

PROFESSIONAL CAREER :

- 2007-** : Professor at Dept. of Architecture & Architectural Engineering,
Faculty of Engineering, Kagoshima University
- 1998-2007:** Associate Professor at Dept. of Architecture & Architectural Engineering,
Faculty of Engineering, Kagoshima University
- 1990-1998:** Senior Research Engineer at Technical Research Institute, Fujita Corporation
- 1986-1990:** Research Engineer at Technical Research Institute, Fujita Corporation

PROFESSIONAL ACTIVITIES :

- Apr.2007** International Conference on Computational Methods (ICCM2007), Hiroshima
- Oct.2006** International Workshop on Computational Morphogenesis 2006 (IWCM2006), Sub-Working Group of WG13 of IASS (organizing committee), Nagoya
- Oct.2000** 6th Asian Pacific Conference on Shell and Spatial Structures (APCS 2000), Korea
- Oct.1999** International Conference on Domain Decomposition Methods, Chiba
- Jul.1999** International Symposium on Boundary Element Techniques, London
- Mar.1998** International Symposium on Inverse Problems in Engineering Mechanics, Nagano
- Jul.1995** International IASS Symposium, Milano.
- Sep.1994** International Conference on Modelling, Simulation & Identification, Wakayama.
- Aug.1994** Third World Congress on Computational Mechanics, Chiba.
- Oct.1993** International SEIKEN-IASS Symposium, Tokyo.
- Jun.1993** Fifth Japan-China Symposium on Boundary Element Methods, Hokkaido.
- Nov.1992** International Symposium on Boundary Elements , Sevilla.
- Sep.1992** International Symposium on Applied Electromagnetics in Materials and Computational Technology, Hokkaido.
- Oct.1991** International Symposium of IABEM, Kyoto.
- Sep.1991** International IASS Symposium, Copenhagen.
- Sep.1988** 2nd International RILEM Symposium, Tokyo.
- Sep.1988** IASS · MSU International Symposium, Istanbul.
- Oct.1987** International IASS Symposium, Beijing.
- Aug.1987** 2nd Korean-Japan Colloquium on Shell and Spatial Structures, Tokyo
- Sep.1986** International IASS Symposium, Osaka.

FIELDS OF SPECIALIZATION :

- Numerical Computation of Bifurcation and Stability
- Dynamic Stability Analysis for Structures
- Optimization Analysis for Shell and Spatial Structures by Using Life-Like Approach
- Simplified Analysis Procedure for Environmental Vibration
- Development of Aided Design System in Architectural Engineering

MEMBERSHIP :

[Architectural Institute of Japan \(AIJ\)](#)

[The Japan Society of Mechanical Engineers \(JSME\)](#)

[The Japan Society of Industrial and Applied Mathematics \(JSIAM\)](#)

[The Japan Society for Computational Engineering and Science \(JSCES\)](#)

[The Society for Science on Form, Japan](#)

[The International Association for Shell and Spatial Structures \(IASS\)](#)

[Digital Content Association of Japan \(DCAJ\)](#)

LIST OF SELECTED PUBLICATIONS :

- [48] **Structural Morphogenesis by the Genetic Algorithms Considering Diversity of Solution**, Journal of Structural and Construction Engineering (AIJ), **614**, 35-43, Apr.2007 (in Japanese)
- [47] **The Possibility of Design Support for Site Planning of Low-Rise Housing by Simulated Breeding with Gene Manipulation**, Journal of Architecture and Planning (AIJ), **611**, 83-91, Jan.2007 (in Japanese)
- [46] **Historical Street Scene Evaluation Using Self-Organization Critical State Analysis**, Journal of Technology and Design (AIJ), **23**, 399-404, Jun.2006 (in Japanese)
- [45] **A Method of Tension Structure Analysis by Finite Element Technique Using the Coordinate Value on a Deformed Body**, Journal of Structural and Construction Engineering (AIJ), **602**, 161-169, Apr.2006 (in Japanese)
- [44] **Experimental and Analytical Study on Structural Characteristics of Composite Cable Structures**, Research Report on Membrane Structures, **19**, 27-34, The Membrane Structures Association of Japan, Feb.2006 (in Japanese)
- [43] **Computational Morphogenesis for Structures**, *Introduction to Optimization in Architecture*, Chapter 5, 67-93, Architectural Institute of Japan (AIJ), Apr.2005 (in Japanese)
- [42] **Development of Morphology-Idea Support Software Using Life-Like Approach**, *New Challenges for Computer Application in Spatial Structures*, Chapter 1(New Challenges for Computational Morphogenesis in Structure), section 1, 2-17, Architectural Institute of Japan (AIJ), Mar.2005 (in Japanese)
- [41] **Optimization of Structure System by Using an Immune Algorithm and Diversity of Its Solutions**, Journal of Structural and Construction Engineering (AIJ), **588**, 103-110, Feb.2005 (in Japanese)
- [40] **Tension Structure Analysis by Finite Element Method Using the Coordinate Value on a Deformed Body and Its Evaluation**, Research Report on Membrane Structures, **18**, 15-21, The Membrane Structures Association of Japan, Feb.2005 (in Japanese)
- [39] **Geometrically Nonlinear Structural Analysis by FEM Using the Coordinate Value on a Deformed Body**, INFORMATION, **7**(5), 569-584, Sep.2004.
- [38] **Heuristic Methods for Optimization of Structural Systems**, Computational Engineering series 2, Corona Publishing Co., Ltd., Jul.2004 (in Japanese).
- [37] **Dynamic Response and Stability of Nonlinear Structural Models**, Computational Engineering series 4, Corona Publishing Co., Ltd., Oct.2003 (in Japanese).
- [36] **Autonomous Decentralized Finite Element Method and Its Applications**, International Journal for Numerical Method in Engineering, **57**, 853-874, Jul.2003.
- [35] **An Analysis Procedure of Local Municipality by Using a Multi-Layered Cellular Automata**, Journal of Architecture and Planning (AIJ), **568**, 93-100, Jun.2003 (in Japanese).
- [34] **Multiobjective Optimization of Truss Structures by Immune Algorithms and Diversity of Its Solutions**,

- Journal of Structural Engineering , **49B**, 309-317, Mar.2003 (in Japanese).
- [33] *Guideline for Numerical Analysis of Spatial Structures*, Chapter 4 (Tension Structures), section 3 (Analysis Methods), Architectural Institute of Japan (AIJ), May.2001 (in Japanese)
- [32] **Dynamic Stability Analysis of an Elastic Rod with Lumped Masses and their Weight under Nonconservative Forces** Journal of Structural Engineering , **47B**, 61-68, Mar.2001 (in Japanese).
- [31] *Theory and Application of Structural Shape Analysis*, Applied Mechanics Series 8, Chapter I, section 5 (cell automaton), Chapter III, section 1.4 (cell automaton) Architectural Institute of Japan (AIJ), Mar.2001 (in Japanese)
- [30] **Bifurcation Analysis of Viscous Flow Between Two Rotating Infinite Coaxial Disks by Integral Equation Method**, Transactions of The Japan Society for Industrial and Applied Mathematics (JSIAM), **10**(4), 295-318, Dec.2000 (in Japanese)
- [29] *Structural Design of Retractable Roof Structures (State of the Art • Guideline • Examples)*, Advances in Architecture Series 5, IASS Working Group no. 16 (Editor K. Ishii), WIT press, Apr.2000
- [28] **A Computational Method for Inverse Problems by Using Autonomous Decentralized Approach** Journal of Structural and Construction Engineering (AIJ), **526**, 69-76, Dec.1999 (in Japanese).
- [27] *Collapse Analysis of Structures, Vol.2*, Applied Mechanics Series 7, Chapter 2, section 1(Dynamic Stability of rods, plates and shells under Nonconservative Forces), Architectural Institute of Japan(AIJ), Nov.1999 (in Japanese)
- [26] **A Simplified Analysis Procedure Aid Design of Floor Slabs for Environmental Vibration** Journal of Structural and Construction Engineering (AIJ), **525**, 141-148, Nov.1999 (in Japanese).
- [25] **Dynamic Stability Analysis of Flow-Conveying Pipe under Consideration of Effective a Lumped Mass by Integral Equation Method** Transactions of JSME, **65**(634) C, 91-96, Jun.1999 (in Japanese).
- [24] **Dynamic Stability Analysis of Flow-Conveying Pipe under Consideration with Effects of Internal Damping and a Lumped Mass by Integral Equation Method**, Transactions of JSCES, **1**(19990016), 125-133, Mar.1999 (in Japanese).
- [23] **Microvibration Analysis for Floor Slab by Applying the Rayleigh-Ritz Method**, Journal of Structural and Construction Engineering (AIJ), **518**, 147-154, Apr.1999 (in Japanese).
- [22] **Development of a Support System in Structural Design of Floor Slab for Environmental Vibration**, Journal of Technology and Design (AIJ), **7**, 169-174, Feb.1999 (in Japanese).
- [21] *Analysis and Generation of Structural Shapes and Systems*, Applied Mechanics Series 5, FEM & BEM, Approximate Analysis Using Autonomous Decentralized Approach, Computer Graphics, AIJ, Dec.1998 (in Japanese)
- [20] **The Rayleigh-Ritz Solution to Estimate Vibration Characteristics of Building Floors** , Journal of Sound & Vibration, **211**(3), 195-206, Mar.1998.
- [19] **Bifurcation Analysis of an Inextensible Elastic Ring by Integral Equation Method** , Transactions of JSIAM, **8**(4), 67-79, Mar.1998 (in Japanese).
- [18] **Development of Evaluation System for Earthquake Motion Using a Geographic Information System** , Journal of Technology and Design (AIJ), **5**, 275-280, Dec.1997 (in Japanese).
- [17] **Shape Analysis and Optimization of Structure Using an Iterative Calculation Method** , Journal of Structural and Construction Engineering (AIJ), **502**, 69-76, Dec.1997 (in Japanese).
- [16] **Dynamic Stability Analysis of Elastic Rod Subjected to Conservative and Nonconservative Forces by Integral Equation Method** , Transactions of JSME, **63**(614) A, 104-111, Oct.1997 (in Japanese).
- [15] **Simplified Analysis of Circular Plates Including Voids** , Computer & Structures, **58**(2), 263-275, Jun.1996.
- [14] **Dynamic Stability Analysis of Elastic Rod with Damping Terms under Nonconservative Forces** , Journal of Structural and Construction Engineering (AIJ), **471**, 37-46, May1995 (in Japanese).
- [13] *Design Mechanics and Control Dynamics of Building Structures*, Applied Mechanics Series 2, Chapter 4(Shape Determination Problem for Membrane Structures), Architectural Institute of Japan(AIJ), Nov.1994 (in Japanese)

- [12] **A Visual Support System to Estimate Dynamic Response Analysis for Frame Structures** , Transaction of NICGRAPH (Institute of Nihon Computer Graphics), **10**, 218-228, Nov.1994 (in Japanese).
- [11] **A Comparative Study of Magnetic Field Analysis Techniques for Designing a Magnetically Shielded Room**, Transactions of Japan Society of Applied Magnetism, **18**(5), 934-939, Sep.1994 (in Japanese).
- [10] **Dynamic Stability Analysis of Elastic Rod under Nonconservative Forces** , Journal of Structural and Construction Engineering (AIJ), **461**, 37-46, Jul.1994 (in Japanese).
- [9] **A Visual Support System for Initial Design Stage of Membrane Structures with a Steering Process** , Transaction of NICGRAPH, **9**, 215-225, Nov.1993 (in Japanese).
- [8] **Recommendations for Design of Retractable Roof Structures with Realized Examples**, Architectural Institute of Japan(AIJ) , Jan.1993 (in Japanese)
- [7] **Animation System to Estimate Seismic Response for Frame Structures** , Transaction of NICGRAPH, **8**, 242-252, Nov.1992 (in Japanese).
- [6] **A Visualization System for the Use in Fire Safety Designing of Buildings** , Transaction of NICGRAPH, **8**, 253-263, Nov.1992 (in Japanese).
- [5] **Three-Dimensional Nonlinear Magnetostatic Analysis System Using Edge Element** , Journal of Simulation (Japan Society for Simulation Technology), **11**(3), 72-78, Sep.1992 (in Japanese).
- [4] **A Visualization for Numerical Simulation**, Computer Simulation, **2**(2), 52-57・67-70, Apr.1991 (in Japanese)
- [3] **The Curved Tension Field Analysis by Finite Element Techniques**, Journal of Structural and Construction Engineering (AIJ), **376**, 10-18, Jun.1987 (in Japanese).
- [2] **The Plane Tension Field Analysis by Finite Element Techniques** , Journal of Structural and Construction Engineering (AIJ), **368**, 27-36, Oct.1986 (in Japanese).
- [1] **Finite Element Techniques in Tension Field Problems**, Journal of Structural and Construction Engineering (AIJ), **351**, 76-83, May.1985 (in Japanese).

LIST OF SUBMITTED OR ACCEPTED PAPERS:

1. Population Fluctuation Estimate System Development of Local Municipality by Multi-Layered CA and GIS
2. Genetic Algorithms to Obtain Decent Solution and Situation of Solution Space on Multiobjective Optimization Problem of Structural form and System
- 3.

HONORS AND OTHERS :

4. Sep.1997 Encouragement Prizes of paper (AIJ)

“Dynamic Stability Analysis of Elastic Rod with Damping Terms under Nonconservative Forces”

3. Nov.1994 Award of fine paper concerning computer graphics (NICOGRAH)

“A Visual Support System to Estimate Dynamic Response Analysis for Frame Structures”

2. Nov.1993 Award of fine paper concerning computer graphics (NICOGRAH)

“A Visual Support System for Initial Design Stage of Membrane Structures with a Steering Process”

1. May.1984 Encouragement Prizes of Sunpakukai (Nihon University)