Professor Shinobu Yoshimura's C.V. as of 1 January, 2021

1. Position & Affiliation

Professor, Dr., Department of Systems Innovation, School of Engineering, The University of Tokyo (UTokyo)
Vice President in charge of University-Industry Collaboration, UTokyo (2017.4-)
7-3-1 Hongo, Bunkyo, Tokyo 113-8656, Japan,
Tel : +81-3-5841-6960, Fax : +81-3-5841-0651
e-mail : yoshi at sys.t.u-tokyo.ac.jp,
http://save.sys.t.u-tokyo.ac.jp, https://adventure.sys.t.u-tokyo.ac.jp

2. Date of Birth

March, 1959

3. Educational Career

1987.3 Doctor of Eng. received from Dept. Nuclear Eng., School of Eng., UTokyo
1983.3 Master of Eng. received from Dept. Nuclear Eng., School of Eng., UTokyo
1981.3 Bachelor of Eng. received from Dept. Nuclear Eng., School of Eng., UTokyo

4. Academic Career

2019.4-Present Deputy Director, The Division of University Corporate Relations, UTokyo
2017.4-Present Vice President, UTokyo
2015.4-2017.3 Member, The Education and Research Council, UTokyo
2014.4-2017.3 Vice Dean, School of Engineering, UTokyo
2012.4-2014.3 Director, Public Relations Office, UTokyo
2011.4-2012.3, 2014.4-2015.3 Vice Director, Public Relations Office, UTokyo
2009.4-2010.3 Special Staff to the President of UTokyo
2008.4-Present Professor, Dept. Systems Innovation, School of Eng., UTokyo
2005.4-2008.3 Professor, Dept. Quantum Eng. & Systems Science, School of Eng., UTokyo
1999.4-2005.3 Professor, Institute of Environmental Studies, Graduate School of Frontier Sciences, UTokyo
1995.6-1999.3 Associate Professor, Dept. Quantum Eng. & Systems Science, School of Eng., UTokyo
1994.4-1994.10 Visiting Researcher, MPA (State Institute of Materials Testing), University of Stuttgart, Germany
1992.6-1995.5 Associate Professor, RACE (Research into Artifacts, Center for Eng.), UTokyo
1989.4-1992.5 Associate Professor, Dept. Nuclear Eng., UTokyo
1987.4-1989.4 Lecturer, Dept. Nuclear Eng., School of Eng., UTokyo
1985.8-1986.5 Visiting Researcher, Computational Mechanics Center, Georgia Institute of Technology, USA

5. Major Social Activities

1997.8-Present ADVENTURE Project Leader
2018.7-2022.7 IACM (International Association for Computational Mechanics) Vice President
2016.7-2022.7 IACM Executive Council Member

2014.7-Present IACM Fellow
2004.9-Present IACM General Council Member
2019.12-2022.8 APACM (Asian-Pacific Association for Computational Mechanics) President
2018.4-2019.7 APACM Secretary General
2018.4-2022.8 APACM Executive Council Member
2008.8-2022.8 APACM General Council Member
2012.4-2018.3 JACM (Japan Association for Computational Mechanics) President
2002.12-2012.3 JACM Vice President and Secretary General
2007.12-Present JACM Fellow
2015.7-Present ICCES Distinguished Fellow (Int. Conf. on Comp. & Exp. Eng. & Sciences)
2016.4-2018.3 Director of Executive Board of JSME (Japan Society of Mechanical Engineers)
2012.4-2013.3 Chair of Computational Mechanics Division of JSME
2002.3-2009.3 Founding Chair of JSME Certification Program for Comp. Mech. Engineers
2005.3-Present JSME Fellow
2020.6-Present JSIAM (The Japan Society for Industrial and Applied Mathematics) Fellow
2014.10-Present Chair of Atomic Energy Research Committee, JWES (The Japan Welding Engineering Society)
2002.4-Present Chair of PFM (Probabilistic Fracture Mechanics) Subcommittee, JWES
2009.4-2010.3 Chair of Computational Science and Engineering Division of AESJ (Atomic Energy Society of Japan)
2017.4-Present AESJ Fellow
2018.4-Present AESJ Lifetime Member
2020.5-Present JSCES Fellow
1995.5-1999.4 Director of JSCES (Japan Society of Computational Engineering and Science)
2007.4-2017.3 Chair of Structural Subcommittee, Nuclear Standards Committee, The Japan Electric Association)
2017.10-2023.9 Member of SCJ (Science Council of Japan)
2020.10-2023.9 Chairperson of Section III on Physical Sciences and Engineering, SCJ
2017.10-2020.9 Chair of Committee on Comprehensive Synthetic Engineering, SCJ
2006.10-2017.9 Associate Member of SCJ
2014.12-2017.9 Chair of SCJ Committee on Computational Science and Engineering and Its Application to Engineering Design, SCJ
2015.9-Present Member of the Engineering Academy of Japan
2010.10-Present Executive Secretary of Editorial Board of UTokyo Engineering Course
2013.4-2019.3 Associate Editor of International Journal of Computational Methods
2015.7-Present Advisory Board Member of International Journal of Computational Mechanics
2007.9-2010.10 Chair of Steering Committee of IAEA-EBP Project on Seismic Safety of Existing Nuclear Power Plants
2019.3-2020.12 Chair of Academic Advisory Committee of SIC (Systems Innovation Center)
2019.3-2020.12 Member of Executive Board of SIC
2014.4 Co-Chair of COMPSAFE2014 (1st APACM Thematic Conf. & IACM Special Interest Conf.), Sendai, Japan, 2014.4
2007.12 Secretary General of APCOM'07-EPMESC XI, Kyoto, Japan, 2007.12
2013.7 Co-Chair of QR2MSE-ICMR-ICME2013, Emeishan, China, 2013.7
2011.11 Co-Chair of ICMR2011, Busan, Korea, 2011.11
2019.8-2022.8 Vice-Chair of WCCM-APCOM2022, Yokohama, Japan, 2022.7-8

6. Recent Major Invited Lectures

6.1 Plenary Lectures

2021.1 WCCM-ECCOMAS2020 Virtual Congress (Paris, France)
2019.10 ACMSA2019 (Penglai, China)

2019.3 ICCES2019 (Tokyo, Japan)
2017.10 COMPSAFE2017 (Chengdu, China)
2017.7 ICCM2017 (Guilin, China)
2016.7 ICCMS2016 (Mumbai, India)
2015.5 COMPDYN2015 (Crete, Greece)
2015.3 SIAM CSE2015 (Salt Lake, USA)
2013.12 APCOM-ISCM2013 (Singapore)
2013.6 COMPDYN2013 (Kos, Greece)
2011.11 SMiRT21 (New Delhi, India)

6.2 Semi-plenary Lectures
2019.6 COMPDYN2019 (Crete, Greece)
2015.3 FEF2015 (Taipei, Taiwan, 2015.3)
2014.7 WCCM-ECCM-ECFD2014 (Barcelona, Spain)
2011.5 COMPDYN2011 (Corfu, Greece)

7. Awards
7.1 International
2015.7 ICCES Distinguished Achievement Medal (ICCES2015 (International Conference on Computational & Experimental Engineering & Sciences), Reno, Nevada, USA)
2015.7 ICCES Distinguished Fellow
2014.7 IACM Fellow Award (Int. Association for Computational Mechanics), (Barcelona, Spain)
2014.3 3rd Place for 2014 IEEE Computational Intelligence for Financial Engineering & Economics Best Paper (London, UK)
2013.12 APACM Computational Mechanics Award (Asia-Pacific Association for Computational Mechanics), (Singapore)
2009.8 AIAA Liquid Propulsion Best Paper Award (45th AIAA/ASME/SAE/ASEE Joint Propulsion Conference, Denver, USA)
2008.3 The K. Washizu Medal (ICCES'08(International Conference on Computational & Experimental Engineering & Sciences), Hawaii, USA)
2006.11 IEEE/ACM Supercomputing 06 Gordon Bell Award finalist (IEEE/ACM, Tampa, USA)
1991.8 Junior SMiRT Award (11th SMiRT (11th International Conference on Structural Mechanics in Reactor Technology), Tokyo)
1990.11 Cray Gigaflops Performance Award (Cray Research Inc., New York)

7.2 Domestic
2020.6 JSIAM Fellow (The Japan Society for Industrial and Applied Mathematics)
2020.5 JSCES Fellow (Japan Society of Computational Engineering and Science)
2019.3 AESJ Computational Science and Engineering Division Distinguished Achievement Award
2018.6 JSAI2018 Best Presentation Award (The Japanese Society for Artificial Intelligence)
2018.4 AESJ Life Time Member
2018.3 IPSJ Specially Selected Paper Award (Information Processing Society of Japan)
2017.12 UTokyo Executive Vice President's Award on Business Reform (The University of Tokyo)
2017.11 JSME 120th Anniversary Service Award (Japan Society of Mechanical Engineers)
2017.6 JEA Nuclear Standards Committee Award (Japan Electric Association)
2017.3 AESJ Fellow (Atomic Energy Society of Japan)
2016.9 JAWS2016 Best Presentation Award (Joint Agent Workshop and Symposium 2016)
2016.9 JAWS2016 Best Paper Award

2016.5, 2013.5, 2010.6 & 2006.5 JSCES Best Paper Awards (Japan Society of Computational Engineering and Science)
2018.9, 2015.7, 2010.6, 1997.6 JSST Best Paper Awards (Japan Society for Simulation Technology)
2014.12 1st Place of Best CFD Graphics Award, 28th CFD Conference (CFD2014)(The Japan Society of Fluid Mechanics (JSFM))
2014.11 JSME Computational Mechanics Award (Computational Mechanics Division, JSME)
2014.4 JSME Best Paper Award
2013.6 2012 JSAI SIG Research Award (Japan Society of Artificial Intelligence)
2013.5 JSCES Best Technology Award
2013.5 2012 The Most Interesting Reading Award (Japan Society for Design Engineering)
2012.10 JAWS2012 Industry Award (Joint Agent Workshop and Symposium 2012)
2011.7 JACM Computational Mechanics Award (Japan Association for Comp. Mechanics)
2011.3 AESJ Computational Science and Engineering Division Achievements Award
2020.3, 2011.3 & 1998.3 AESJ Best Paper Awards
2009.4 MEXT Minister Award of Science & Technology (Ministry of Education, Culture, Sports, Science and Technology, Japan)
2008.4 JSME Best Technology Award
2007.12 JACM Fellows Award
2007.10 JSME 110th Anniversary Service Award
2007.6 JSST Best Research Award
2005.2 JSME Fellow
2001.11 1st Place of JSME D&S Division Analysis Contest (Design and Systems Division, JSME)
2001.3 JCOT Best Paper Award (Japan Coating Technology Association)
2000.11 JSME Computational Mechanics Achievements Award (Computational Mechanics Division, JSME)
1996.9 JSIAM Best Paper Award (Japan Society for Industrial and Applied Mathematics)
1992.4 JSME Excellent Young Researcher Award
1990.2 Inoue Research Award for Young Scientists (Inoue Science Promotion Foundation)

8. Short Description of Research Areas

Professor Yoshimura has published 285peer reviewed journal papers, 76 review papers and 7 books. He has been working on High-performance and Intelligent Computational Mechanics with Real World's Applications for 34 years.

Among his wide research activities, the most distinguished and well-recognized achievement is the R&D of the advanced parallel finite element analysis software known as ADVENTURE system (https://adventure.sys.t.u-tokyo.ac.jp) since 1997, leading more than 20 investigators. The ADVENTURE system is very unique open source CAE software that enables very precise analyses of practical structures and machines using over 100 million to billions DOF mesh. Those analyses can be performed very efficiently and easily not only on ordinary PC clusters, but also on latest massively parallel computers such as the Earth simulator, Blue Gene/L, the K computer and FUGAKU computer. Since Dec. 2002, 45,103 modules of the system have been downloaded by 10,938 registered users worldwide. Its commercial version named ADVENTURECluster has also been widely adopted in automobile, E&E/ICT, heavy, space, material and construction industries. Since January 2015, he has been leading a new national HPC project, i.e. FLAGSHIP2020 Priority Issue 6 (https://postk6.t.u-tokyo.ac.jp/en/), and FUGAKU project to extend the simulation system towards Exaflops computer such as "FUGAKU" appeared in 2020.

Furthermore, Professor Yoshimura has been developing a general-purpose platform of parallel partitioned coupling techniques with nonlinear iterations, named ADVENTURE_Coupler and REVOCAP_Coupler, which ensure accuracy, parallel-efficiency, robustness as well as flexibility. The ADVENTURE's parallel solvers together with the coupling platform enable large-scale parallel coupled analyses of very complicated structures including Fluid-Structure Interaction, Acoustic Fluid-

Structure Interaction, Magneto-Structure Interaction and Structure-Structure Interaction. In the FLAGSHIP2020 Priority Issue 6 Project on "Accelerated Development of Innovative Clean Energy Systems" and the FUGAKU project, he is developing Multiscale and Multiphysics Integrated Simulators for Coal Gasification Combustion Plants as well as Large Scale Offshore Wind Farms as Digital Twin of such large-scale and complex physical system, fully utilizing the performance of Exaflops computer such as "FUGAKU" computer.
In summary, his achievements include scientific impacts through the R&D of innovative algorithms, engineering impacts through the R&D of practical software, and social impacts through its dissemination to the society as open source as well as the solutions of never solved real world's problems. The technologies he has developed would become de Fact Standard of large scale coupled finite element analyses for high-performance computing of petaflops to exaflops scale.
He was also the founding chair of JSME Certification Program for Computational Mechanics Engineers (http://www.jsme.or.jp/cee/cmnintei.htm), which has already certified 10,113 computational mechanics engineers since 2003.

9. Publications (Books et al.)
(1) "The Finite Element Method", Computational Mechanics and CAE Series, Baifukan, (1991) (G.Yagawa, S.Yoshimura) (in Japanese)
(2) "Elastic-Plastic Fracture Mechanics in Inhomogeneous Materials and Structures", Special Issue, International Journal of Pressure Vessels and Piping, Vol. 63, No. 3, (1995) (G.Yagawa, S.Yoshimura (Ed.))
(3) "Application of Neural Networks to Strength of Materials", Computational Mechanics Series V, Youkendo, (1997), (G.Yagawa, S.Yoshimura (Ed.)) (in Japanese)
(4) "Design with Sensory Information", Intelligent Engineering Series, Baifukan, (1999), (G.Yagawa, S.Yoshimura, A.Matsuda) (in Japanese)
(5) "Computational Solid Mechanics", Modern Fundamental Engineering Series, Iwanami-Shoten, (2001), (G.Yagawa, S.Yoshimura) (in Japanese)
(6) "High-Performance Computing for Structural Mechanics and Earthquake / Tsunami Engineering", Springer, (2015) (S. Yoshimura, M. Hori, M. Ohsaki)
(7) "Probabilistic Fracture Mechanics for Risk-Informed Activities – Fundamentals and Applications -", Japan Welding Engineering Society, (2017.9) (S.Yoshimura, Y.Kanto)
http://www-it.jwes.or.jp/ae/index.jsp

10. Publications (Showing International Journal Papers only)
(1) "Nonlinear and Dynamic Fracture of Cracked Structures under Electromagnetic Force", Nuclear Engineering and Design / Fusion, Vol.2, Nos.1&2, pp.53-63, (1985) (G.Yagawa, S.Yoshimura)
(2) "Dynamic Fracture Mechanics with Electromagnetic Force and Its Application to Fracture Toughness Testing", Engineering Fracture Mechanics, Vol.23, No.1, pp.265-286, (1986) (G.Yagawa, S.Yoshimura)
(3) "On the Dynamic Fracture Toughness and Crack Tip Strain Behavior of Nuclear Pressure Vessel Steel : Application of Electromagnetic Force", Nuclear Engineering and Design, Vol.97, No.2, pp.195-209, (1986) (G.Yagawa, S.Yoshimura)
(4) "A Study of Two Alternate Tangent Modulus Formulations and Attendant Implicit Algorithms for Creep as well as High-Strain-Rate Plasticity", International Journal of Plastcity, Vol.3, pp.391-413, (1987) (S.Yoshimura, K-L.Chen, S.N.Atluri)
(5) "Dynamic Fracture Mechanics under Electromagnetic Force", Fusion Engineering and Design, Vol.7, pp.269-279, (1989) (G.Yagawa , S.Yoshimura, Y.Akahoshi)
(6) "Generation and Propagation Analyses of High-Strain-Rate Dynamic Crack Propagation in a Visco-Plastic Solid", Nuclear Engineering and Design, Vol.111, pp.273-289, (1989) (S.Yoshimura, S.N.Atluri, G.Yagawa)
(7) "Finite Element Analysis of Electromagnetic Field for Multidimensional RF Cavities", Review of Scientific Instruments, Vol.60, No.7, Part2, pp.1740-1743, (1989) (G-W.Ye, Y.Miyauchi, G.Yagawa, S.Yoshimura)

(8) “A Numerical Integration Scheme for Finite Element Method Based on Symbolic Manipulation”, International Journal for Numerical Methods in Engineering, Vol.29, pp.1539-1549, (1990) (G.Yagawa, G-W.Ye, S.Yoshimura)
(9) “Automation of Thermal and Structural Design Using Artificial Intelligence Techniques”, Engineering Analysis with Boundary Elements, Vol.7, No.2, pp.73-77, (1990) (S.Yoshimura, G.Yagawa, Y.Mochizuki)
(10) “An Artificial Intelligence Approach to Efficient Fusion First Wall Design”, Lecture Notes in Computer Science (Computer-Aided Cooperative Product Development), Springer-Verlag, pp.502-521, (1990) (S.Yoshimura, G.Yagawa, Y.Mochizuki)
(11) “A Large Scale Finite Element Analysis Using Domain Decomposition Method on a Parallel Computer”, Computers and Structures, Vol.38, No.5/6, pp.615-625, (1991) (G.Yagawa, N.Soneda, S.Yoshimura)
(12) “Analysis of Growing Ductile Cracks Using Computer Image Processing”, ASTM STP 1131, pp.289-313, (1992) (G.Yagawa, S.Yoshimura, A.Yoshioka, C-R.Pyo)
(13) “Automatic Two- and Three-Dimensional Mesh Generation Based on Fuzzy Knowledge Processing”, Computational Mechanics, Vol.9, No.5, pp.333-346, (1992) (G.Yagawa, S.Yoshimura, N.Soneda, K.Nakao)
(14) “Development of an Automatic Mesh Generation System for Shell Structures Based on Fuzzy Knowledge Processing”, JSAE (Japan Society of Automotive Engineering) Review, Vol.13, No.3, pp.60-64, (1992) (G.Yagawa, S.Yoshimura, K.Nakao, M.Ohji)
(15) “Probabilistic Fracture Mechanics Analysis Based on Three-dimensional J-Integral Database”, Engineering Fracture Mechanics, Vol.44, No.6, pp.887-893, (1993) (G-W.Ye, G.Yagawa, S.Yoshimura)
(16) “A Parallel Finite Element Method with a Supercomputer Network”, Computers and Structures, Vol.47, No.3, pp.407-418, (1993) (G.Yagawa, A.Yoshioka, S.Yoshimura, N.Soneda)
(17) “Applications of Probabilistic Fracture Mechanics to FBR Components”, Nuclear Engineering and Design, Vol.142, pp.43-49, (1993) (K.Hojo, M.Takenaka, H.Kaguchi, G.Yagawa, S.Yoshimura)
(18) “Finite Element Analysis of Gas-Lubricated Grooved Journal Bearings (Analysis Method)”, JSME International Journal, Series C, Vol.39, No.1, pp.123-129, (1996) (K.Kinouchi, K.Tanaka, S.Yoshimura, G.Yagawa)
(19) “Finite Element Analyses of Three Dimensional Fully Plastic Solutions Using Quasi-nonsteady Algorithm and Tetrahedral Elements”, Computational Mechanics, Vol.14, pp. 128-139, (1994) (S.Yoshimura, C-R.Pyo, G.Yagawa, H.Kawai)
(20) “Development of User-Friendly Structural Design System for Pressure Vessels”, JSME International Journal, Series A, Vol.39, No.3, pp.354-361, (1996) (T.Sato, T.Nomoto, K.Kado, G.Yagawa, S.Yoshimura)
(21) “Simplified Stable Crack Growth Analyses of Welded CT Specimens-Comparison Study of GE/EPRI, Reference Stress and R6 Methods”, International Journal of Pressure Vessels and Piping, Vol.63, pp.293-302, (1995) (S.Yoshimura, G.Yagawa, C-R.Pyo, K.Kashima, T.Shimakawa, S.Takamatsu)
(22) “Neural Network Approach to Estimate Stable Crack Growth in Welded Specimens”, International Journal of Pressure Vessels and Piping, Vol. 63, pp.303-313, (1995) (G.Yagawa, A.Matsuda, H.Kawate, S.Yoshimura)
(23) “Study on Life Extension of Aged RPV Material Based on Probabilistic Fracture Mechanics : Japanese Round Robin”, Transactions of ASME, Journal of Pressure Vessel Technology, Vol.117, pp.7-13, (1995) (G.Yagawa, S.Yoshimura, N.Handa, T.Uno, K.Watashi, T.Fujioka, H.Ueda, M.Uno, K.Hojo, S.Ueda)
(24) “Quantitative Nondestructive Evaluation with Ultrasonic Method Using Neural Networks and Computational Mechanics”, Computational Mechanics, Vol.15, pp.521-523, (1995) (A.Oishi, K.Yamada, S.Yoshimura, G.Yagawa)
(25) “Life Extension Simulation of Aged Reactor Pressure Vessel Material Using Probabilistic Fracture Mechanics Analysis on a Massively Parallel Computer”, Nuclear Engineering and Design, Vol.158, pp.341-350, (1995) (S.Yoshimura, M-Y.Zhang, G.Yagawa)
(26) “Automated Structural Design Based on Knowledge Engineering and Fuzzy Control”, Engineering Computations, Vol.12, No.7, pp.593-608, (1995) (S.Yoshimura, Y.Mochizuki, G.Yagawa)

(27) “Automatic Mesh Generation of Complex Geometries Based on Fuzzy Knowledge Processing and Computational Geometry”, Integrated Computer-Aided Engineering, Vol.2, No.4, pp.265-280, (1995) (G.Yagawa, S.Yoshimura, K.Nakao)
(28) “A CAE System for Micromachines: Its Application to Electrostatic Micro Wobble Actuator”, Sensors and Actuators, Ser.A, No.50, pp.209-221, (1995) (J-S.Lee, S.Yoshimura, G.Yagawa, N.Shibaike)
(29) “Direct Analysis Method for Probabilistic Fracture Mechanics”, Nuclear Engineering and Design, Vol.160, pp.347-362, (1996) (H.Akiba, S.Yoshimura, G.Yagawa)
(30) “Analyses of Possible Failure Mechanisms and Root Failure Causes in Power Plant Components Using Neural Networks and Structural Failure Database”, Transactions of ASME, Journal of Pressure Vessel Technology, Vol.118, pp.237-246 (1996) (S.Yoshimura, A.S.Jovanovic)
(31) “Mesh-Invisible Finite Element Analysis in a Virtual Reality Environment”, Computer Modeling and Simulation in Engineering, Vol.1, No.2, pp.289-314, (1996) (G.Yagawa, H.Kawai, S.Yoshimura, A.Yoshioka)
(32) “New Regularization by Transformation for Neural Network Based Inverse Analyses and Its Application to Structure Identification”, International Journal for Numerical Methods in Engineering, Vol.39, pp.3953-3968, (1996) (S.Yoshimura, A.Matsuda, G.Yagawa)
(33) “Identification of Two Dissimilar Surface Cracks Hidden in Solid Using Neural Networks and Computational Mechanics”, Computer Modeling and Simulation in Engineering, Vol.1, pp.477-491, (1996) (S.Yoshimura, Y.Saito, G.Yagawa)
(34) “Performance Study of the Domain Decomposition Method with Direct Equation Solver for Parallel Finite Element Analysis”, Computational Mechanics, Vol.19, pp.84-93, (1996) (G.P.Nikishkov, A.Makinouchi, G.Yagawa, S.Yoshimura)
(35) “Recursive Distribution Method for Probabilistic Fracture Mechanics”, Computational Mechanics, Vol.18, pp.175-185, (1996) (H.Akiba, S.Yoshimura, G.Yagawa)
(36) “Automated System for Structural Design Using Design Window Search Approach: Its Application to Fusion First Wall Design”, Advances in Engineering Software, Vol.28, pp.103-113, (1997) (Y.Mochizuki, S.Yoshimura, G.Yagawa)
(37) “Automated System for Analyzing Stress Intensity Factors of Three-Dimensional Cracks: Its Application to Analyses of Two Dissimilar Semi-Elliptical Surface Cracks in Plate”, Transactions of ASME, Journal of Pressure Vessel Technology, Vol.119, pp.18-26, (1997) (S.Yoshimura, J-S.Lee, G.Yagawa)
(38) “A Study on Probabilistic Fracture Mechanics for Nuclear Pressure Vessels and Piping”, International Journal of Pressure Vessels and Piping, Vol.73, pp.97-107, (1997) (G.Yagawa, S.Yoshimura)
(39) “Probabilistic Fracture Mechanics Analyses of Nuclear Pressure Vessels under PTS Events”, Nuclear Engineering and Design, Vol.174, pp.91-100, (1997) (G.Yagawa, S.Yoshimura, N.Soneda, M.Hirano)
(40) “Neural Network Based Parameter Estimation for Nonlinear Finite Element Analyses”, Engineering Computations, Vol.15, pp.103-138, (1998) (A.Matsuda, H.Okuda, S.Yoshimura, G.Yagawa)
(41) “A CAE System for Multidisciplinary Design and Its Interface in Internet”, Internet Journal of Japan Society of Computational Engineering and Science, No.19980004, (1998) (S.Yoshimura, T.Kowalczyk, Y.Wada, G.Yagawa)
(42) “Porting the Industrial Sheet Metal Forming Code to Parallel Computer”, Computers and Structures, Vol.67, pp.439-449, (1998) (G.P.Nikishkov, M.Kawka, A.Makinouchi, G.Yagawa, S.Yoshimura)
(43) “An Algorithm for Domain Partitioning with Load Balancing”, Engineering Computations, Vol.16, No.1, pp.120-135, (1999) (G.P.Nikishkov, A.Makinouchi, G.Yagawa, S.Yoshimura)
(44) “Load Balancing and Tuning the Shur Complement Computations in Parallel Finite Element Analysis”, Computer Modeling and Simulation in Engineering, Vol.4, No.1, pp.12-18, (1999) (G.P.Nikishkov, N.Makinouchi, G.Yagawa, S.Yoshimura)
(45) “Automatic Mesh Generation of Quadrilateral Elements Using Intelligent Local Approach”, Computer Methods in Applied Mechanics and Engineering, Vol.179, pp.125-138, (1999) (S.Yoshimura, Y.Wada, G.Yagawa)

(46) “Probabilistic Fracture Mechanics of Nuclear Structural Components : Consideration of Transition from Embedded Crack to Surface Crack”, Nuclear Engineering and Design, Vol.191, pp.263-273, (1999) (G.Yagawa, Y.Kanto, S.Yoshimura)
(47) “A PC-based System for Evaluation of Three-dimensional Stress Intensity Factors”, International Journal of Pressure Vessels and Piping, Vol.76, pp.495-501, (1999) (S.Yoshimura, H.Kawate, Y.Wada, G.Yagawa)
(48) “Risk-Benefit Analyses of SG Tube Maintenance Based on Probabilistic Fracture Mechanics”, Nuclear Engineering and Design, Vol.207, pp.287-298, (2001) (Y.Isobe, M.Sagisaka, S.Yoshimura, G.Yagawa)
(49) “Probabilistic Fracture Mechanics Analysis of Nuclear Structural Components : A Review of Recent Japanese Activities”, Nuclear Engineering and Design, Vol.207, No.3, pp.269-286, (2001) (G.Yagawa, Y.Kanto, S.Yoshimura, H.Machida, K.Shibata)
(50) “Neural Network Based Inverse Analysis for Defect Identification with Laser Ultrasonics”, Research in Nondestructive Examination, pp.79-95 (2001) (A.Oishi, K.Yamada, S.Yoshimura, G.Yagawa, S.Nagai, Y.Matsuda)
(51) “Advanced General-purpose Computational Mechanics System for Large Scale Analysis and Design”, Journal of Computational and Applied Mathematics, Vol.149, pp.279-296, (2002) (S.Yoshimura, R.Shioya, H.Noguchi, T.Miyamura)
(52) “Domain Decomposition Based Parallel Contact Algorithm and Its Implementation to Explicit Finite Element Analysis Code”, JSME International Journal, Vol.45A, No.2, pp.123-130, (2002) (A.Oishi, S.Yoshimura, G.Yagawa)
(53) “Optimization of Operation and Maintenance of Nuclear Power Plant by Probabilistic Fracture Mechanics”, Nuclear Engineering and Design, Vol.214, No.1-2, pp.1-12, (2002) (N.Maeda, S.Nakagawa, G.Yagawa, S.Yoshimura)
(54) “Elastic-Plastic Analysis of Nuclear Structures with Millions of DOFs Using the Hierarchical Domain Decomposition Method”, Nuclear Engineering and Design, Vol.212, pp.335-355, (2002) (T.Miyamura, H.Noguchi, R.Shioya, S.Yoshimura, G.Yagawa)
(55) “Hexahedral Mesh Generation of Nuclear Structures Using Intelligent Local Approach”, Nuclear Engineering and Design, Vol.212, pp.321-333, (2002) (Y.Wada, S.Yoshimura)
(56) “Pareto-based Continuous Evolutionary Algorithms for Multiobjective Optimization”, Evolutionary Computation, Vol.19, No.1, pp.22-48, (2002) (M-B.Shim, M-W.Suh, T.Furukawa, G.Yagawa, S.Yoshimura)
(57) “Automated System of Simulation and Parameter Identification of Inelastic Constitutive Models”, Computer Methods in Applied Mechanics and Engineering, Vol.191, pp.2235-2260, (2002) (T.Furukawa, T.Sugata, S.Yoshimura, M.Hoffmann)
(58) “Direct Design Window Search Method and Its Application to Micro Electrostatic Actuator”, Computers and Structures, Vol.80, pp.2469-2481, (2002) (D.Ishihara, M-J.Jeong, S.Yoshimura, G.Yagawa)
(59) “Probabilistic Fracture Mechanics Analysis of Nuclear Piping Considering Dispersion in Seismic Loading”, International Journal of Pressure Vessels and Piping, Vol.79, pp.193-202, (2002) (H.Machida, S.Yoshimura)
(60) “Thermoelasticity Optimization of 3-D Serpentine Cooling Passages in Turbine Blades”, International Journal of Turbo and Jet-Engines, Vol.21, No.1, pp.57-68, (2004) (B.H.Dennis, I.N.Egorov, H.Sobieczky, G.S.Dulikravich, S.Yoshimura)
(61) “Generalized I/O Data Format and Interface Library for Module-based Parallel Finite Element Analysis System”, Advances in Software Engineering, Vol.35, pp.149-159, (2004) (T.Miyamura, S.Yoshimura)
(62) “A Finite Element Formulation for the Determination of Unknown Boundary Conditions for Three-dimensional Steady Thermoelastic Problems”, Transactions of ASME, Journal of Heat Transfer, Vol.126, No.1, pp.110-118, (2004) (B.H.Dennis, G.S.Dulikravich, S.Yoshimura)
(63) “Multidimensional Clustering Interpretation and Its Application to Optimization of Coolant Passage of Turbine Blade”, Transactions of ASME, Journal of Mechanical Design, Vol.127, pp.215-221, (2005) (M.J.Jeong, B.H.Dennis, S.Yoshimura)
(64) “Discontinuous Boundary Implementation for the Shallow Water Equations”, International Journal for Numerical Methods in Fluids, Vol.47, pp.1451-1468, (2005) (S.Bunya, J.J.Westerink, S.Yoshimura)
(65) “Seismic Response Analysis of Full Scale Nuclear Vessel Model with ADVENTURE System on the Earth Simulator”, Journal of the Earth Simulator, Vol.2, pp.41-54, (2005) (M.Ogino, R.Shioya,

H.Kawai, S.Yoshimura)
(66) “A Human-like Numerical Technique for Engineering Design”, International Journal for Numerical Methods in Engineering, Vol.64, pp.1915-1943, (2005) (Chen Jian Ken Lee, T.Furukawa, S.Yoshimura)
(67) “A Monolithic Approach for Interaction of Incompressible Viscous Fluid and an Elastic Body Based on Fluid Pressure Poisson Equation”, International Journal for Numerical Methods in Engineering, Vol.64, pp.167-203, (2005) (D.Ishihara, S.Yoshimura)
(68) “Parallel Process System and Its Application to Steam Generator Structural Analysis”, Journal of Mechanical Science and Technology (KSME International Journal), Vol.19, No.11, pp.2007-2015, (2005) (Yoon-Suk Chang, Han-Ok Ko, Jae-Boong Choi, Young-Jin Kim, S.Yoshimura)
(69) “Seismic Loads for Crack Stability Assessment in a Review of Leak-before-break (LBB) Applicability”, Nuclear Engineering and Design, Vol.235, pp.21-31, (2005) (H.Machida, N.Yamashita, S.Yoshimura, G.Yagawa)
(70) “Virtual Demonstration Tests of Large-Scale and Complex Artifacts Using an Open Source Parallel CAE System, ADVENTURE”, Journal of Solid State Phenomena, Vol.110, pp.133-142, (2006) (S. Yoshimura)
(71) “MATES : Multi-Agent based Traffic and Environmental Simulator – Theory, Implementation and Practical Application “, Computer Modeling in Engineering and Sciences, Vol.11, No.1, pp.17-25, (2006) (S. Yoshimura)
(72) “Large Scale Drop Impact Analysis of Mobile Phone Using ADVC on Blue Gene/L”, (H.Akiba, T.Ohyama, Y.Shibata, K.Yuyama, Y.Katai, R.Takeuchi, T.Hoshino, S.Yoshimura, H.Noguchi, M.Gupta, J.A.Gunnels, V.Austel, Y.Sabharwal, S.Kato, T.Kawakami, S.Tadokoro, J.Ikeda, Proceedings of IEEE/ACM Supercomputing’ 06, CD-ROM, 2006 (2006 Gordon Bell Award finalist)
(73) “Improvements in Mass Conservation Using Alternative Boundary Implementations for a Quasi-Bubble Finite Element Shallow Water Model”, International Journal for Numerical Methods in Fluid, Vol.47, pp.1451-1468, (2006) (S.Bunya, S.Yoshimura, J.J.Westerink)
(74) “Recent Japanese Probabilistic Fracture Mechanics Researches Related to Failure Probability of Aged RPV”, Journal of Solid State Phenomena, Vol.120, pp.49-67, (2007) (K.Shibata, Y.Kanto, S.Yoshimura, G.Yagawa)
(75) “Economic Evaluation of Maintenance Strategies for Steam Generator Tubes Using Probabilistic Fracture Mechanics and a Financial Method”, Journal of Solid State Phenomena, Vol.120, pp.119-126, (2007) (Y.Isobe, M.Sagisaka, S.Yoshimura, G.Yagawa)
(76) “Numerical Prediction of Sound Generated from Flows with a Low Mach Number”, Computers and Fluids, Vol.36, No.1, pp.53-68, (2007) (C.Kato, Y.Yamade, H.Wang, Y.Guo, M.Miyazawa, T.Takaishi, S.Yoshimura, Y.Takano)
(77) “Efficient Parallel Analysis of Shell-fluid Interaction Problem by Using Monolithic Method Based on Consistent Pressure Poisson Equation”, JSME Journal of Computational Science and Technology, Vol.2, No.1, pp.185-196, (2008) (D.Ishihara, S.Kanei, S.Yoshimura, T.Horie)
(78) “Quantitative Evaluation of Flow-Induced Structural Vibration and Noise in Turbomachinery by Full-Scale Weakly Coupled Simulation”, Journal of Fluids and Structures, Vol.23, pp.531-544, (2007) (Y-Y.Jiang, S.Yoshimura, R.Imai, H.Katsura, T.Yoshida, C.Kato)
(79) “A New Local Contact Search Method Using a Multi-layer Neural Network”, Computer Modeling in Engineering and Sciences, Vol.21, No.2, pp.93-103, (2007) (A.Oishi, S.Yoshimura)
(80) “An Application of the Domain Decomposition Method to Three-Dimensional Large-Scale Magnetic Field Analyses”, International Journal of Pure and Applied Mathematics, Vol.42, No.2, pp.267-273, (2008) (H.Kanayama, S.Sugimoto, S.Yoshimura)
(81) “Vectorization of Polygon Rendering for Off-line Visualization of a Large Scale Structural Analysis with ADVENTURE System on the Earth Simulator”, Journal of the Earth Simulator, Vol.9, pp.51-63, (2008.3) (H.Kawai, M.Ogino, R.Shioya, S.Yoshimura)
(82) “Finite Element Analyses of Dynamic Problems Using Graphics Hardware”, Computer Modeling in Engineering and Science, Vol.25, No.2, pp.115-132, (2008) (A.Oishi, S.Yoshimura)
(83) “Line Search Partitioned Approach for Fluid-Structure Interaction Analysis of Flapping Wing”, Computer Modeling in Engineering and Sciences, Vol.24, No.1, pp.51-60, (2008) (T.Yamada, S.Yoshimura)
(84) “Genetic Approaches to Iteration-free Local Contact Search”, Computer Modeling in Engineering and Sciences, Vol.28, No.2, pp.127-146, (2008) (A.Oishi, S.Yoshimura)
(85) “Large Scale Parallel Finite Element Analyses of High Frequency Electromagnetic Field in

Commuter Trains", Computer Modeling in Engineering and Sciences, Vol.21, No.1, pp.1-11, (2009) (A.Takei, S.Yoshimura, H.Kanayama)
(86) "Development of Probabilistic Fracture Mechanics Analysis Code for Pipes with Stress Corrosion Cracks", JSME Journal of Power and Energy Systems, Vol.3, No.1, pp.103-113, (2009) (H.Machida, M.Arakawa, N.Yamashita, S.Yoshimura)
(87) "Practical Performances of Non-linear Algorithms for Partitioned Iterative Methods of Fluid-Structure Interaction Problems", JSME Journal of Computational Science and Technology, Vol.3, No.1, pp.396-407, (2009) (S.Minami, S.Yoshimura)
(88) "Large-scale Full Wave Analysis of Electromagnetic Field by Hierarchical Domain Decomposition Method", Computer Modeling in Engineering and Sciences, Vol.40, No.1, pp.63-81, (2009) (A.Takei, S.Yoshimura, H.Kanayama)
(89) "Performance Evaluation on Nonlinear Algorithms with Line-Search for Partitioned Coupling Techniques for Fluid-Structure Interactions", International Journal for Numerical Methods in Fluids, Vol.64, Nos.10-12, pp.1129-1147, (2010) (S.Minami, S.Yoshimura)
(90) "Full Wave Analyses of Electromagnetic Fields with an Iterative Domain Decomposition Method", IEEE Transactions on Magnetics, Vol.46, No.8, pp.2860-2863, (2010) (A.Takei, S.Sugimoto, M.Ogino, S.Yoshimura, H.Kanayama)
(91) "Multi-agent Based Traffic Simulation at Merging Section Using Coordinative Behavior Model", Computer Modeling in Engineering and Sciences, Vol.63, No.3, pp.265-282, (2010) (H.Fujii, S.Yoshimura, K.Seki)
(92) "Virtual Social Experiment of Tram Railway Extension Using Multi-agent-based Traffic Simulator", Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol.15, No.2, pp.226-232, (2011) (H.Fujii, T.Sakurai, S.Yoshimura)
(93) "Large Scale Elasto-Plastic Analysis Using Domain Decomposition Method Optimized for Multi-core CPU Architecture", Key Engineering Materials, Vols.462-463, pp.605-610, (2011) (H.Kawai, M.Ogino, R.Shioya, S.Yoshimura)
(94) "A Monolithic Approach Based on Balancing Domain Decomposition Method for Acoustic Fluid-Structure Interaction", Transactions of ASME, Journal of Applied Mechanics, Vol.79, No.1, 010906-010906-8, (2012), (DOI: 10.1115/1.4005092) (S.Minami, H.Kawai, S.Yoshimura)
(95) "Summary of International PFM Round Robin Analyses among Asian Countries on Reactor Pressure Vessel Integrity during Pressurized Thermal Shock", International Journal of Pressure Vessels and Piping, Vol.90-91, pp.46-55, (2012) (Y.Kanto, M-J.Jhung, K.Ting, Y-B.He, K.Onizawa, S.Yoshimura)
(96) "Benchmark Analysis on PFM Analysis Codes for Aged Piping of Nuclear Power Plants", JSME Journal of Mechanical Science and Technology, Vol.26, No.7, pp.2055-2058, (2012) (H.Itoh, Y-S.Li, K.Osakabe, K.Onizawa, S.Yoshimura)
(97) "Parallel BDD based Monolithic Approach for Acoustic Fluid-Structure Interaction", Computational Mechanics, Vol.50, pp.707-718, (2012) (S.Minami, H.Kawai, S.Yoshimura)
(98) "Benchmark Analysis and Numerical Investigation on Probabilistic Fracture Mechanics Analysis Codes for NPPs Piping", International Journal of Pressure Vessels and Piping, Vol.99-100, pp.61-68, (2012) (H.Itoh, Y-S.Li, K.Osakabe, K.Onizawa, S.Yoshimura)
(99) "CG-based Subdomain Local Solver with ICT Factorization Preconditioner for Domain Decomposition Method", JSME Journal of Computational Science and Technology, Vol.6, No.3, pp.157-168, (2012) (Y.Yusa, S.Minami, H.Kawai, S.Yoshimura)
(100) "Precise Evaluation of Vehicles Emission in Urban Traffic Using Multi-agent-based Traffic Simulator MATES", Computer Modeling in Engineering and Science, Vol.88, No.1, pp.49-64, (2012) (H.Fujii, S.Yoshimura)
(101) "Seismic Structural Response Estimates of a Fault-Structure System Model with Fine Resolution Using Multiscale Analysis with Parallel Simulation of Seismic-Wave Propagation", Bulletin of the Seismological Society of America, Vol.103, No.3, pp.2094-2110 (2013), June 2013, doi:10.1785/0120120216 (Pher Errol Balde Quinay, T.Ichimura, M.Hori, A.Nishida, S.Yoshimura)
(102) "Investigating the Impact of Trading Frequencies of Market Makers : A Multi-Agent Simulation Approach", SICE Journal of Control, Measurement, and System Integration, Vol.6, No.3, pp.216-220, (2013) (Chi Wang, K.Izumi, T.Mizuta, S.Yoshimura)
(103) "Mixed-mode Fracture Mechanics Analysis of Large-scale Cracked Structures Using Partitioned Iterative Coupling Method", Computer Modeling in Engineering and Science, Vol.91, No.6, pp.445-461, (2013) (Y.Yusa, S.Yoshimura)

(104) “Design of Financial Market Regulations against Large Price Fluctuations Using by Artificial Market Simulations”, Journal of Mathematical Finance, Vol.3, pp.15-22, (2013) (T.Mizuta, K.Izumi, I.Yagi, S.Yoshimura)
(105) “Benchmark analysis on probabilistic fracture mechanics analysis codes concerning fatigue crack growth in aged piping of nuclear power plants”, International Journal of Pressure Vessels and Piping, Vol.117-118, pp.56-63, (2014) (J.Katsuyama, H.Itoh, Y.Li, K.Onizawa, S.Yoshimura)
(106) “Speedup of Elastic-Plastic Analysis of Large-scale Model with Crack Using Partitioned Coupling Method with Subcycling Technique”, Computer Modeling in Engineering & Sciences, Vol.99, No.1, pp.87-104, (2014) (Y.Yusa, S.Yoshimura)
(107) “A Parallel Iterative Partitioned Coupling Analysis System for Large-Scale Acoustic Fluid-Structure Interactions”, Computational Mechanics, Vol.53, No.6, pp.1299-1310, (2014) (S.Kataoka, S.Minami, H.Kawai, T.Yamada, S.Yoshimura)
(108) “How Does High Frequency Risk Hedge Activity Have an Effect on Underlying Market ? : Analysis by Artificial Market Model”, Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol.18, No.4, pp.558-566, (2014) (S.Kawakubo, K.Izumi, S.Yoshimura)
(109) “Hierarchical Domain Decomposition with Parallel Mesh Refinement for Billions-of-DOF Scale Finite Element Analyses”, International Journal of Computational Methods, Vol.11, No.4, 1350061, (2014) DOI: 10.1142/S0219876213500618 (K.Murotani, S.Sugimoto, H.Kawai, S.Yoshimura)
(110) “MPS-FEM Partitioned Coupling Approach for Fluid-Structure Interaction with Free Surface Flow”, International Journal of Computational Methods, Vol.11, No.4, 1350101, (2014) DOI: 10.1142/S0219876213501016 (N.Mitsume, S.Yoshimura, K.Murotani, T.Yamada)
(111) “Development of Hierarchical Domain Decomposition Explicit MPS Method and Application to Large-scale Tsunami Analysis with Floating Objects”, Journal of Advanced Simulation in Science and Engineering, Vol.1, No.1, pp.16-35, (2014) (K.Murotani, S.Koshizuka, T.Tamai, K.Shibata, N.Mitsume, S.Yoshimura, S.Tanaka, K.Hasegawa, E.Nagai, T.Fujisawa)
(112) “Analysis of an Option Market Dynamics Based on a Heterogeneous Agent Model”, Intelligent Systems in Accounting, Finance and Management, Vol.21, No.2, pp.105-128, (2014) (S. Kawakubo, K. Izumi, S. Yoshimura)
(113) “Performance Evaluation of Parallel Finite Element Electromagnetic Field Analysis Using Numerical Human Models”, Journal of Advanced Simulation in Science and Engineering, Vol.1, No.1, pp.127-140, (2014) (A.Takei, K.Murotani, S.Sugimoto, M.Ogino, T.Yamada, S.Yoshimura)
(114) “Understanding the Mechanism of Tsunami-induced Damage to Machines and Structures Based on a Discipline of Mechanics”, Chapter 4 of Lessons Learned from the Great East Japan Earthquake Disaster, Report of the JSME Research Committee on the Great East Japan Earthquake Disaster, pp.24-57 (2014) http://www.jsme.or.jp/English/ (S.Yoshimura, H.Nakamura, H.Kanayama, T.Aoki, T.Himeno, Y.Sakai, S.Koshizuka, D.Isobe, H.Fujii)
(115) “Improved MPS-FE Fluid-Structure Interaction Coupled Method with MPS Polygon Wall Boundary Model”, Computer Modeling in Engineering & Sciences, Vol.101, No.4, pp.229-247, (2014), (N.Mitsume, S.Yoshimura, K.Murotani, T.Yamada)
(116) “Seismic Response Analysis of Full Scale Boiling Water Reactor Using Three Dimensional Finite Element Method”, Journal of Nuclear Science and Technology, Vol.52, No.4, pp.546-567, (2015) (S.Yoshimura, K.Kobayashi, H.Akiba, S.Suzuki, M.Ogino)
(117) “Explicitly Represented Polygon Wall Boundary Model for the Explicit MPS Method”, Computational Particle Mechanics, Vol.2, No.1, pp.73-89, (2015) (N.Mitsume, S.Yoshimura, K.Murotani, T.Yamada)
(118) “Ultra-large Scale Fracture Mechanics Analysis Using a Parallel Finite Element Method with Submodel Technique”, Finite Elements in Analysis and Design, Vol.105, pp.44-55, (2015) (K.Arai, K.Yodo, H.Okada, T.Yamada, H.Kawai, S.Yoshimura)
(119) “Petascale Coupled Simulations of Real World’s Complex Structures”, IACM Expression, No.37, pp.9-13, (2015) (S.Yoshimura, T.Yamada, H.Kawai, T.Miyamura, M.Ogino, R.Shioya)
(120) “Effects of Price Regulations and Dark Pools on Financial Market Stability : An Investigation by Multiagent Simulations”, Intelligent Systems in Accounting, Finance and Management, DOI: 10.1002/isaf.1374 (T.Mizuta, S.Kosugi, T.Kusumoto, W.Matsumoto, K.Izumi, I.Yagi, S.Yoshimura)
(121) “Parallel Partitioned Simulations of Real World’s Coupled Problems”, Proceedings of Indian National Science Academy, Vol.82, No.2, pp.147-162, (2016) (S.Yoshimura, T.Yamada)
(122) “Benchmark Analyses of Probabilistic Fracture Mechanics for Cast Stainless Steel Pipe”, Bulletin of the JSME, Mechanical Engineering Journal, Vol.3, No.4, (2016), DOI: 10.1299/mej.16-

00083 (K.Hojo, S.Hayashi, W.Nishi, M.Kamaya, J.Katsuyama, K.Masaki, M.Nagai, T.Okamoto, Y.Takada, S.Yoshimura)
(123) “Parallel Partitioned Coupling Analysis System for Large-scale Incompressible Viscous Fluid-Structure Interaction Problems”, Computers and Fluids, Vol.141, pp. 259–268, (2016), (T. Yamada, G.-W. Hong, S. Kataoka, S. Yoshimura)
(124) “A Numerical Study of Iterative Substructuring Method for Finite Element Analysis of High Frequency Electromagnetic Fields”, Computers & Mathematics with Applications, Vol.72, No.8, pp.2020-2027, (2016), (M. Ogino, A. Takei, S. Sugimoto, S. Yoshimura)
(125) “Server-side Screening and Network Visualization of Huge Simulation Results”, Key Engineering Materials, Vol.713, pp.254-257, (2016) (T. Yamada, K. Yodo, Y. Wada, S. Yoshimura)
(126) “A Mesh Moving Technique with Minimum-Height-Based Stiffening for Fluid-Structure Interaction Analysis”, Mechanical Engineering Letters, Bulletin of the JSME, Vol.3, p.16-00657(8 pages), (2017), (T. Yamada, Y. Yamamoto, G. Hong, S. Yoshimura)
(127) “Numerical Analysis of Impact Failure of Automotive Laminated Glass : A Review”, Composites Part B: Engineering, Vol.122, pp.47-60, (2017) (S. Chen, M. Zang, D. Wang, S. Yoshimura, T. Yamada)
(128) “Agent-based Simulation Framework for Mixed Traffic of Cars, Pedestrians and Trams”, Transportation Research, Part C, Emerging Technologies, Vol. 85, pp.234-248, (2017) (H. Fujii, H. Uchida, S. Yoshimura)
(129) “Inverse Analysis of Origin-Destination Matrix for Microscopic Traffic Simulation”, Computer Modeling in Engineering & Sciences, Vol.113, pp.71-78, (2017), (K.Abe, H.Fujii, S.Yoshimura)
(130) “Partitioned-Coupling FSI Analysis with Active Control”, Computational Mechanics, Vol.64, No.4, pp.549-558, (2017) (S. Kaneko, G.-W. Hong, N. Mitsume, T. Yamada, S. Yoshimura)
(131) “Speedup of Dynamic Route Search for Large-scale Microscopic Traffic Simulation”, Journal of Advanced Simulation in Science and Engineering, Vol.4, No.1, pp.31-43, (2018) (N.Mita, H.Uchida, H.Fujii, S.Yoshimura)
(132) “Cluster Analysis for a Series of Microscopic Traffic Simulation Results”, Journal of Advanced Simulation in Science and Engineering, Vol.4, No.1, pp.78-98, (2018) (M. Yanai, K. Abe, T. Yamada, H. Fujii, S. Yoshimura)
(133) “Numerical Study of Active Control by Piezoelectric Materials for Fluid-Structure Interaction Problems”, Journal of Sound and Vibration, Vol.435, pp.23-35, (2018) (S. Kaneko, G.-W. Hong, N. Mitsume, T. Yamada, S. Yoshimura)
(134) “Verification and Validation of Dynamic Response Simulation Codes for BWR Fuel Assemblies Under Seismic Loading”, International Journal of Pressure Vessels and Piping, Vol.167, pp.25-31, (2018) (T. Yamada, S. Yoshimura, Y. Koide, S. Onitsuka, T. Iijima)
(135) “Coupling Model between Finite Element-based Analysis of Boussinesq-type Wave Model and Particle-based Analysis of Free-surface Flow”, International Journal for Numerical Methods in Fluids, Vol.88, No.3, pp.141–168, (2018) (N. Mitsume, A. S. Donahue, J. J. Westerink, S. Yoshimura)
(136) “An Improved Contact Formulation for Impact Crack Simulation in a Laminated Grass Beam”, International Journal of Computational Methods, Vol.15, No.8, (2018), DOI: 10.1142/S0219876218500779 (S. Chen, M. Zang, S. Yoshimura, Z. Zheng)
(137) “Scalable Parallel Elastic-Plastic Finite Element Analysis Using a Quasi-Newton Method with a Balancing Domain Decomposition Preconditioner”, Computational Mechanics, Vol.62, No.6, pp.1563-1581, (2018) (Y. Yusa, H. Okada, T. Yamada, S. Yoshimura)
(138) “A Nodal-based Extrinsic Cohesive/Contact Model for Interfacial Debonding Analyses in Composite Structures”, Computers and Structures, Vol.215, pp.80-97, (2019) (Shunhua Chen, Naoto Mitsume, Wei Gao, Tomonori Yamada, Mengyan Zang, Shinobu Yoshimura)
(139) “Seismic Analysis of Nuclear Power Plants by Using Three-dimensional Finite Element Models : A Review”, Journal of Nuclear Science and Technology, Vol.56, No.1, pp.1-16, (2019) (Shohei Onitsuka, Tadashi Iijima, Tomonori Yamada, Shinobu Yoshimura)
(140) “Parallel Analysis System for Free-Surface Flow Using MPS Method with Explicitly Represented Polygon Wall Boundary Model”, Computational Particle Mechanics, Vol.7, pp.279-290, (2019) (Naoto Mitsume, Tomonori Yamada, Shinobu Yoshimura)
(141) “Time-based Dynamic Load Balancing Algorithm for Domain Decomposition with Particle Method Adopting Three-dimensional Polygon-wall Boundary Model”, Journal of Advanced Simulation in Science and Engineering, Vol.6, No.2, pp.282-297, (2019) (Yoshiki Mizuno, Naoto Mitsume, Tomonori Yamada, Shinobu Yoshimura)

(142) “Development of Two Intrinsic Cohesive Zone Models for Progressive Interfacial Cracking of Laminated Composites with Matching and Non-matching Cohesive Elements”, Composite Structures, Vol.229, No.1, 111406, (2019) (Shunhua Chen, Naoto Mitsume, Tinh Quoc Bui, Wei Gao, Tomonori Yamada, Mengyan Zang, Shinobu Yoshimura)
(143) “Feasibility study of full-scale elastic-plastic seismic response analysis of a nuclear power plant”, Bulletin of the JSME, Mechanical Engineering Letters, Vol.6, No.6, pp.19-00281-19-00281, (2019) (Tomoshi Miyamura, Shinobu Yoshimura, Tomonori Yamada)
(144) “Guideline on Probabilistic Fracture Mechanics Analysis for Japanese Reactor Pressure Vessels”, Transactions of ASME, Journal of Pressure Vessel Technology, Vol.142, No.2, 021205, (2020) (Jinya Katsuyama, Kazuya Osakabe, Shumpei Uno, Yinsheng Li, Shinobu Yoshimura)
(145) “Parallel Analysis System for Free-surface Flow Using MPS Method with Explicitly Represented Polygon Wall Boundary Model”, Computational Particle Mechanics, Vol.7, No.2, pp.279-290, (2020) (Naoto Mitsume, Tomonori Yamada, Shinobu Yoshimura)
(146) “A Computational Framework for Impact Fracture Analysis of Laminated Glass : An Extrinsic Cohesive Shell Approach”, Computers and Structures, Vol.233, 106238, (2020) (Di Wang, Shunhua Chen, Wei Xu, Mengyan Zang, Shinobu Yoshimura)
(147) “A Novel Ghost Cell Boundary Model for the Explicit Moving Particle Simulation Method in Two Dimensions”, Computational Mechanics, Vol.66, No.1, pp.87-102, (2020) (Zumei Zheng, Guangtao Duan, Naoto Mitsume, Shunhua Chen, Shinobu Yoshimura)
(148) “A Cohesive Zone Based DE/FE Coupling Approach for Interfacial Debonding Analysis of Laminated Grass”, Theoretical and Applied Fracture Mechanics, Vol.108, 102668, (2020) (Wei Gao, Xin Liu, Shunhua Chen, Tinh Quoc Bui, Shinobu Yoshimura)
(149) “An Explicit MPS/FEM Coupling Algorithms for Three-dimensional Fluid-structure Interaction Analysis”, Engineering Analysis with Boundary Elements, Vol.121, pp.192-206 (2020) (Zumei Zheng, Guangtao Duan, Naoto Mitsume, Shunhua Chen, Shinobu Yoshimura)
(150) “A Nodal-based Lagrange Multiplier/Cohesive Zone approach for Dynamic Interfacial Cracking Analysis of Thin-walled Laminated Composite Structures”, Composites Part B, Vol.256, 113112, (2021) (Shunhua Chen, Hu Chen, Naoto Mitsume, Naoki Morita, Tinh Quoc Bui, Shinobu Yoshimura)
(151) “Application of Probabilistic Fracture Mechanics to Reactor Pressure Vessel Using PASCAL4 Code”, Transactions of ASME, Journal of Pressure Vessel Technology, Vol.143, 021505-1-8, April (2021) (Kai Lu, Jinya Katsuyama, Yinsheng Li, Shinobu Yoshimura)
(152) “Robust Fluid-Structure Interaction Analysis for Parametric Study of Flapping Motion”, Finite Elements in Analysis & Design, Vols.183-184, 103494, (2021) (Giwon Hong, Shigeki Kaneko, Naoto Mitsume, Tomonori Yamada, Shinobu Yoshimura)
(153) “A Hyper-reduction Method for Accelerated Prediction of Thermal Fatigue Behaviors of Electric Packages”, Journal of the Mechanics and Physics of Solids, Under Review (Shigeki Kaneko, Haoyan Wei, Qizhi He, J. S. Chen, Shinobu Yoshimura)
(154) “Traffic Demand Estimation for Multi-agent Based Simulator Considering Link Congestion”, IET Transactions on Intelligent Transportation System, Under Review (Kazuki Abe, Hideki Fujii, Shinobu Yoshimura)

11. Publications (Book Chapters)

(1) “Fully Plastic Solutions of Three-Dimensional Cracks : A Comparison Study”, Computational and Experimental Fracture Mechanics Developments in Japan, Topics in Engineering, Vol.16, pp.91-109, (1994)(G.Yagawa, S.Yoshimura, C-R. Pyo)
(2) “Some Structural Integrity Studies of Pressure Vessels and Piping in Japan - a Review”, International Journal of Pressure Vessels and Piping, Vol.65, pp.101-107, (1995)（S.Yoshimura）
JPX Working Paper, Japan Exchange Group, Vol.2, (2013) (T. Mizuta, S. Hayakawa, K. Izumi, S. Yoshimura)
(3) “Parallel Analysis System for Fluid-Structure Interaction with Free-Surfaces Using ADVENTURE_Solid and LexADV_EMPS”, Advances in Computational Fluid-Structure Interaction and Flow Simulation (eds. Y. Bazilevs, K. Takizawa), pp.245-255, (2017), Birkhaeuser.
(N. Mitsume, T. Yamada, S. Yoshimura, K. Murotani)
(4) “A Hybrid Finite Element and Mesh-free Particle Method for Disaster-resilient Design of Structures”, (N. Mitsume, S. Yoshimura, K. Murotani, T. Yamada)
Resilience : A New Paradigm of Nuclear Safety (eds. J. Ahn, F. Guarnieri, K. Furuta), pp.303-310,

(2017), Springer
(5) “Mixed Traffic Simulation of Cars and Pedestrians for Transportation Policy Assessment”, Crowd Dynamics – Theory, Models, and Applications, Volume 2 (ed. L. Gibelli), pp.199-222, (2020), Birkhaeuser. (Hideki Fujii, Hideaki Uchida, Tomonari Yamada, Shinobu Yoshimura)

12. International Technical Reports et al.
(1) IAEA Safety Reports Series No.66, “Earthquake Preparedness and Response for Nuclear Power Plants”, (2011)
(http://wwwpub.iaea.org/MTCD/publications/PDF/Pub1473_web.pdf#search='IAEA+Safety+Reports+Series+No.66') (As the Chairman of Steering Committee of IAEA-EBP Project on Seismic Safety of Existing Nuclear Power Plants)
(2) “Lessons Learned from the Great East Japan Earthquake Disaster”, Report from the JSME Investigation Committee on the Great East Japan Earthquake Disaster, (2014) (http://www.jsme.or.jp/English/) (As the Secretary of the Investigation Committee)
(3) UTokyo HP (http://www.u-tokyo.ac.jp/en/index.html) (As the Director of UTokyo Public Relations Office)
(3) Hitachi-UTokyo Laboratory Proposal “Toward Realizing Electricity Systems to Support Society 5.0”, Ver.1 (2018.4.18) (As the Leader of Energy Project of Hitachi-UTokyo Laboratory)
http://www.ht-lab.ducr.u-tokyo.ac.jp/wpcontent/uploads/2018/06/67b00381b14c7f17bae922345c3e752d.pdf
(4) Hitachi-UTokyo Laboratory Proposal “Toward Realizing Electricity Systems to Support Society 5.0”, Ver.2 (2019.4.17) (As the Leader of Energy Project of Hitachi-UTokyo Laboratory)
http://www.ht-lab.ducr.u-tokyo.ac.jp/wp-content/uploads/2019/09/0f2d87bf8c6a2d7ebb3f5a00fedacaa7.pdf