns under cyclic and dynamic loads," Structural and Building Board, pp. 259-272, Instn Civ. Engrs, June 1991.
- \* K. Koh and K. Takanashi: "An Analytical Approach to Energy Response of Hysteretic Structures Consisted of Uncertainty Materials," Journal of Structural and Construction Engineering, AlJ, March 1992.
- \* T. Yamada, H. Kondo and K. Takanashi: "Two Dimensional Vibration Tests in the floor Seismic Isolator for Computer system," Journal of Structural Engineering, Vol. 38B, AIJ, March 1992.
- \* K. Ohi, Y. Chen and K. Takanashi: "An Experimental Study on Inelastic behaviors of H-Shaped Steel Beam-Columns subject to varying axial and lateral loads," Journal of Structural Engineering, Vol. 38B, All, March 1992.
  - K. Takanashi: "Experimental Behavior of Partially Encased Composite Columns under Cyclic and Dynamic Loads," Proc. U.S.-Japan Seminar, July 1991.
  - K. Ohi and K. Takanashi: "Multi-Spring Joint Model for Inclastic Behavior of Steel Members with Local Buckling," Proc. U.S.-Japan Seminar, July 1991.
- \* K.Ohi: "Identification of likely collapse modes for framed structure by stochastic programming," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol.B, pp. 257-258, AIJ, September 1991.
- \* H. Kondo, T. Yamada and K. Takanashi: "Vibration Tests on the Practical Floor Isolation System Part 1 Vibration of the Computer set on Access Floor-," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol. B, pp. 631-632, AIJ, September 1991.
- \* T. Yamada, H. Kondo and K. Takanashi: "Vibration Tests on the Practical Floor Isolation System -Part 2 Vibration of the Computer with Seismic Damper-," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol. B, pp. 633-634, AIJ, September 1991.
- \* Kikukawa, K. Takanashi, N. Yamamoto, G. Nakagawa and K. Fujisawa: "Development on Techniques of Effective Use of New Metallic Materials Part 22 Ultimate Strength of High Strength Bolted Joints for New 60kgf/mm Class High Quality Steel," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol.C, pp. 1063-1064, AIJ, September 1991.
- \* R. Hirabayashi and K. Takanashi: "Bearing Strength at bolt connections,"

- Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol.C, pp. 1073-1074, AIJ, September 1991.
- \* K. Takanashi, A. Fukushima, H. komatu, Y. Shimawaki and J. Kuwamura: "Flexural Buckling Strength of Centrally Loaded Compressive High-Strength Steel Members," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol. C, pp. 1301-1302, AIJ, September 1991.
- \* L. Meng, K. Takanashi and K. Ohi: "An Evaluation of Energy Absorption of Steel Frames by Static Analysis," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol.C, pp. 1499-1500, AIJ, September 1991.
- \* Y. Chen and K. Takanashi: "Resistance of a Tall Building against Horizontal Forces," Summaries of Technical Papers of Annual Meeting AIJ 1991, Vol.C, pp. 1545-1546, AIJ, September 1991.
- \* K. Ohi: "Stochastic Limit Analysis of Framed Structure," JCOSSAR'91 Vol. 2 pp. 675-678, AIJ, November 1991.
- \* H. Kondo, Y. Chen, K. Ohi and K. Takanashi: "Resistance Deterioration of H-Shaped Members Subjected to Combined Stresses (Part I)," Proc. of 62th Architectural Research Meeting, 1991, KANTO Chapter, pp. 97-100, AIJ, January 1992.
- \* Y. Chen, H. Kondo, K. Ohi and K. Takanashi: "Resistance Deterioration of H-Shaped Members Subjected to Combined Stresses (Part II)," Proc. of 62th Architectural Research Meeting, 1991, KANTO Chapter, pp.101-104, AIJ, January 1992.