

CURRICULUM VITAE OF K. C. (KWANG-CHUN) PARK

(Version as of July 2011)

PRESENT AFFILIATION

Professor	World Class University Invited Professor
Department of Aerospace Engineering Sciences	Division of Ocean Systems Engineering
College of Engineering and Applied Science	School of Mechanical Engineering
University of Colorado, Campus Box 429	KAIST
Boulder, CO 80309	Yuseong-gu, Daejeon 305-701
Phone 303-492-6330 or 6838	82-42-350-1591 or 1506
Fax 303-492-4990	Fax 82-42-350-1510
E-mail: kcpark@colorado.edu	E-mail: kcpkaist@kaist.edu

CURRENT RESEARCH INTERESTS: Computational Multiphysics, Fluid-Structure Interaction, System Identification, Dynamics of Microsystems and MEMS, Membranaous Aerospace Structures

EXPERIENCE

6/1987-present:

Department of Aerospace Engineering Sciences, Boulder, Colorado. *Professor.*

Established the Center for Space Structures and Controls (CSSC) and served as its founding Director (11/1985-8/1988). Director of Center for Aerospace Structures (CAS) (6/1991-8/1996).

Initiated a new graduate program in space structures and computational mechanics in the College of Engineering

Served as Technical Director, Center for Space Construction (a NASA-sponsored space engineering center) (9/1987-8/1988).

6/2009-present:

Korea Advanced Institute of Science and Technology, Daegu, Korea *WCU Visiting Professor.* Six months/year.

2002-2009: Korea Advanced Institute of Science and Technology, Daegu, Korea *Distinguished Invited Professor.* Three months/year.

1997-present: Conservatoire National des Arts et Metiers, Paris, France. *Professeur Invité* during the summer.

6/2005-8/2005: Summer, 2005: Laboratoire de Sols Solides Structures, Domaine Universitaire, Grenoble, France. *Professeur Invité.*

9/1999 - 6/2000 Fall/1999 and Spring/2000: Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, Cambridge, Mass. *Visiting Professor.*

3/2000-5/2000: Institute of Space and Astronautical Science, Sagami-hara, Kanagawa 229, Japan. *Visiting Professor.*

6/2000-7/2000: College of Industrial Technology, Nihon University, Tokyo, Japan. *Visiting Professor.*

5/1996-8/1997 Summer, 1997: Institut National des Sciences Appliquées de Rouen, Rouen, France *Professeur Invité.*

5/1996-7/1996 Summer, 1996: University of Paris VI and Joseph Frouier University of Grenoble *Professeur Invité*.

1/1992-12/1992: Fall, 1992 Institute of Space and Astronautical Science, Sagamihara, Kanagawa 229, Japan. *Visiting Professor*.

Summer, 1992 Laboratoire de Mecanique et Technologie, Ecole Normale Superieure de Cachan, 94235 Cachan Cedex, France. *Professeur Invité*.

Spring, 1992 Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, Cambridge, Mass. *Visiting Professor*.

11/1985-5/1987: Department of Mechanical Engineering, Boulder, Colorado. *Professor*.

4/1980-10/1985: LOCKHEED MISSILES & SPACE CO., INC. Palo Alto Research Laboratory, Palo Alto, California. *Senior Staff Scientist*. Conducted and supervised research on dynamics of large space structures, finite element methods for nonlinear shells and coupled-field problems, algorithms for concurrent computations, partitioned analysis techniques for structure-medium interaction problems. Consulted other Lockheed Divisions on structural dynamics and finite element methods.

10/1979-3/1980: NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, Langley Research Center, Hampton, Virginia. *Visiting Scientist*. Conducted nonlinear modeling and dynamic analysis of thermal protection system for space shuttle's insulation ceramic tile and shock absorption pad. Conducted seminars on computational structural dynamics for NASA and other personnel at Langley.

2/1976-9/1979: LOCKHEED MISSILES AND SPACE COMPANY, INC., Palo Alto Research Laboratory, Palo Alto, California. *Research Scientist*. Conducted research on improved transient analysis algorithms for computational structural dynamics and fluid-structure interaction problems.

4/1974-1/1976: *Associate Research Scientist*. Conducted research on vehicle crashworthiness and structural vulnerability.

4/1973-3/1974: LOCKHEED-CALIFORNIA COMPANY, Burbank, California. *Senior Structural Engineer*. Conducted experimental and analytical helicopter crashworthiness studies for U. S. Army Fort Eustis Transportation Research Center.

6/1972-3/1973: GEORGE WASHINGTON UNIVERSITY, Washington, D. C. The Fatigue Institute. *Research Assistant*. Performed nonlinear dynamics analysis of elastic-plastic structures by the finite element methods.

1/1971-5/1972: CLARKSON COLLEGE OF TECHNOLOGY, Potsdam, New York. *Graduate Research Assistant*. Conducted research to develop failure prediction techniques of impacted structures.

3/1968-7/1969: KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY, Seoul, Korea. *Mechanical Engineer*. Performed the technology assessment of Korean automobile industry for instituting an automobile technology research and development center.

1/1966-2/1968: HANKUK MACHINE INDUSTRIAL COMPANY, Incheon, Korea. *Junior Design Engineer*. Performed manufacturing layout plans for machining diesel engine components

including jigs and fixtures.

EDUCATION

Ph.D. (5/1975), Applied Mechanics and Systems Analysis, Clarkson College (1/1971-5/1975).

M.S. (6/1970), Controls, Stanford University, Stanford, California (9/1969-12/1970).

BSME (2/1966), Inha Institute of Technology, Inchon, Korea (3/1962-2/1966).

PROFESSIONAL ACTIVITIES

Fellow, American Society of Mechanical Engineers, Committee on Computing in Applied Mechanics (1976-present), Adaptive Structures and Materials Committee (1991-present).

Technical Program Chairman, 1990 AIAA Dynamics Specialist Conference

Member, NASA/OAST Space Systems and Technology Advisory Committee (1985–1993)

Editorial Board, Communications in Applied Numerical Methods (1980-2004).

Editorial Board, Int'l Journal of Numerical Methods in Engineering (1978-present)

Editorial Board, Computers & Structures: An International Journal (1998-2004)

Editorial Board, International Journal of Computational Engineering Science (IJCES) (1996-2003)

Editorial Board, Computer Methods in Engineering Sciences (CMES) (1996-2002)

RECENT INVITED LECTURES

2011:

Park, K. C. "A Method for Computation of Discontinuous Wave Propagation in Heterogeneous Solids" *Semi-Plenary Lecture* at COMPDYN2011 (3rd International Conference on Computational Dynamics and Earthquake Engineering), 26-28 May 2011, Corfu, Greece.

Park, K. C. "Continuum-Based Modeling of Combined Acoustic and Sloshing Problems Interacting with Flexible Structures" *Plenary Lecture* at Coupled2011 (IV International Conference on Computational Methods for Coupled Problems in Science and Engineering), 20-22 June 2011, Kos Island, Greece.

2010:

21 January 2010. Toyama University, Toyama, Japan. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

22 January 2010. Kanazawa Institute of Technology, Kanazawa, Japan. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

25 January 2010. Tokyo Institute of Technology, Tokyo, Japan. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

18 March 2010. Sungkyunkwan University, Yongin, Korea. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

16 April 2010. Pusan National University, Busan, Korea. Title: System Theory-Based Identification of Dynamical Models and Applications

03 June 2010. Braunschweig University, Braunschweig, Germany Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

11 June 2010. Norwegian University of Science and Technology, Trondheim, Norway. Title: Partitioned Multiphysics and Multiscale Simulation: Its Origin, Present Practice and Future Challenge

13 August 2010. UKC2010 Conference, Seattle, WA. Title: Can Flexibility-Based Model Reduction

Techniques Be in Vogue again?

11 November 2010. KAIST, Daejeon, Korea. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

18 November 2010. Stanford University, Stanford, CA, USA. Title: Paradigm Changes from Analytical to Date-Oriented Engineering Modeling: Is it a boon or menace?

2009:

Invited Lecture: Treatment of Coupling Terms for Partitioned Analysis of MultiPhysics Problems, Sandia National Laboratories, Albuquerque, N. M., 26 January 2009.

Invited Seminar: Partitioned Analysis of Fluid-Structure Interaction Systems: Origin, Subsequent Developments, and Future Potential, Presented at KAIST, 24 March 2009.

Lecture: RECENT PROGRESS IN EXTERNAL ACOUSTIC-FLEXIBLE STRUCTURAL INTERACTIONS, Division of Ocean Systems Engineering, KAIST, 23 March 2009.

Lecture: RECENT PROGRESS IN EXTERNAL ACOUSTIC-FLEXIBLE STRUCTURAL INTERACTIONS, Department of Ocean Technology, Graduate School of Frontier Sciences, University of Tokyo, Kashiwa, Japan, 16 October 2009.

Invited Seminar: RECENT PROGRESS IN EXTERNAL ACOUSTIC-FLEXIBLE STRUCTURAL INTERACTIONS, Department of Naval Architecture and Ocean Engineering, Busan University, Busan, 12 November 2009.

Invited Seminar: RECENT PROGRESS IN EXTERNAL ACOUSTIC-FLEXIBLE STRUCTURAL INTERACTIONS, Department of Naval Architecture and Ocean Engineering, University of Ulsan, Ulsan, 10 December 2009.

2008:

Keynote Lecture: Aerospace Structures: Present Status, Future Challenges, and Research Needs. the KSAS-JSASS Meeting, Jeju Island, South Korea 20 November 2008

Invited Lecture: A Critical Survey of Theoretical Developments and Engineering Practices in Non-linear Structural Dynamics Modeling. Sandia National Laboratories, Albuquerque, NM, August 22, 2008.

Special Session in honor of Professor O. C. Zienkiewicz, Staggered Analysis Procedures Revisited Initial Fondest Hopes, Ensuing Applications, and Future Prospects. WCCM-VIII, Venice, 02 July 2008.

Invited Lecture: RECENT PROGRESS IN EXTERNAL ACOUSTIC-FLEXIBLE STRUCTURAL INTERACTIONS, CIMNE, University of Catalunya, Barcelona, 11 June 2008

2007:

Keynote Lecture: Partitioned Modeling and Analysis of Coupled Dynamical Systems, the Annual Meeting of Korean Society of Mechanical Engineers, Busan, Korea, 01 June 2007.

Invited Seminar: Recommendations for KAIST Admission Policy and A Brief Introduction of US Admission Practices, KAIST, Daejeon, Korea, 29 May 2007.

Keynote Lecture: Marriage la mode: Computational Mechanics, Lagrange Multipliers and Coupled Physics, 2007 Spring Meeting of Fracture Mechanics Division, Korean Society of Mechanical Engineers, Tongyeong, Korea, 06 April 2007.

2006:

Keynote Lecture: Partitioned Modeling of Coupled Dynamical Systems, Theory and Applications, The 8th International Conference on Motion and Vibration Control (MOVIC 2006), 27-30 August

2006, KAIST, Daejeon, Korea.

Keynote lecture: D'Alembert-Lagranges Principal Balance Equations, Their Origin and Applications, 2006 Annual conference of Noise/Vibration Division, Korean Society of Mechanical Engineers, Hwasoon, Korea, 16-17 November 2006.

Invited Seminar: BEM-BEM and BEM-FEM Coupling Procedures, University of Seville, 30 May - 02 June 2006.

Invited Seminar: New Interpretations of Lagrange Multipliers and Applications, Ecole Polytechnique, Palaiseau, France, 29 June 2006

Invited Seminar: External Acoustic-Structure Interactions, CNAM, Paris, France, 29 June 2006

Semi-Plenary Lecture: Partitioned Analysis at WCCM-VII, Los Angeles, 17-20 July 2006.

Plenary Lecture: Partitioned Modeling of Coupled Dynamical Systems: Theory and Applications, Proc. the 8th International Conference on Motion and Vibration Control, 28-31 August 2006, Daejeon, Korea.

Plenary Lecture: A Revisit to D'Alembert-Lagranges Principal Balance Equations, Their Origin and Applications, The KSNVE Annual Autumn Conference, 16-17 November 2006, Hwasoon, Korea.

2005:

Invited Seminar: New Model for Acoustics, Sandia National Laboratories, 20 April 2005.

Invited Seminar: Structural Modeling for Experiment Design, Los Alamos National Laboratory, 21 April 2005.

Invited Seminar: High-Fidelity Multi-Physics Simulation, Polytechnique de Grenoble, 22 June 2005

Semi-Plenary Lecture: Partitioned Analysis at Eurodyn2005, Paris, 07 Sept. 2005

Invited Seminar: Membranes for Space Applications, CNAM, Paris, 12 October 2005

2004:

"Reduced-Order Modeling of Complex Structural Systems," NATO Advanced Studies Workshop, University of Ljubljana, Slovenia, 12-17 May; and, Conservatoire des Arts et Metiers (CNAM), Paris, France, June 8, 2004.

"Membranes for Space Structures," University of Maryland, March 26, 2004.

"Membranous Space Structures," NASA Langley Research Center, March 24, 2004.

"Localization of Lagrange Multipliers for Partitioned Modeling of Multi-physics Problems," Korea Advanced Institute of Science and Technology, July 16, 2004.

"New Approximation of External Structure-Acoustic Interactions," Sandia National Laboratories, December 2, 2004; Seoul national University, Seoul, Korea, November 15, 2004; Korea Advanced Institute of Science and Technology, Daejeon, Korea, November 17, 2004.

"Computational Mechanics Activities at Center for Aerospace Structures," Samsung Research Center, Siheung, Korea, November 16, 2004.

2003:

"Multi-Physics Modeling of MEMS Devices and Model Validation," the Department of Mechanical Engineering, University of Michigan, 11 April, 2003; the Department of Mechanical Engineering, Northwestern University, 02 May, 2003. K. C. Park,

"Membranes for Space Structures," CNAM, Paris, 26 May 2003; KAIST, Daejeon, Korea, 8 July 2003.

"Localized Modeling of Interaction Interfaces, Multiphysics Coupling, and Domain Decomposition,"

the Industrial Mathematics Initiative, KAIST, 1-3 July 2003, Daejeon, Korea.

"A New Membranous Structural Concept for Solar Sails and Reflectors," NASA/Langley Research Center, 20 October 2003.

"Switching Speed and Actuation Energy of RF MEMS Switches," Raytheon RF Symposium, St. Petersburg, FL, 21-23 April 2003.

2002:

"Computational Mechanics Activities of K. C. Park during the 70-80s," the FEM42 Celebration Workshop, Ibiza, Spain, 30 May 2002.

"Flexibility-Based Component Mode Synthesis," Seoul National University, Seoul, Korea, 6 December 2002.

"Advanced Lectures on Computational Dynamics" (a total of 8 lectures), Korea Advanced Institute of Science and Technology, Daejeon, Korea, 04 November -13 December 2002.

"Partitioned Analysis for coupled systems" (a total of 6 lectures), Korea Advanced Institute of Science and Technology, 3 June - 12 July 2002.

"New design concept of membranous space structure," Institute of Space and Astronautical Sciences, Tokyo, Japan. 25 July 2002.

2001:

"Modeling of Nonlinear Structural Joints via Experimental-Analytical Localized Flexibility Identification," the XIXth International Modal Analysis Conference, Kissimmee, FL, 6 February 2001.

"Interfacing Nonmatching FEM Meshes: The Zero Moment Rule," Bregenz, Germany, 22 May 2001.

"Localized Modeling of Contact-Impact problems and nonmatching interfaces," Copper Mountain Multigrid Conference, 4 April 2001.

"Health Monitoring of Structural Systems and Damage Detection Using Localized Flexibility Methods," a keynote lecture at Korea Advanced Institute of Science and Technology, Taejeon, Korea, November 11, 2001.

"Modeling of Structural Joints," the NSF/Sandia Workshop on Modeling and Simulation of Structural Systems with Joint Interfaces, 25 June 2001

"Construction of Nonmatching Interfaces," Sandia National Laboratory, 30 April 2001.

"A stress and energy conserving algorithm for nonmatching interfaces," MIT, 13 June 2001.

"A Simple Algorithm for Localized Construction of Nonmatching Structural Interfaces," USMC-CMIV, Dearborn, MI, 02 August 2001.

"Structural system identification: from reality to models," invited lecture, EUROMECH 427, Cachan, France, 24 September 2001.

CURRENT RESEARCH ACTIVITIES

Computational multiphysics: Modeling and algorithms development for high-fidelity simulation of structure-medium interaction problems, interface characterization issues, and elasto-electro-acoustic problems. It is being sponsored by NSF, NASA, DOE, and CNAM (France).

Design of membranous structures: This research is aimed at designing membranes free of wrinkles for space applications. It is being supported by NASA in collaboration with University of Cambridge (U.K.) and ISAS (Japan).

Mechanical characterization of microelectro-mechanical systems (MEMS): Characterization of

mechanical elements used in MEMS is the objective of this relatively new research thrust. At present, energy loss mechanisms in integrated MEMS devices such as switches, gyroscopes and resonators are the main thrusts. It is being supported by Coventor, Raychem, and Sandia National National Laboratories.

Contact-impact problems for heterogeneous systems: Accurate computations of impact-contact forces are the main focus of this research when the impacting structures are highly heterogeneous, being sponsored by Lawrence Livermore National Laboratory.

Structural system identification: This project involves the development of theory for system theory-based construction of structural models from experiments, the objective extraction of normal modes and mode shapes, non-proportional damping coefficients, and correlations with the finite element models for simultaneous design of structures for acoustics or controls. It is being sponsored by Sandia National Laboratory and Shimizu Corp (Japan).

CONSULTING ACTIVITIES

1994–present: Sandia National Laboratories, Albuquerque, NM on pyroshock techniques for satellite separation from the launcher and GM engine mount design.

1985–1994: Lockheed Missiles and Space Co., Inc., Palo Alto, Ca. on shell structural analysis by finite element methods and structural acoustics.

1993–present: Avery Corp., Cleveland, OH on control of emulsion and drying processes for paper products.

1992–1994: Samsung Aerospace Co., Seoul, Korea on satellite business development and technology assessment of military fighter jetplanes.

1986–1994: Jet Propulsion Laboratory, California Institute of Technology, Pasadena, Ca. on dynamics of large space structures.

1990–1993: Charles Draper Laboratories, Cambridge, Ma. on real-time simulation of space station attitude keeping and space robots.

1991–1994: Laboratoire de Mécanique et Technologie, Ecole Normale Supérieure de Cachan, Paris, France on parallel computations and transient nonlinear analysis techniques.

PUBLICATIONS

1. H.-L. Xing, J. H. Jeon, K. C. Park and I. K. Oh, "Active Disturbance Rejection Control for Precise Position Tracking of Ionic Polymer-Metal Composite Actuators," Submitted to IEEE/ASME Transactions on Mechatronics.

2. J. Song, J. H. Jeon, I. K. Oh and K.C. Park, Electro-active polymer actuator based on sulfonated polyimide with highly conductive silver electrodes via self-metallization, To appear in Macromolecular Rapid Communications.

3. K. C. Park, S.J Lim and H. Huh, "A method for computation of discontinuous wave propagation in heterogeneous solids: basic algorithm description," Submitted to International Journal for Numerical Methods in Engineering.

4. J. A. González and K. C. Park, "A Simple Explicit-Implicit FETI Transient Analysis Algorithm," To appear in International Journal for Numerical Methods in Engineering, 2012.

5. S. S. Cho, H. Huh and K. C. Park, "A Time-Discontinuous Variational Integrator for Stress Wave Propagation Analysis in Solids," *Comput. Methods Appl. Mech. Engrg.*, 200 (2011) 649 -

6. C. A. Felippa, K. C. Park, M. R. Ross, "A Classification of Interface Treatments for FSI," in: Fluid Structure Interaction II (ed. by Hans-Joachim Bungartz, Miriam Mehl and Michael Schfer), Lecture Notes in Computational Science and Engineering 73, Springer-Verlag, 2010, pp. 27-52.
7. K.C. Park, R. Ohayon, C.A. Felippa and J.A. González, "Partitioned formulation of internal and gravity waves interacting with flexible structures," *Computer Methods in Applied Mechanics and Engineering*, Volume 199, Issues 9-12, 15 January 2010, Pages 723-733
8. Markovic D, Ibrahimbegovic A, Park KC, Partitioning based reduced order modeling approach for transient analyses of large structures, *ENGINEERING COMPUTATIONS*, Volume: 26 Issue: 1-2 Pages: 46-68. 2009.
9. Moonseok Lee, Youn-Sik Park, Youngjin Park, K.C. Park, New approximations of external acoustic-structural interactions: Derivation and evaluation, *Computer Methods in Applied Mechanics and Engineering*, Vol. 198 (15-16) pp.1368-1388, 2009
10. M. Ross, M. A. Sprague, C. A. Felippa and K. C. Park, Treatment of acoustic fluid-structure interaction by localized Lagrange multipliers and comparison to alternative interface coupling methods, *Computer Methods in Applied Mechanics and Engineering*, 198 (9-12), p.986-1005, 2009.
11. K. C. Park, Carlos A. Felippa, Roger Ohayon, The d'Alembert-Lagrange principal equations and applications to floating flexible systems, *International Journal for Numerical Methods in Engineering*, Vol. 77(8), 2009, pp. 072-1099.
12. Seo YH, Lee CW, Park KC, Crack Identification in a Rotating Shaft via the Reverse Directional Frequency Response Functions, *JOURNAL OF VIBRATION AND ACOUSTICS-TRANSACTIONS OF THE ASME*, Volume: 131 Issue: 1 Article Number: 011012, 2009.
13. M. R. Ross, C. A. Felippa, K. C. Park and M. A. Sprague, Treatment of acoustic fluid-structure interaction by localized Lagrange multipliers: Formulation *Computer Methods in Applied Mechanics and Engineering*, 197 (33), p.3057-3079, 2008.
14. Gyeong-Ho Kim and K.C. Park, A Continuum-based Modeling of MEMS Devices for Estimating Their Resonant Frequencies, *Computer Methods in Applied Mechanics and Engineering* 198 (2), 234-244, 2008.
15. C. A. Felippa and K. C. Park, Model-based partitioned analysis of coupled problems, chapter 4 in: Computational Aspects of Structural Dynamics and Vibrations, ed. by G. Sandberg and R. Ohayon, CISM Courses and Lectures, Vol. 505, Springer-Verlag, Berlin, 2008, 171-216.
16. Sebastian Kreissl, Hiraku Sakamoto, K. C. Park, Horst Baier, Design Improvements of a Solar Sail for Stiffness Increase and Passive Attitude Stabilization, Proc. AIAA Conference, 04-24-2007 Honolulu, Hawaii, Paper # AIAA-2007-1802.
17. K. C. Park, Partitioned Modeling of Coupled Dynamical Systems: Theory and Applications, Proc. the 8th International Conference on Motion and Vibration Control (MOVIC 2006),
18. H. Sakamoto, Y. Miyazaki and K. C. Park, "Finite Element Modeling of Sail Deformation under Solar Radiation Pressure," *Journal of Spacecraft and Rockets*, Vol. 44, No. 3, May-June 2007, 514-522.
19. T. Akita, K. Nakashino, M. C. Natori and K. C. Park, Modeling of Wrinkled Membranes Based on Projection Operator, *International Journal of Numerical Methods in Engineering*, Volume 71, Issue 10, 03 September 2007, 1231-1259
20. H. Sakamoto, K. C. Park, and Y. Miyazaki, Evaluation of membrane structure designs using boundary web cables for uniform tensioning, *ACTA ASTRONAUTICA*, 60 (10-11): 846-857 MAY-JUN 2007.

21. J. A. González, K. C. Park and C. A. Felippa, FEM and BEM coupling in elastostatics using localized Lagrange multipliers, *International Journal of Numerical Methods in Engineering*, 2007; Volume 69: 2058-2074.
22. D. Markovic and K. C. Park, Reduction of substructural interface degrees of freedom in flexibility-based component mode synthesis, *International Journal of Numerical Methods in Engineering*, 2007; 70:163-180.
23. H. Sakamoto, K. C. Park, and Y. Miyazaki, Distributed and localized active vibration isolation in membrane structures, *Journal of Spacecraft and Rockets*, 43(5): 1107-1116, September-October 2006.
24. H. Sakamoto and K. C. Park, Localized vibration isolation strategy for low- frequency excitations in membrane space structures, *Journal of Vibration and Acoustics*, 128(6): 673-802, December 2006.
25. Hunsang Jung, Youngjin Park, Youn-Sik Park and K. C. Park, " Mode Decoupling Controller for Feedback Model Updating," Paper No. IMECE2004-5969, *Proceedings of IMECE04 2004 ASME International Mechanical Engineering Congress & Exposition*, Anaheim, CA, USA, September 14-19, 2004.
26. Y. Miyazaki and K. C. Park, "A formulation of conserving impact system based on localized Lagrange multipliers," *International Journal of Numerical Methods in Engineering*, Volume 68, Issue 1, 2006, 98-124.
27. C. A. Felippa and K. C. Park, Underwater shock analysis on stiffened shells: the source of staggered solution procedures, abstract in *Proc. 5th IACM-IASS Int. Conf. on Computation of Shells and Spatial Structures*, ed. by E. Ramm, W. A. Wall, K.-U. Bletzinger, and M. Bischoff, TU Munchen Press, 2005.
28. C. A. Felippa and K. C. Park, Taming complexity in the synthesis of partitioned analysis methods for coupled systems, abstract in *Proc. Computational Methods for Coupled Problems in Science and Engineering*, ed. by M. Papadrakakis, E. Oñate and B. Schrefler, CIMNE, Barcelona, 2005.
29. H. Sakamoto, K. C. Park, and Y. Miyazaki, Dynamic wrinkle reduction strategies for cable suspended membrane structures. *Journal of Spacecraft and Rockets*, **42(5)**:850-858, September-October 2005.
30. K. C. Park, "Partitioned formulation with localized Lagrange multipliers and its applications," in: *Structural Dynamics (Eurodyn 2005)*, Millpress, Rotterdam, 2005, pp. 67-76.
31. D. Markovic and K. C. Park, "Reduction of Interface Degrees of Freedom in Flexibility-Based Component Mode Synthesis," *Proc. 5th EUROMECH Nonlinear Dynamics Conference*, Eindhoven, The Netherlands, August 7-12, 2005, pp. 900-907.
32. J. A. González, K. C. Park and C. A. Felippa, "Partitioned formulation of frictional contact problems," *Comm. Num. Meth. Engr.*, Volume 22, Issue 4, 2006, 319-333
33. Hiraku Sakamoto and K.C. Park, "Design Parameter Effects for Wrinkle Reduction in Membrane Space Structures," Paper No. AIAA-2005-1974, *Proc. the 46th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM)*, 18-21 April 2005, Austin, TX.
34. Hiraku Sakamoto, K.C. Park and Yasuyuki Miyazaki, "Distributed Localized Vibration Control of Membrane Structures Using Piezoelectric Actuators," Paper No. AIAA-2005-2114, *Proc. the 46th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM)*, 18-21 April 2005, Austin, TX.
35. Hiraku Sakamoto, K.C. Park and Yasuyuki Miyazaki, "Advanced Cable Boundary Layer Design in Membrane Structures for Dynamic Wrinkle Reduction," Paper No. AIAA-2005-1973, *Proc. the*

- 46th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM), 18-21 April 2005, Austin, TX.
36. Eui-Il Jung, Youn-Sik Park and K. C. Park, "Structural Dynamics Modification via Reorientation of Modification Elements, *Finite Element Analysis and Design*, **42(1)**, 2005, 50-70.
 37. Hiraku Sakamoto and K. C. Park, "A New Membranous Structural Concept for Solar Sails and Reflectors," paper No. ISTS 2004-c-09, *Proc. 24th International symposium on Space Technology and Science*, Miyazaki, Japan, 30 May-06 June, 2004.
 38. Park, K. C., Felippa, C. A. and Ohayon, R., "Reduced-Order Partitioned Modeling of Coupled Systems: Formulation and Computational Algorithms," *Multi-physics and Multi-scale Computer Models in Non-linear Analysis and Optimal Design of Engineering Structures Under Extreme Conditions (NATO ARW PST.ARW980268)*, ed. A. Ibrahimbegovic and B. Brank, University of Ljubliana, 2004, 267-289.
 39. Felippa, C. A. and Park, K. C., "Synthesis Tools for Structural Dynamics and Partitioned Analysis of Coupled Systems," *Multi-physics and Multi-scale Computer Models in Non-linear Analysis and Optimal Design of Engineering Structures Under Extreme Conditions (NATO ARW PST.ARW980268)*, ed. A. Ibrahimbegovic and B. Brank, University of Ljubliana, 2004, 50-110.
 40. Park K. C. and Park, Yong Hwa, "Partitioned Component Mode Synthesis via A Flexibility Approach," *AIAA Journal*, 2004, vol.42, no.6, 1236-1245.
 41. Sakamoto, H., Park, K. C. and Miyazaki, Y., "Dynamic Wrinkle Reduction Strategies for Cable Suspended Membrane Structures," Paper No. AIAA-2004-1581, *Proc. the 45th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM)*, 19-22 April 2004, Palm Springs, CA.
 42. Park, Y.H and Park, K. C., "Anchor Loss Evaluation of MEMS Resonators - I: Energy Loss Mechanism through Substrate Wave Propagation," *Journal of Microelectromechanical Systems*, Vol. 13, No. 2, 2004, 238-247.
 43. Park, Y.H and Park, K. C., "Anchor Loss Evaluation of MEMS Resonators - II: Coupled Substrate-Resonator Simulation and Validation," *Journal of Microelectromechanical Systems*, Vol. 13, No. 2, 2004, 248-257.
 44. Wong, W., Pellegrino, S. and Park, K. C., "Prediction of Wrinkle Amplitudes in Square Solar Sails," Paper No. AIAA-2003-1982, *Proc. the 44th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM)*, 7-10 April 2003, Norfolk, Virginia.
 45. Sakamoto, H., Miyazaki, Y. and Park, K. C., "Evaluation of Cable Suspended Membrane Structures for Wrinkle-Free Design," Paper No. AIAA-2003-1905, *Proc. the 44th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference (SDM)*, 7-10 April 2003, Norfolk, Virginia.
 46. Alvin, K. F., Robertson, A. N., Reich, G. W. and Park, K. C., "Structural system identification: from reality to models," *Computers & Structures*, **81(2003)**, 1149-1176.
 47. Lee, Yongjoo Lee and K. C. Park, "Numerically Generated Tangent Stiffness Matrices for Non-linear Structural Analysis," *Computer Methods in Applied Mechanics and Engineering*, 191(2002) 5833-5846.
 48. K. C. Park, C. A. Felippa and G. Rebel, (2002), "A Simple Algorithm for Localized Construction of Nonmatching Structural Interfaces," *International Journal of Numerical Methods in Engineering*, 2002; **53**:2117-2142.
 49. G. Rebel, K. C. Park and C. A. Felippa (2002), "A Contact Formulation Based on Localized

- Lagrange Multipliers: Formulation and Application to Two-dimensional Problems,” *International Journal of Numerical methods in Engineering*, 2002; **54**:263-297.
50. Felippa, C. A. and Park, K. C., “The construction of free-free flexibility matrices for multilevel structural analysis,” *Computer Methods in Applied Mechanics and Engineering*, 191(19-20) (2002) 2111-2140.
 51. Xue Yue and K. C. Park (2002), ”Modeling of Joints and Interfaces,” in : *Modeling and Simulation-Based Life Cycle Engineering*, K. Chong, S. Saigal, S. Thynell and H. Morgan (des.), Spon Press, London, pp.60-75.
 52. K. C. Park and Yong Hwa Park, ”Partitioned Structural Eigenvalue Analysis, Part I: Mode Synthesis Approximations and Error Estimates,” *Proc. 2002 AIAA SDM Conference*, Paper No. AIAA-2002-1227, 22-26 April 2002, Denver, CO.
 53. Yong Hwa Park and K. C. Park, ”Partitioned Structural Eigenvalue Analysis, Part II: Implementation and Performance Evaluation,” *Proc. 2002 AIAA SDM Conference*, Paper No. AIAA-2002-1228, 22-26 April 2002, Denver, CO.
 54. G. Rebel and K. C. Park, Application of the Localized Lagrange Multiplier Method to a 3D Contact Patch Test *Proc. 2002 AIAA SDM Conference*, Paper No. AIAA-2002-1577, 22-26 April 2002, Denver, CO.
 55. Yong Hwa Park and K. C. Park, ”Design Sensitivity Analysis for the Performance Improvement of High- Q MEMS Resonators,” *Proc. 2002 AIAA SDM Conference*, Paper No. AIAA-2002-1351, 22-26 April 2002, Denver, CO.
 56. Reich, G.W., Park, K. C. and Namba, H. (2001), ”Health Monitoring of a Reinforced Concrete Containment Vessel by Localized Methods,” *Proc. of the Third International Workshop on Structural Health Monitoring*, Technomic Publishing Company, Inc., 2001
 57. Reich, G. W. and Park, K. C. (2001), “A Theory for Strain-Based Structural System Identification,” in: *Journal of Applied Mechanics*, **68**(4), 521-527.
 58. K. C. Park, C. A. Felippa and G. Rebel, (2001), ”Interfacing Nonmatching FEM Meshes: The Zero Moment Rule,” in: *Trends in Computational Structural Mechanics*, ed. by W. A. Wahl, K.-U. Bletzinger and K. Schweizerhof, CIMNE, Barcelona, Spain, 2001, p.355-367.
 59. Felippa, C. A., Park, K. C. and Farhat, C., “Partitioned Analysis of Coupled Mechanical Systems,” *Computer Methods in Applied Mechanics and Engineering*, 190(24-25), 2001, 3247-3270.
 60. Park, K. C., Felippa, C. A. and Ohayon, R., “Partitioned Formulation of Internal Fluid-Structure Interaction Problems via Localized Lagrange Multipliers,” *Computer Methods in Applied Mechanics and Engineering*, 190(24-25), 2001, 2989-3007.
 61. Park, K.C., Felippa, C. A. and Ohayon, R. (2001), “Localized Formulation of Multibody Systems,” in: *Computational Aspects of Nonlinear Systems with Large Rigid Body Motion* (ed. J. Ambrosio and M. Kleiber), NATO Science Series, IOS Press, p.253-274.
 62. Reich, G. W. and Park, K. C., “On the Use of Substructural Transmission Zeros for Structural Health Monitoring,” *AIAA Journal*, Vol. 38, No. 6, 2000, 1040-1046.
 63. Xue Yue and K. C. Park (2001), ”Modeling of Nonlinear Structural Joints via Experimental-Analytical Localized Flexibility Identification,” *Proc. the XIXth International Modal Analysis Conference*, Paper No. 384, Kissimmee, FL, 5-8 February 2001.
 64. Gumaste, Udayan and Park, K. C. (2000), “Interfacing an explicit nonlinear finite element code with an implicit parallel solution algorithm,” to be presented at the International Congress on Computational Engineering Sciences, August 5-8, 2000, Los Angeles, CA.

65. Gumaste, Udayan, Park, K. C. and Alvin, K. F. , “A Family of Implicit Partitioned Time Integration Algorithms for Parallel Analysis of Heterogeneous Structural Systems,” *Computational Mechanics: an International Journal*, **24** (2000) 6, 463-475.
66. Park, K. C., Gumaste, Udayan, and Felippa, C. A., “A Localized Version of the Method of Lagrange Multipliers and its Applications,” *Computational Mechanics: an International Journal*, **24** (2000) 6, 476-490.
67. Park, K. C. and Felippa, C. A., “A Variational Principle for the Formulation of Partitioned Structural Systems,” *International Journal of Numerical Methods in Engineering*, vol. 47, 2000, 395-418.
68. Park, K. C., “Partitioned Solution of Reduced Integrated Finite Element Equations,” *Computers & Structures*, 74 (2000) 281-292.
69. Alvin, K. F. and Park, K. C., “Extraction of Substructural Flexibilities from Global Frequencies and Mode Shapes,” *AIAA Journal*, vol. 37, no.11, 1999, p. 1444-1451.
70. Reich, G. W. and Park, K. C., ”Experimental Application of a Structural Health Monitoring Methodology,” Paper No. 3988-17, *Proc. 2000 Smart Structures and Materials Conference: Smart Systems for Bridges, Structures, and Highways*, Newport Beach, CA, March 6-9, 2000.
71. Park, K. C., Kim, N. I., and Reich, G. W., ”A Theory of Localized Vibration Control via Partitioned LQR Synthesis,” Paper No. 3984-63, *Proc. 2000 Smart Structures and Materials Conference: Mathematics and Control in Smart Structures*, Newport Beach, CA, March 6-9, 2000.
72. Reich, G. W. and Park, K. C., ”Experimental Damage Detection Using Substructural Transmission Zeros,” AIAA Paper No. 2000-1699, *Proc. 41st Structures, Structural Dynamics, and Materials Conference*, Atlanta, GA, April 3-6, 2000.
73. Park, K. C. and Reich, G. W., ”Model-Based Health Monitoring of Structural Systems: Progress, Potential and Challenges,” *Structural Health Monitoring 2000*, ed. F-K Chang, Technomic Pub., 1999, 82-95.
74. Park, K. C. and Reich, G. W., “A Procedure to Determine Accurate Rotations from Measured Strains and Displacements for system Identification,” *Proc. 17th International Modal Analysis Conference*, 8-11 February 1999, Kissimmee, FL.
75. Park, K. C., Reich, G. W. and Alvin, K. F. “Structural Damage Detection Using Localized Flexibilities,” *Journal of Intelligent Material Systems and Structures*, Vol. 9, No. 11, 1998, pp. 911-919.
76. Wilkie, W. K., W. K. Belvin and Park, K. C. Torsional Stiffness Optimization of Piezoelectric Active Twist Helicopter Rotor Blades,” *Proc. 9th International Conference on Adaptive Structures and Technologies*, 14-16 October 1998, Cambridge, MA.
77. Park, K. C., “A Contact Algorithm Based on Localized Lagrange Multipliers for Partitioned Parallel Computations,” Center for Aerospace Structures, Report No. CU-CAS-98-15, University of Colorado, Boulder, CO, July 1998.
78. Park, K. C. and Felippa, C. A., “A Flexibility-Based Inverse Algorithm for Identification of Structural Joint Properties,” to appear in *ASME Symposium on Computational Methods on Inverse Problems*, 15-20 November 1998, Anaheim, CA.
79. Wilkie, W. K., Park, K. C. and W. K. Belvin, Helicopter Dynamic Stall Suppression Using Piezoelectric Active Fiber Composite Rotor Blades,” *Proc. 1998 AIAA SDM Conference*, Paper No. AIAA-98-2002, April 20-24 1998, Long Beach, CA.
80. Felippa, C. A., Park, K. C. and Justino, M.R., “The Construction of Free-Free Flexibility Matrices as Generalized Stiffness Inverses,” *Computers & Structures*, vol.68 (1998), 411-418.

81. Robertson, A. N. and Park, K. C., "An Investigation of Time Efficiency in Wavelet-Based Markov Parameter Extraction Methods," *Proc. 1998 AIAA SDM Conference*, Paper No. AIAA-98-1889, April 20-24 1998, Long Beach, CA.
82. Reich, G. W. and Park, K. C., "Structural Health Monitoring via Structural Localization," *Proc. 1998 AIAA SDM Conference*, Paper No. AIAA-98-1892, April 20-24 1998, Long Beach, CA.
83. Park, K. C. and Felippa, C. A., "A Variational Framework for Solution Method Developments in Structural Mechanics," *Journal of Applied Mechanics*, March 1998, **Vol. 65/1**, 242-249.
84. Robertson, A. N., Park, K. C. and Alvin, K. F., "Extraction of Impulse Response Data via Wavelet Transform for Structural System Identification," *ASME Journal of Vibrations and Acoustics*, **120, No.1**, January 1998, 252-260.
85. Robertson, A. N., Park, K. C. and Alvin, K. F., "Identification of Structural Dynamics Models Using Wavelet-Generated Impulse Response Data," *ASME Journal of Vibrations and Acoustics*, **120, No.1**, January 1998, 261-266.
86. Park, K. C., Karl Stol and K. F. Alvin, "Dynamic Direct Flexibility Procedures for Implicit Parallel Analysis of Structural Dynamic Systems," Center for Aerospace Structures, Report No. CU-CAS-97-17, University of Colorado, Boulder, CO, November 1997.
87. Park, K. C., Reich, G. W. and K. F. Alvin, "Damage Detection Using Localized Flexibilities," in : *Structural Health Monitoring, Current Status and Perspectives*, ed. F-K Chang, Technomic Pub., 1997, 125-139.
88. C. A. Felippa and K. C. Park, "A direct flexibility method," *Computer Methods in Applied Mechanics and Engineering*, 149 (1997) 319-337.
89. Alvin, K. F., Park, K. C. and Peterson, L. D., "Extraction of Undamped Normal Modes and Full Modal Damping Matrix from Complex Modal Parameters," *AIAA Journal*, Volume 35, Number 7, 1997, 1187-1194
90. Park, K. C., Justino, M. R, Jr. and Felippa, C. A., "An Algebraically Partitioned FETI Method for Parallel Structural Analysis: Algorithm Description," *International Journal of Numerical Methods in Engineering*, **40**, 2717-2737 (1997).
91. Justino, M. R, Jr., Park, K. C. and Felippa, C. A., "An Algebraically Partitioned FETI Method for Parallel Structural Analysis: Implementation and Numerical Performance Evaluation," *International Journal of Numerical Methods in Engineering*, **40**, 2739-2758 (1997).
92. G. Greshik, K. C. Park, H. Namba and T. Sato, "On the Applicability of the Cascade Fold to Parabolic Dishes," *International Journal of Space Structures*, Vol. 11, No. 4, (381-391 (1996).
93. M. R. Justino F., Mark Blanford and K. C. Park, A matrix-free algebraic FETI method for quasi-static nonlinear structural analysis, Center for Aerospace Structures, Report No. CU-CAS-96-19, University of Colorado, 1996; presented at the 4th U.S. National Congress on Computational Mechanics, 6-8 August 1997, San Francisco, CA.
94. Wilkie, W. Keats, and Park, K. C., "An Aeroelastic Analysis of Helicopter Rotor Blades Incorporating Piezoelectric Fiber Composite Twist Actuation," *NASA TM 110252*, Langley Research Center, May 1996; also in *Proc. ASME Aerospace Division*, **AD-Vol.52**, ASME, New York, N.Y., pp. 423-434.
95. A. N. Robertson and K. C. Park, "Filtering of vibration records and Markov parameters via wavelet and Fourier methods," to appear *Proc. 1997 AIAA SDM Conference*, Paper No. AIAA 97-1213, April 7-10 1997, Kissimmee, FL.
96. G. W. Reich and K. C. Park, "Localized system identification and structural health monitoring

- from vibration test data,” *Proc. 1997 AIAA SDM Conference*, Paper No. AIAA 97-1318, April 7-10 1997, Kissimmee, FL.
97. Park, K. C., “Pyroshock Analysis by an Extended Wigner-Ville Transform for Instantaneous Frequencies and Their Spectrum,” Preprint prepared for Sandia National Laboratories, 1996.
98. Robertson, A. N., Park, K. C. and Alvin, K. F., “Extraction of Impulse Response Data via Wavelet Transform for Multiple Input Structural System Identification,” *Proc. 1996 AIAA SDM Conference*, Paper No. AIAA 96-1203, April 15-19 1996, Salt lake City, Utah.
99. Park, K. C., “Dynamics of Mechanical and Aerospace Systems: Past, Present and Future Thrusts,” *Proc. the 50th Anniversary Conference of KSME*, The Korean Society of mechanical Engineers, Seoul, Korea, 2-4 November 1995, 80-101.
100. Robertson, A. N., Park, K. C. and Alvin, K. F., MIMO System Structural System Identification: A Revisit via Wavelet Transform,” *Proc. the 14th Int’l. Modal Analysis Conf.*, Dearborn, MI, 12-15 Feb. 1996.
101. Greschik, G., Park, K. C., “The deployment of curved closed tubes,” *Journal of Mechanical Design*, Trans. the ASME, **118(3)**, 337-339 September 1996.
102. Greschik, G., Park, K. C. and Natori, M. C., “Helically curved Unfurlable Structural Elements: Kinematic Analysis and Laboratory Demonstration,” *Journal of Mechanical Design*, Trans. the ASME, **118(1)**, March 1996, 22-28.
103. Alexander, S. and Park, K. C., “Minimum Torque Path Determination for Simultaneous Appendage Deployment and Satellite Attitude Reorientation,” to appear in *Proc. 1995 AIAA SDM Conference*, Paper No. AIAA 95-1441, April 18-21 1995, New Orleans, LA.
104. Menon, R. G. and Park, K. C., “Parallel simulation and Control of Massively Actuated Structures,” *Proc. 1995 AIAA SDM Conference*, Paper No. AIAA 95-1241-CP, pp. 749-758, April 18-21 1995, New Orleans, LA.
105. Keating, S., Felippa, C. A. and Park, K. C., “An Element-Level Error Estimator for Mesh Refinement of Finite Element Models,” to appear in *Proc. 1995 AIAA SDM Conference*, Paper No. AIAA 95-1305, April 18-21 1995, New Orleans, LA.
106. Hwang, W. S., Belvin, K. W. and Park, K. C., “Design of Complex Vibration Control Systems Based on Spatial Energy Transmission Patterns,” *Proc. 1995 AIAA SDM Conference*, Paper No. AIAA 95-1381, April 18-21 1995, New Orleans, LA.
107. Jensen, D. D. and Park, K. C., “Equilibrium Constrained Assumed natural Coordinate Strain Plate Elements,” *International Journal for Numerical Methods in Engineering*, **38**, 2951-2977 (1995).
108. Greschik, G., Park, K. C. Namba, H. and Sato, T., “Deployability of the Sato Parabolic Dish and Other Sato Dishes,” *Proc. 19th International Symposium on Space Technology and Science, Yokohama, Japan*, Agne Shofu Pub. Inc., Tokyo, 1994, pp.203- 211.
109. Greschik, G., Park, K. C. and Natori, M. C., “The Unfurling of a rolled-up Strip into a helically curved strip,” *Proc. 1994 AIAA SDM Conference*, Paper No. AIAA 94-1472, April 18-21 1994, Hilton Head, SC.
110. Alvin, K. F., Park, K. C. and Peterson, L. D., “A Minimal-Order Experimental Component Mode Synthesis: New Results and Challenges,” *AIAA Journal*, **33(8)**, August 1995, 1477-1485.
111. Alvin, K. F., Peterson, L. D. and Park, K. C., “Experimental Identification of Normal Modes and Damping in an Actively Controlled Structure,” *Proc. 1994 AIAA SDM Conference*, Paper No. AIAA 94-1686, April 18-21 1994, Hilton Head, SC.

112. Hayman, G. J., Hedgepeth, J. M. and Park, K. C., "Design Freedoms in Articulating Astromast and Their Optimization for Improved Performance," *Proc. 1994 AIAA SDM Conference*, Paper No. AIAA 94-1409, April 18-21 1994, Hilton Head, SC.
113. Alvin, K. F., Park, K. C. and Peterson, L. D., "Consistent Model Reduction of Modal Parameters for Reduced-Order Active Control," *AIAA Journal of Guidance, Control and Dynamics*, **18(4)**, July-August 1995, 748-755.
114. Alvin, K. F., Peterson, L. D. and Park, K. C., "A Method for Determining Minimum-Order Mass and Stiffness Matrices from Modal Test Data," *AIAA Journal*, **33(1)**, January 1995, 128-135.
115. Peterson, L. D., S. Doebbling, Alvin, K. F. and Park, K. C., "Damage Detection Using Experimentally Measured Mass and Stiffness Matrices," *Proc. 1993 AIAA SDM Conference*, Paper No. AIAA 93-1482, April 19-21 1993, LaJolla, CA.
116. Yang, L. F., Mikulas, M., Park, K. C. and Su, R., "Slewing Maneuvers and Vibration Controls of Space Structures by Combined Feedforward and Feedback Moment Gyro Controls," *ASME Journal of Dynamic Systems, Measurement, and Control*, **117 (3)**, September 1995, 343-351.
117. Park, K. C., "Time Domain Computational Techniques," in: Chapter 4 of *Flight Vehicle Materials, Structures and Dynamics - Assessment and Future Directions*, ed. by A. K. Noor, ASME, New York, N. Y., 1994.
118. Alvin, K. F. and Park, K. C., "A Second-Order Structural Identification Procedure via System Theory-Based Realization," *AIAA Journal*, **32(2)**, February 1994, 397-406.
119. Park, K. C., Belvin, W. K. and K. F. Alvin, "Second-Order Discrete Kalman Filtering Equations for Control-Structure Interaction Simulations," to appear in *Journal of Guidance, Control, and Dynamics*, 1994.
120. Park, K. C. and Alexander, S., "Dynamics of Adaptive Structures: Design through Simulations," in: *Computational Engineering*, Kwak, B. M. and Tanaka, M. (editors), Elsevier, Amsterdam, 1993, 255-260.
121. Chiou, J. C., Park, K. C. and C. Farhat, "A Natural Partitioning Scheme for Parallel Simulation of Multibody Systems," *International Journal for Numerical Methods in Engineering*, **36**, 945-967 (1993).
122. Park, K. C. and Chiou, J. C., "A Discrete Momentum-Conserving Explicit Algorithm for Multibody Dynamics Analysis," *International Journal for Numerical Methods in Engineering*, **36**, 1071-1083 (1993).
123. Downer, D. D. and Park, K. C., "Formulation and Solution of Inverse Spaghetti Problem: Application to Beam Deployment Dynamics," *AIAA Journal*, **31**, February 1993, 339-347.
124. Sun, S. M., Natori, M. C. and Park, K. C., "A Computational Procedure for Flexible Beams with Frictional Contact Constraints," *International Journal of Numerical Methods in Engineering*, **36**, 3781-3800 (1993).
125. Park, K. C. and Natori, M. C., "Active Adhesion Concepts for In-Orbit Construction," *Journal of Reinforced Plastics and Composites*, **12**, Sept. 1993, 934-942.
126. Park, K. C., "Recent Developments in Time Integration Methods for Structural and Interaction System Dynamics," Chapter 9 of *Solving Large Scale Problems in Mechanics*, ed. by M. Papadrakakis, John Wiley & Sons, Ltd., 1992, pp. 259-300.
127. Downer, D. D., Park, K. C. and J. C. Chiou, "Dynamics of Flexible Beams for Multibody Systems: A Computational Procedure," *Computer Methods in Applied Mechanics and Engineering*, **96** (1992) 373-408.

128. Park, K. C., Alvin, K. F. and W. K. Belvin, "Computational Aspects of Real-Time Dynamics and Control Simulation," in *Intelligent Structures - 2: Monitoring and Control*, ed. Y. K. Wen, Elsevier Applied Science, New York, 1992, pp. 175-193.
129. Jensen, D. D. and Park, K. C., "ANS Shell Elements with Improved Transverse Shear Accuracy," *Proc. 32nd AIAA SDM Conf.*, Paper No. AIAA-92-2419, Dallas, TX, April 1992.
130. Park, K. C. and Alexander, S., "Element Topology-Independent Preconditioners for Parallel Finite Element Computations," *Proc. the 32nd AIAA SDM Conf.*, Paper No. AIAA-92-2475, Dallas, TX, April 1992.
131. Chiou, J. C., Downer, J. D., Natori, M. C. and Park, K. C., "Interaction Dynamics of an Orbiter and a Flexible Space Structure Undergoing Incremental In-Space Construction," *AIAA 1992 Dynamics Specialist Conf.*, Paper No. AIAA-92-2088, Dallas, TX, April 1992.
132. Downer, J. D. and Park, K. C., "Dynamics of Spacecraft with Deploying Flexible Appendages," *AIAA 1992 Dynamics Specialist Conf.*, Paper No. AIAA-92-2087, Dallas, TX, April 1992.
133. Natori, M. C., Park, K. C., Chiou, J. C. and Namba, H., "Application of Adaptive Structure Concepts to Construction of Space Systems in Orbit," *Journal of Intelligent Materials Systems and Structures*, **3(4)**, October 1992, 719-734.
134. Alvin, K. F. and Park, K. C., "Frequency-Window Tailoring of Finite Element Models for Vibration and Acoustics Analysis Center for Space Structures and Controls," in: *Structural Acoustics*, NCA-Vol.12/AMD-Vol.128, 1991, pp.117-128, American Society of Mechanical Engineers, New York.
135. Park, K. C., J. D. Downer, J. C. Chiou and C. Farhat, "A Modular Multibody Analysis Capability for High-Precision, Active Control and Real-Time Applications", *International Journal for Numerical Methods in Engineering*, **32**, 1767-1798 (1991).
136. Park, K.C. and Matsushima, K., "Stabilization of Divergence-Free Condition for Unsteady Incompressible Flow Computations," *Proc. AIAA Computational Fluid Dynamics Conference*, Honolulu, Hawaii, June 24-26, 1991.
137. Park, K.C., Chiou, J.C., Downer, J.D., Farhat, C., Chen G.S., and Wada, B.K., "Dynamics of Three-Dimensional Space Crane: Motion Requirements and Computational Considerations," Paper No. 90-WA/Aero-7, ASME Winter Annual Meeting, Dallas, Texas, November 25-30, 1990.
138. Park, K. C. and Belvin, W. K., "A Partitioned Solution Procedure for Control-Structure Interaction Simulations," *J. Guidance, Control and Dynamics*, **14(1)**, Jan.-Feb. 1991, 59-67.
139. Park, K. C., K. Alvin and W. K. Belvin, "Parallel Computations and Control of Adaptive Structures," in: *Intelligent Structures*, ed. by K. C. Chong, S. C. Liu and J. C. Li, Elsevier Science Publishers, London, 1990, 439-458.
140. Park, K. C., J. C. Chiou and J. D. Downer, "Explicit-Implicit Staggered Procedure for Multibody Dynamics Analysis," *J. Guidance, Control, and Dynamics*, **13(3)**, May -June 1990, 562-570.
141. Belvin, W. K. and Park, K. C., "Structural Tailoring and Feedback Control Synthesis: An Interdisciplinary Approach," *J. Guidance, Control, and Dynamics*, **13(3)**, May -June 1990, 424-429.
142. Farhat, C., Park, K. C. and Pelerin, Y. D., "An Unconditionally Stable Staggered Algorithm for Transient Finite Element Analysis of Coupled Thermoelastic Problems," *Computer Methods in Applied Mechanics and Engineering*, **85** (1991) 349-365.
143. Park, K. C., J. C. Chiou and J. D. Downer, "Staggered Solution Procedures for Multibody Dynamics Simulations," *Mechanics and Control of Large Flexible Structures, Progress in Astronautics and Aeronautics*, ed. J. L. Junkins, AIAA, 1990, 183-207.

144. Downer, D. D., Park, K. C. and J. C. Chiou, "A Computational Procedure for Multibody Systems Including Flexible Beam Dynamics," *Proc. the 1990 AIAA Dynamics Specialist Conference*, Paper No. AIAA-90-1237, Long Beach, Calif., 5-6 April 1990.
145. Belvin, W. K. and Park, K. C., "Computer Implementation of Analysis and Optimization Procedures for Control-Structure Interaction Problems," to appear in *AIAA Journal*; also in *Proc. the 1990 AIAA Dynamics Specialist Conference*, Paper No. AIAA-90-1194, Long Beach, Calif., 5-6 April 1990.
146. Park, K. C. and Belvin, W. K., "Discrete Integration of Continuous Kalman Filtering Equations for Time-Invariant Second-Order Structural Systems," *Proc. AIAA Guidance, Control and Navigation Conference*, Paper No. AIAA-90-3387-CP, Portland, Ore., August 20-22, 1990, pp.653-660.
147. Farhat, C., Sobh, N. and K. C. Park, "Transient Finite Element Computations on 65,536 Processors: The Connection Machine," *International Journal on Numerical Methods in Engineering*, **30(1)**, 27-55 (1990).
148. Park, K. C., Pramono, E., Stanley, G. M. and Cabiness, H. A., "The ANS Shell Elements: Earlier Developments and Recent Improvements," in *Analytical and Computational Models of Shells*, Noor, A. K. et al (eds.), CED -Vol. 3, 1989, ASME, New York, 217-240.
149. Belvin, W. K. and Park, K. C., "Computational Architecture for Integrated Controls and Structures Design," *Proc. the Third Annual NASA/DOD Control/Structures Interaction Technology Conference*, January 29-February 2, 1989, Dan Diego, Calif.
150. C. Farhat, N. Sobh and K. C. Park, "Dynamic Finite Element Simulations on the Connection Machine," *International Journal of High Speed Computing*, Vol. 1, No. 2, pp. 289-302 (1989)
151. Belvin, W. K. and Park, K. C., "On the State Estimation of Structures with Second Order Observers," *Proc. the 30th Structures, Dynamics and Materials Conference*, AIAA Paper No. 89-1241, April 3-5,1989.
152. Park, K. C. and Belvin, W. K., "Stability and Implementation of Partitioned CSI Solution Procedures," *Proc. the 30th Structures, Dynamics and Materials Conference*, AIAA Paper No. 89-1238, April 3-5,1989
153. Park, K. C. and Jensen, D. D., "A Systematic Determination of Lumped and Improved Consistent Mass Matrices for Vibration Analysis," *Proc. the 30th Structures, Dynamics and Materials Conference*, AIAA Paper No. 89-1335, April 3-5,1989.
154. Park, K. C., J. C. Chiou and J. D. Downer, "Recent Advances in Multibody Dynamics Analysis Procedures," *Computational Methods in Bioengineering* (ed. R. L. Spilker and B. R. Simon), BED-Vol.9, ASME, New York, 1988, 53-70.
155. Park, K. C., "Transient Analysis Methods in Computational Methods," *Finite Elements: Theory and Applications* (ed. D. L. Dwoyer, M. Y. Hussaini and R. G. Voigt), Springer-Verlag, 1988, 240-267.
156. Park, K. C., "Computational Issues in Control-Structure Interaction Analysis," *Large Space Structures: Dynamics and Control*, edited by Atluri, S. N., Springer-Verlag, 1988, pp.115-131.
157. Park, K. C. and Belvin, W. K., "Partitioned Procedures for Control-Structure Interaction Analysis," *Computational Mechanics '88*, S. N. Atluri and G. Yagawa (editors), Vol. 2, Springer-Verlag, 1988, pp. 64.iii.1-4.
158. Park, K. C., Stanley, G. M., "Strain Interpolations for A 4-Node ANS Shell Element," *Computational Mechanics '88*, S. N. Atluri and G. Yagawa (editors), Vol. 1, Springer-Verlag, 1988, pp. 26.i.1-4.

159. Stanley, G. M., Cabiness, H. and Park, K. C., "Revised ANS Shell Elements: Implementation and Numerical Evaluations," *Computational Mechanics '88*, S. N. Atluri and G. Yagawa (editors), Vol. 1, Springer-Verlag, 1988, pp. 26.v.1-4.
160. Park, K. C., "Flexible Beam Dynamics for Space Structures: - Formulation," *Report No. CU-CSSC-87-03*, Center for Space Structures and Controls, University of Colorado, May 1987 (Revised September 1987).
161. Park, K.C., Chiou, J.C. and J. D. Downer, "Explicit-Implicit Staggered Procedure for Multi-Body Dynamics Analysis," *J. Guidance, Control, and Dynamics*, **13(3)**, May -June 1990, 561-570.
162. Park, K. C. and Chiou, J. C., "Stabilization of Computational Procedures for Constrained Dynamical Systems," *Journal of Guidance, Control and Dynamics*, **11**, July-August 1988, 365-370.
163. Nour-Omid, B. and Park, K. C. "A Lagrange Multiplier Method for the Solution of Contact-Impact Problems," preprint, October 1987.
164. C. Farhat, C. A. Felippa and K. C. Park, "Implementation Aspects of Concurrent Finite Element Computations," in *Parallel Computations and Their Impact on Mechanics*, American Society of Mechanical Engineers, New York, 1987, 301-316.
165. Nour-Omid, B. and K. C. Park, "Solving Structural Mechanics Problems on the CalTech Hypercube Machine," *Comp. Meth. Appl. Mech. Eng.*, **61**, (1987) 161-176.
166. Park, K. C. and Chiou, J. C., "Evaluation of Constraint Stabilization Procedures for Multi-body Dynamical Systems," *Proc. the 28th SDM Conference*, Part 2A, AIAA, New York, N. Y., 1987, AIAA Paper No. 87-0927, pp.769-773.
167. Park, K. C., Stanley, G. M. and Cabiness, H., "A Family of C^0 Shell elements Based on Generalized Hrennikoff's Method and Assumed Natural-coordinate Strains," *Finite Element Methods for Nonlinear Problems*, P. G. Bergan(editor), Springer-Verlag, 1986, 265-282.
168. Stanley, G. M., Park, K. C. and Hughes, T. J. R., "Continuum-based Resultant Shell Elements," *Finite Element Method for Plate and Shell Structures*, Volume 1: Element Technology, ed. by Hughes, T. J. R. and Hinton, E., Pineridge Press International, Swansea, U. K., 1986, pp. 1-45.
169. Flaggs, D. L. and Park, K. C., "A Symbolic Analysis of C^1 and C^0 Discretizations for Curved Beams," *Innovative Numerical Methods in Engineering*, R. P. Shaw(editor), Springer-Verlag, 1986, 553-560.
170. Park, K. C. and Stanley, G. M., "A Curved C^0 Shell Element Based on Assumed Natural-Coordinate Strains," *Journal of Applied Mechanics*, 1986, 278-290.
171. Park, K. C., "Improved Strain Interpolation for Curved C^0 Elements," *Int. j. num. meth. engr.*, **22**, 281-288(1986).
172. Park, K. C., Stanley, G. M. and Flaggs, D. L., "A Uniformly Reduced Four-Noded C^0 -Shell Element with Consistent Rank Corrections," *Comp. & Struct.*, **20**, pp.129-139, 1985.
173. Park, K. C. and Regelbrugge, M. E., "A Momentum and Energy Conserving Algorithm for Contact-Impact Problems," Lockheed Palo Alto Research Laboratory, Report LMSC-D060682, September 1985, Palo Alto, Calif.
174. Park, K. C. and Flaggs, D. L., "A Symbolic Fourier Synthesis of a One-Point Integrated Quadrilateral Plate Element," *Comp. Meth. Appl. Mech. Engr.*, **48**, (1985) 203-236.
175. Park, K. C., "Symbolic Fourier Analysis Procedures for C^0 Finite Elements," in : *Innovative Methods for Nonlinear Analysis*, W. K. Liu, T. Belytschko and K. C. Park(editors), Pineridge Press, Swansea, (1984), 269-293.

176. Park, K. C., "Locking, Spurious Mechanisms, and Pressure Divergence in Penalty Finite Element Methods for Stokes Flow Problems," *Comp. Meth. Appl. Mech. Eng.*, **47**, (1984) 315-330.
177. Park, K. C. and Flaggs, D. L., "A Fourier Analysis of Spurious Mechanisms and Locking in the Finite Element Method," *Comp. Meth. Appl. Mech. Engr.*, **46**, (1984) 65-81.
178. M. E. Regelbrugge and Park, K. C., "Global/Local Interactions in Transient Dynamic Response of Large Space Structures," Presented at the 25th Structures, Dynamics and Materials Conf., Palm Springs, May 1984, Paper No. AIAA-84-0945-CP.
179. Park, K. C. and J. M. Winget, "Element-By-Element Semi-Implicit for Heat Conduction Analysis," *Proc. of the International Conference on Transient and Coupled Problems*, 9-13 July 1984, Venice, Italy.
180. Park, K. C. and Flaggs, D. L., "An Operational Procedure for the Symbolic Analysis of the Finite Element Method," *Comp. Meth. Appl. Mech. Engr.*, **42**, (1984) 37-46.
181. Park, K. C. and Felippa, C. A., "Recent Developments in Coupled-Field Analysis Methods," in: *Numerical Methods in Coupled Systems*, Lewis, R. W. et al(editors), John Wiley & Sons, (1984) 327-352.
182. Park, K. C. and Felippa, C. A., "Partitioned Analysis of Coupled Systems," in: *Computational Methods for Transient Analysis*(T. Belytschko and T. J. R. Hughes, Eds.), North-Holland Pub. Co., 157-219 (1983).
183. Park, K. C., "Stabilization of Partitioned Solution Procedures for Pore Fluid-Soil Interaction Analysis," *Int. j. num. meth. engr.*, **19**, 1669-1673 (1983).
184. Park, K. C., "An Improved Semi-Implicit Method for Structural Dynamics Analysis," *Journal of Applied Mechanics*, **49**, 1982, 589-593.
185. Park, K. C. and Winget, J. M., "Vibration Control of Large Space Structures by Irregular Truss Lattices," Presented at the 23rd Structures, Dynamics and Materials Conf., AIAA Paper no. 82-0649-CP, New Orleans, May 1982.
186. Park, K. C. and Housner, J. M., "Semi-Implicit Transient Analysis Procedures for Structural Dynamics Analysis," *Int. j. num. meth. engr.*, **18**, 609-622 (1982).
187. Underwood, P. G. and Park, K. C., "STINT/CD: A Stand-alone Explicit Time Integration Package for Structural Dynamics Analysis," *Int. j. num. meth. engr.*, **17**, 1285-1312 (1981).
188. Park, K. C., "A Family of Solution Algorithms for Nonlinear Structural Analysis based on Relaxation Equations," *Int. j. num. meth. engr.*, **18** (1982), 1337-1347.
189. Housner, J. M., Edinghoffer, H. and Park, K. C., "Nonlinear Dynamic Phenomena in the Space Shuttle Thermal Protection System," *Journal of Spacecraft and Rockets*, **19**, 1982, 269-277.
190. Park, K. C., "Time Integration of Structural Dynamics Equations: A Survey," in: *Pressure Vessels and Piping: Design Technology - 1982- A Decade of Progress*, ASME, New York, N. Y., 1982, pp. 277-291.
191. Park, K. C. and Felippa, C. A., "Partitioned Transient Analysis Procedures for Coupled-Field Problems: Accuracy Analysis," *Journal of Applied Mechanics* , **47**, 1980, 919-926.
192. Felippa, C. A. and Park, K. C., "Staggered Transient Analysis Procedures for Coupled-Field Mechanical Systems: Formulation," *Comp. Meth. Appl. Mech. Eng.*, **24**, (1980) 61-111.
193. Underwood, P. G. and Park, K. C., "A Variable-Step Central Di- fference Method for Structural Dynamics Analysis, Part 2: Imple- mentation and Performance Evaluation," *Comp. Meth. Appl. Mech. Eng.*, **23**, (1980) 259-279.

194. Park, K. C. and Underwood, P. G., "A Variable-Step Central Difference Method for Structural Dynamics Analysis, Part 1: Theoretical Aspects," *Comp. Meth. Appl. Mech. Eng.*, **22**, (1980) 241-258.
195. Park, K. C., "Partitioned Transient Analysis Procedures for Coupled-Field Problems: Stability Analysis," *Journal of Applied Mechanics*, **47**, 1980, pp.370-376.
196. Park, K. C., "The Solution of Variable-Step Implicit Difference Equations for Dynamic Systems Analysis," *Proc. of the Second International Conference on Innovative Numerical Analysis in Applied Engineering Science* (Shaw, R. et al. editors), the University of Virginia Press, 1980, pp.667-672.
197. Felippa, C. A. and Park, K. C., "Direct Time Integration Methods in Nonlinear Structural Dynamics," *Comp. Meth. Appl. Mech. Eng.*, **17/18**, (1979) 277-313.
198. Felippa, C. A., Yee, H. C. and Park, K. C., "Synthesis of Staggered Solution Procedures for Coupled Field Problems," *Proc. of the Second International Conference on Applied Numerical Modeling*, Madrid, Spain, 1978.
199. Felippa, C. A. and Park, K. C., "Computational Aspects of Time Integration Procedures in Structural Dynamics, Part 1: Implementation," *Journal of Applied Mechanics*, **45**, 1978, pp. 595-602.
200. Park, K. C. and Felippa, C. A., "Computational Aspects of Time Integration Procedures in Structural Dynamics, Part 2: Error Propagation," *Journal of Applied Mechanics*, **45**, 1978, pp.603-611.
201. Park, K. C., Felippa, C. A. and Deruntz, J. A., "Stabilization of Staggered Solution Procedures for Fluid-Structure Interaction Analysis," in: *Computational Methods for Fluid Structure-Interaction Problems*, ASME Applied Mechanics Symposia, AMD-vol.26, 1977, pp.95-124.
202. Underwood, P. G. and Park, K. C., "Implementation of a Variable-Step Integration Technique for Nonlinear Structural Dynamics Analysis," *Proc. of the 4th International Conf. on Structural Mechanics in Reactor Technology*, 1977, paper no.M5/a.
203. Park, K. C., "An Efficient Implementation of Explicit Method for Damped Second-Order Equations of Motion," *Symp. on Application of Computer Methods in Engineering*, University of California Press, 1977, pp.634-646.
204. Park, K. C. and Geers, T. L., "A Matrix Scaling Technique for Efficient Transient Structural Response Analysis," *Proc. of the International Symp. on Innovative Numerical Analysis in Applied Engineering Science*, Paris, France, 1977, pp.8-11:17.
205. Park, K. C., "An Implicit Variable-Step Technique for Fluid Dynamics Equations," *Proc. of the 2nd International Conference on Finite Element Methods in Flow Problems*, Rapallo, Italy, 1976, pp. 33-39.
206. Park, K. C., "Practical Aspects of Numerical Time Integration," *Comp. & Struct.* **7**, 1977, pp. 343-353.
207. Park, K. C., "Evaluating Time Integration Methods for Nonlinear Dynamics Analysis," in: *Finite Element Analysis of Transient Nonlinear Structural Behavior*(T. Belytschko and T. L. Geers, editors) , ASME Applied Mechanics Symposia, AMD-vol.14, 1975, pp.35-58.
208. Park, K. C., "Modeling and Analysis Techniques for Vehicle Crash Simulation," in: *Aircraft Crashworthiness*(K. J. Saczalski et al, Editors), the University of Virginia Press, 1975, pp. 499-515.
209. Park, K. C., and Saczalski, K. J., "A Simplified Technique for Prediction of Collapse Modes in Crash-Impacted Structural Systems," *Journal of Engineering for Industry*, **98**, 1976, pp. 902-908.

210. Park, K. C., "Evaluation of Time Integration Methods for Transient Response Analysis of Nonlinear Structures," *Trans. of the 3rd Int. Conf. on Structural Mechanics in Reactor Technology*, vol.5, Part M, Paper no.M1/2, 1975, London, U. K.
211. Saczalski, K. J. and Park, K. C., "Comments on Inelastic Constitutive Relations for Prediction of Structural Crash-Impact Response," *NSF Workshop on Inelastic Constitutive Equations for Metals*, Rensselaer Polytechnic Institute, Troy, N. Y., 1975.
212. Park, K. C., "An Improved Stiffly Stable Method for Direct Integration of Nonlinear Structural Dynamics Equations," *Journal of Applied Mechanics*, **42**, 1975, pp.464-470.
213. Park, K. C. and Saczalski, K. J., "An Interactive Hybrid Technique for Crashworthy Design of Complex Vehicular Structures," *Proc. of SAE Conf. of Vehicle Structural Mechanics*, 1974, SAE Paper no. 740327.
214. Park, K. C. and Saczalski, K. J., "Transient Response of Inelastically Constrained Rigid Body Systems," *Journal of Engineering for Industry*, **96**, 1974, pp.1041-1047.
215. Wittlin, G. and Park, K. C., "Development and Experimental Verification of Procedures to Determine Nonlinear Load-Deflection Characteristics of Helicopter Substructures Subjected to Crash Forces," Vol.1 & 2, Report USAAMRDL-TR-74-12A and -12B, U. S. Army Air Mobility Research and Development Laboratory, Fort Eustice, Va.(1974)
216. Saczalski, K. J. and Park, K. C., "Statistical Loads Analysis Technique for Shock and High Frequency Excited Structures," *Shock & Vibration Bulletin*, Part 5, n0.42, 1972.

BOOKS EDITED

- Computational Techniques for Interface Problems*(with D. K. Gartling), ASME Applied Mechanics Symposia, vol.29, 1978, ASME, New York.
- Computer Analysis of Large Scale Structures*(with R. Jones), ASME Applied Mechanics Symposia Series, AMD-Vol.49, ASME, New York, 1981.
- Innovative Methods for Nonlinear Problems*(with W. K. Liu and T. Belytschko), Pineridge Press, Swansea, U. K., 1984.