July 2025

CURRICULUM VITAE

JIANN-WEN WOODY JU

Professor, Ph.D., P.E.

Laureate, 2025 Blaise Pascal Medal in Engineering, EurASc

Fellow, European Academy of Sciences (EurASc)

Member, European Academy of Sciences and Arts (EASA)

ASCE Life Fellow

Fellow ASME, Fellow ASCE, Fellow EMI, Fellow USACM, Fellow ACI, Fellow IACM

PERSONAL DATA

U.S. Citizen.

University Address: Department of Civil and Environmental Engineering, University of California, Los Angeles, CA90095-1593.

E-mail: juj@ucla.edu; woodyju@sbcglobal.net

PROFESSIONAL ENGINEER LICENSURE

- **Registered Professional Engineer** in Civil Engineering (with focus areas on Structural Engineering & Geotechnical Engineering), State of **California**.
- **Registered Professional Engineer** in Civil Engineering (with focus areas on Structural Engineering & Geotechnical Engineering), State of **Arizona**.

EDUCATION

University of California — Berkeley, California.

Ph.D. in Civil Engineering, Dec. 1986. Major: *Structural Mechanics and Computational Mechanics*. Minor: *Numerical Analysis*.

Dissertation title: "*Constitutive Modeling for Inelastic Materials Including Damage and Finite Strain Effects*".

Dissertation advisers: Professors R.L. Taylor and K.S. Pister

University of California — Berkeley, California.

M.S. in Civil Engineering, June 1983. Major: Structural Engineering.

National Taiwan University — Taipei, Taiwan.

B.S. in Civil Engineering, June 1980. Major: Structural Engineering.

PROFESSIONAL EXPERIENCE

University of California, Los Angeles (7/98 — present)

Professor. **Dept. Chair** (1999—2002). Department of Civil and Environmental Engineering. **Chair** (2001—2012) of the **Structures & Mechanics Program**; Professor of Biomedical Engineering Interdepartmental Program (1998—present). Same teaching and research activities as the next item, **plus** damage/ degradation of concrete foundations, damage and healing models for geomaterials, micromechanics and nanomechanics of advanced composites and FRC, construction defects, structural damage assessment due to earthquakes; thin-film MEMS; biomechanics of human bones, dental surgery and nanomaterials.

University of California, Los Angeles (7/93 — 6/98)

Associate Professor. **Dept. Vice Chair and Undergraduate Advisor** (7/94—6/98). Department of Civil and Environmental Engineering. **Chair** (1/96—9/98) of the **Structures& Mechanics Program**. Teaching graduate and undergraduate courses in solid mechanics, plasticity, experimental structural mechanics, structural analysis, and structural dynamics. Supervising post-doctoral fellows and doctoral dissertations and research. Actively conducting research in micromechanics of heterogeneous composites with many strongly interacting inhomogeneities, thermo-micromechanical damage modeling of concrete pavement under high temperature, micromechanical damage mechanics for composite materials with many interacting and evolving microcracks, continuum elastoplastic damage mechanics for brittle and ductile materials, plasticity and viscoplasticity theories and algorithms, nonlinear computational solid mechanics (finite element methods), sulfate attack on concrete and service life predictions, durability, nondestructive and mechanical testing of concrete, etc.

Princeton University (9/87 — 6/93)

Assistant Professor. Structures and Mechanics Program, Department of Civil Engineering and Operations Research. Taught graduate and undergraduate courses in nonlinear solid mechanics, plasticity, damage mechanics, nonlinear computational mechanics, structural theories and structural dynamics. Supervised doctoral dissertations and research. Conducted externally funded research in micromechanical damage mechanics for composite materials with many interacting and evolving microcracks, continuum elastoplastic damage mechanics for brittle and ductile materials, micromechanics of heterogeneous composites with many strongly interacting inhomogeneities, plasticity and viscoplasticity theories and computational algorithms, and nonlinear computational solid mechanics, etc.

University of California, Berkeley (11/86 — 8/87)

Post-Doctoral Research Engineer. Research supervised by Professors R.L. Taylor and K.S. Pister for theoretical development and numerical implementation of three-dimensional fully nonlinear rate-dependent continuum elastoplastic-damage models. In addition, research work included development of finite element solutions of fully nonlinear frictional stick-slip contact problems.

University of California, Berkeley (6/86 — 8/86)

Lecturer. Summer Session, Department of Civil Engineering. Taught an upper division course CE-130 “Mechanics of Materials”. Full responsibility for conduct of the course.

AWARDS, HONORS and DISTINCTIONS

- ***Laureate, 2025 Blaise Pascal Medal in Engineering*** (sole recipient)***, European Academy of Sciences,*** awarded in July 2025, headquartered in Brussels, Belgium.
- ***Fellow (Academician), European Academy of Sciences (EurASc),*** elected in July 2025, headquartered in Brussels, Belgium.
- ***Member (Academician), European Academy of Sciences and Arts (EASA),*** elected in March 2024, in Division VI, headquartered in Salzburg, Austria.
- ***ASCE Life Fellow***, elected in January 2024, the American Society of Civil Engineers.
- ***EMI (Engineering Mechanics Institute) Fellow Election***, the American Society of Civil Engineers, July 2020.
- The ***ICDM-3 Lifetime Achievement Medal,*** the Third International Conference on Damage Mechanics, July 4-6, 2018 (Shanghai).
- **EU Academy of Sciences, Member**, November 2018—present.
- **Editor-in-Chief**, ***International Journal of Damage Mechanics***, July 2015-present (SAGE Publications, London, U.K.). SCI-indexed. JCR Year 2020 Impact Factor = **5.029**.
- **Editorial Board**, ***Journal of Structural Integrity and Maintenance,*** January 2016-present (Taylor & Francis Group, London, U.K.).
- **Editorial Board**, ***Journal of the Chinese Institute of Engineers (JCIE)***, January 2016-present (Taylor & Francis Group, London, U.K.). SCI-indexed.
- **Plenary Speaker**, the Third International Conference on New Western Land-Sea Corridor Engineering Disaster Prevention and Mitigation & Structural Safety, at Guangxi University, Nanning, December 2-3, 2023. (Remote lecture by QQ Meeting.)
- **Plenary Speaker**, the Third International Conference on Damage Mechanics (ICDM-3), at Tongji University, Shanghai, July 4-6, 2018.
- **Plenary Speaker**, the 11th Frontier Scientists Workshop, sponsored by the Korean Academy of Science and Technology (KAST), at InterContinental Mark Hopkins in San Francisco, July 24-25, 2017, by special KAST invitation only.
- **Plenary Speaker**, the Second International Conference on Damage Mechanics (ICDM-2), at the University of Technology at Troyes, Troyes, France, July 8 and July 9 (twice), 2015.
- ***Southwest Jiaotong University Honorary Distinguished Professor*** (Short-Term), January 2015-present (Chengdu, China).
- **Editorial Advisory Board**, ***Advances in Structural Engineering*** (An International Journal), January 2014-present (SAGE Publications, London, U.K.). SCI-indexed.
- ***ICACM Award,*** the International Chinese Association for Computational Mechanics, Dec. 2013 (Sydney, Australia).
- **Editorial Board**, ***Frontiers of Structural and Civil Engineering***, January 2013-present (Springer Publications).

- ***National 1000 Distinguished Professor*** (Short-Term Honorary)**,** Tongji University, 2013-2019 (Shanghai).
- ***Tongji University Distinguished Professor*** (Short-Term Honorary), 2013-2019 (Shanghai).
- ***Guangxi University Distinguished Professor*** (Short-Term Honorary), 2013-2019 (Nanning, China).
- **External Academic Advisor** (EAA), City University of Hong Kong, for the Department of Architecture and Civil Engineering, November 2013-September 2019.
- **Editor and Editorial Board**, ***Journal of Composites***, October 2012-present (Hindawi Publishing Co., New York City, USA).
- ***IACM Fellow Award***, the International Association for Computational Mechanics, July 2010.
- Election as **Member of the General Council** of the International Association for Computational Mechanics (**IACM**), July 2009-present.
- ***Tongji University Chair Professor*** (Short-Term Honorary), 2011-2013 (Shanghai).
- ***Chang-Jiang Scholar Chair Professor*** (Short-Term Honorary), 2009-2012, Ministry of Education (China), and Guangxi University (Nanning).
- ***Kwang-Hua Chair Professor*** (Short-Term Honorary), 2010-2011, Tongji University (Shanghai).
- **Associate Editor and Editorial Board**, ***ASCE Journal of Nanomechanics and Micromechanics***, Jan. 2010-present (American Society of Civil Engineers, Reston, Virginia, USA). SCI-indexed.
- ***ACI Fellow Award***, the American Concrete Institute, Nov. 2008.
- **Invited Visiting Chair Professor** (Short-Term Honorary), LMT Cachan, ENS Cachan/CNRS and the University of Paris VI, France, AY 2008-2009.
- Invited Visiting Professor, City University of Hong Kong, November to December 2009, under the Academic Exchange Fund of the City University of Hong Kong.
- ***2008 Publication Award of Merit*****,** the Structural Engineers Association of Illinois, June 2008, for a paper published in the *ACI Structural Journal*, vol. 104, no. 5, pp. 601-610, Sep./Oct. 2007, by the American Concrete Institute.
- **Editorial Board**, ***Acta Mechanica*** (An International Journal), March 2008-present (Springer Publications, Wien, Austria). SCI-indexed.
- **Editorial Board**, ***Journal of Chongqing University (English Edition)***, April 2008-present (Chongqing, China).
- **Editorial Board**, ***Book Series in Computational and Experimental Methods in Structures***, June 2008—present, Imperial College Press & World Scientific Publishing Co., USA, UK and Singapore.
- **Engineering Panel Member,** Research Grant Council of Hong Kong, Sep. 2008- 2020.
- Distinguished Visiting Professor (Honorary), the Chinese Academy of Sciences, Institute of Mechanics, July-August 2007.
- **Election as General Council Member and Executive Council Member,** the International Chinese Association for Computational Mechanics, July 2007-present.
- **Thematic Plenary Speaker,** the 2013 Asia-Pacific Congress for Computational Mechanics, Inter-Continental Hotel, Singapore, December 12, 2013.

- **Semi-plenary Speaker**, the 2013 Chinese Congress on Theoretical and Applied Mechanics, Shaanxi State Hotel, Xi'an, China, August 19, 2013.
- **Plenary Speaker**, the Fourth National Symposium on Tunnel, Underground Space, and Transportation Infrastructures, Fuyuan Ambassador Hotel, Enshi, Hubei, China, August 1, 2013.
- **Plenary Speaker**, 2013 International Workshop on Life-Cycle Performance of Concrete Structures, Hong Kong Polytechnic University, Hong Kong, June 15, 2013.
- **Plenary Speaker**, the First International Conference on Damage Mechanics (ICDM-1), at Serbian Chamber of Engineers, Belgrade, Serbia, June 26, 2012.
- **Semi-plenary Speaker**, the 3rd International Symposium on Computational Mechanics (ISCM-3), and the 2nd International Conference on Computational Structural Engineering (CSE-2), National Taiwan University, Taipei, Taiwan, December 5, 2011.
- **Plenary Speaker**, the 2nd International Symposium on Computational Mechanics, and the 12th International Conference on the Enhancement and Promotion of Computational Methods in Engineering and Science, Hong Kong (Holiday Inn Gold Mile Hotel) and Macau (MGM Grand Hotel), November 30, 2009.
- **Semi-plenary Speaker,** International Symposium on Computational Mechanics, Beijing, China, July 30, 2007.
- ***USACM Fellow Award***, the U.S. Association for Computational Mechanics, Feb. 2007.
- **Principal Co-Chair of ASME Award Endowments** for the "Thomas J.R. Hughes AMD Young Investigator Award" and the "Theodore Belytschko Applied Mechanics Award", the American Society of Mechanical Engineers, 2006-2007.
- **Elections as *USACM Member-at-Large*** and ***Executive Committee Member***, the U.S. Association for Computational Mechanics, Dec. 2006-2010, and July 2010-2014.
- ***ASCE Fellow Election***, the American Society of Civil Engineers, Dec. 2006.
- **Editor**, ***International Journal of Damage Mechanics***, Sep. 2006-present (Sage Publications, London, U.K.). SCI-indexed.
- ***ASME Fellow Election***, the American Society of Mechanical Engineers, Feb. 1998.
- **1997** ***Walter L. Huber Civil Engineering Research Prize***, the American Society of Civil Engineers, 1997. (A national distinguished mid-career achievement award)
- **1991** ***Presidential Young Investigator Award*** (1991-98), National Science Foundation and White House.
- **1991** ***Alfred Rheinstein Faculty Award***, (with $10,000 research award), School of Engineering and Applied Science, Princeton University, May 1991.
- **Editorial Advisory Board**, ***International Journal of Damage Mechanics***, since 1991. SCI-indexed.
- **Associate Technical Editor**, ASME ***Journal of Engineering Materials and Technology***, 1995—2001. SCI-indexed.
- **Associate Technical Editor**, ASME ***Journal of Applied Mechanics***, 1995-2002. SCI-indexed.
- Citation in ***Who's Who in Science and Engineering***, by Marquis Who's Who, 2nd Ed., 1994; 4th Ed., 1998; 5th Ed., 2000-2001; 6th Ed., 2002-2003; 7th Ed., 2003-2004; 8th Ed., 2005-2006; 9th Ed., 2006-2007; 10th Ed., 2008-2009.

- Citation in ***Who's Who in America***, by Marquis Who's Who, 59th Ed., 2005; 60th Ed., 2006; 61st Ed., 2007; 62nd Ed., 2008.
- Citation in ***Who's Who in the West***, by Marquis Who's Who, 29th Ed., 2002; 30th Ed., 2003; 31st Ed., 2004; 32nd Ed., 2005; 33rd Ed., 2006; 34th Ed., 2007.
- Citation in ***Who's Who in Finance and Business***, by Marquis Who's Who, 35th Ed., 2006-2007; 36th Ed., 2008-2009.
- Citation in ***Who's Who in the World***, by Marquis Who's Who, 18th Ed., 2001.
- Citation in ***Who's Who in American Education***, by Marquis Who's Who, 6th Ed., 2004-2005.
- Citation in ***2000 Outstanding Intellectuals of the 21st Century***, by International Biographical Center, 1st Ed., 2002 (England).
- Citation in ***Strathmore's Who's Who***, by Strathmore Directories Ltd., 2003-2004 Ed., 2004-2005 Ed., 2005-2006 Ed.
- Invited participant, 1998 **Symposium on Frontiers of Engineering**, U.S. National Academy of Engineering, Sep. 17-19, 1998.
- **2000 ACI-James-Instruments Award for Research in Nondestructive Testing**, American Concrete Institute, March 2000. (faculty advisor to the winning research paper by Lisheng Weng and J.W. Ju.)
- Principal author, LS-DYNA Material Model 25**,** Geologic Cap model and concrete model since 1988.
- Principal author, MSC/DYTRAN Material Model**,** Geologic Cap model and concrete model since 1988.
- **Chairman** of American Concrete Institute Committee **446** on "*Fracture Mechanics*" (2004-2008).

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Society of Civil Engineers, Member, 1986—2006; **Fellow**, 2006—present; **Life Member**, 2024—present.

  Member and Member of the Control Group Appointments in the "*Inelastic Behavior Committee*" ("Modeling Inelasticity and Multiscale Behavior"), Engineering Mechanics Division/Institute (1989—present).

  Member Appointment in the "*Computational Mechanics Committee*", Engineering Mechanics Division/Institute (1989—1993; 2003—present).

  Founding Chairman of the "*Nanomechanics and Nanomaterials Committee*", EMI (2012-present).

- American Society of Mechanical Engineers, Member 1986—1998; **Fellow**, 1998—present.

  Member in "*Joint Constitutive Equations Committee*", Applied Mechanics Division and Materials Division (1989—present).

  Member in "*Composite Materials Committee*", Applied Mechanics Division (1990—present).

  Successfully sponsoring and initiating the ASME **Fellow Election** for Prof. Victor Li of the Univ. of Michigan, Ann Arbor, Sep. 1999; and for Prof. Nasr Ghoniem of UCLA, Oct. 2006.

- U.S. Association for Computational Mechanics, Member, 1990—2006; **Fellow**, 2007—present. **Election as a *USACM Member-at-Large*** and ***an Executive Committee Member***, Dec. 2006—present.

- International Association for Computational Mechanics (**IACM**), Member, 1990—2010; **Fellow**, 2010-present; **Member of the General Council**, July 2009-present.

- International Chinese Association for Computational Mechanics (**ICACM**), **Election as a General Council Member and an Executive Council Member,** July 2007-Oct. 2016 (1st term); Oct. 2016-Oct. 2022 (2nd term).

- American Concrete Institute, Member, 1997—2008; **Fellow**, 2008—present.

  Chairman of ACI Committee **446** "*Fracture Mechanics*" (2004—2008).

  Voting Member in Committee **446** "*Fracture Mechanics*" (1998—present).

  Associate Member in Committee **201** "*Durability of Concrete*" (1998—present).

  Associate Member in Committee **228** "*Nondestructive Testing of Concrete*" (1998—present).

- American Academy of Mechanics, Member, 1991—present.

- Society of Engineering Science, Member, 1993—present.

- American Society for Engineering Education, 2008-present.

- **American Society of Testing Materials**, Member, 1999—2001, 2016—present. **Voting Member** in Committee **E50** and Sub-Committee **E50-02**.

- Consortium of Universities for Research in Earthquake Engineering, Member, 1993—present.

  Board of Directors, and **Representative** for UCLA (1/2000—1/2003).

- Earthquake Engineering Research Institute, Member, 1/2000—2003.

SYMPOSIA & TECHNICAL PROGRAMS IN INTERNATIONAL CONFERENCES

[1] **Organizer and Chair** of the Session on "Damage Mechanics in Inelasticity", with 5 papers, sponsored by the ASCE Engineering Mechanics Division, in the *3rd Joint ASCE-ASME Mechanics Conference*, July 9-12, 1989, La Jolla, CA.

[2] **Organizer and Chair** of the **Symposium** on "Damage Mechanics in Engineering Materials" (with D. Krajcinovic and H.L. Schreyer), with 6 sessions and 30 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *1990 ASME Winter Annual Meeting*, Nov. 25-30, 1990, Dallas, Texas.

[3] **Organizer and Chair** of the **Symposium** on "Damage Mechanics: Theories and Computations" (with H. Levine), with 2 sessions and 11 papers, in the *1991 ASCE Engineering Mechanics Conference*, May 19-22, 1991, Columbus, Ohio.

[4] **Organizer and Chair** of the **Symposium** on "Damage Mechanics and Plasticity", with 5 sessions and 20 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *1992 ASME Applied Mechanics/ Materials/ Aerospace Summer Meeting*, April 28-May 1, 1992, Tempe, Arizona.

[5] **Organizer and Chair** of the Session on "Material Softening and Damage Mechanics" (with H. Levine), with 6 papers, in the *1992 ASCE Engineering Mechanics Specialty Conference*, May 24-27, 1992, College Station, Texas.

[6] **Organizer and Chair** of the **Symposium** on "Damage Mechanics and Localization" (with K.C. Valanis), with 3 sessions and 13 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *1992 ASME Winter Annual Meeting*, Nov. 8-13, 1992, Anaheim, CA.

[7] **Organizer and Chair** of the **Symposium** on "Homogenization and Constitutive Modeling for Heterogeneous Materials" (with C.S. Chang), with 3 sessions and 15 papers, in the *1993 First Joint ASCE/ASME/SES Mechanics Conference*, June 6-9, 1993, Charlottesville, Virginia.

[8] **Organizer and Chair** of the **Symposium** on "Micromechanics of Composites" (with G.J. Weng and Y.D.S. Rajapakse), with 8 sessions and 32 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *1993 ASME Winter Annual Meeting*, Nov. 28-Dec. 3, 1993, New Orleans, Louisiana.

[9] **Organizer and Co-Chair** of the **Symposium** on "Inelasticity and Micromechanics of Metal Matrix Composites" (with G.Z. Voyiadjis), with 5 sessions and 25 papers, sponsored by the Engineering Mechanics Division, ASCE, in the *12th U.S. National Congress on Applied Mechanics*, June 26-July 1, 1994, Seattle, Washington.

[10] **Organizer and Chair** of the **Symposium** on "Damage Mechanics in Composites" (with D.H. Allen), with 4 sessions and 20 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *1994 ASME Winter Annual Meeting*, Nov. 6-11, 1994, Chicago, Illinois.

[11] **Organizer and Chair** of the **Symposium** on "Damage Mechanics in Engineering Materials" (with J.L. Chaboche), with 3 sessions and 15 papers, in the *1995 ASCE Engineering Mechanics Conference*, May 21-24, 1995, Boulder, Colorado.

[12] **Organizer and Chair** of the **Symposium** on "Numerical Methods in Structural Mechanics", with 5 sessions and 21 papers, in the *1995 ASME Joint Applied Mechanics and Materials Summer Conference*, June 28-30, 1995, UCLA, Los Angeles, CA.

[13] **Organizer and Chair** of the **Symposium** on "Damage Mechanics in Composite Materials" (with D. Krajcinovic), with 4 sessions and 17 papers, in the *1995 ASME Joint Applied Mechanics and Materials Summer Conference*, June 28-30, 1995, UCLA, Los Angeles, CA.

[14] **Member** of the **Technical Program Committee**, the ***1995 ASME Joint Applied Mechanics and Materials Summer Conference***, June 28-30, 1995, UCLA, Los Angeles, CA.

[15] **Organizer and Chair** of the **Symposium** on "Damage Mechanics in Engineering Materials" (with G.Z. Voyiadjis and J.-L. Chaboche), with 11 sessions and 55 papers, in the *1997 Joint ASME/ASCE/SES Mechanics and Materials Conference (McNU97)*, June 29-July 2, 1997, Northwestern University, Evanston, IL. The **largest** symposium in the conference.

[16] **Member** of the **International Scientific Committee**, the *35th Society of Engineering Science Annual Technical Meeting*, September 27-30, 1998, Washington State University, Pullman, WA.

[17] **Member** of the **Technical Program Committee**, the *1999 SPIE International Symposium on Nondestructive Evaluation Techniques for Aging Infrastructure and Manufacturing*, March 3-5, 1999, Newport Beach Marriott Hotel, CA.

[18] **Organizer and Chair** of the Session on NDE of Airport Concrete Structures (ND02), the *1999 SPIE International Symposium on Nondestructive Evaluation Techniques for Aging Infrastructure and Manufacturing*, March 3-5, 1999, Newport Beach Marriott Hotel, CA.

[19] **Organizer and Chair** of the **Symposium** on "Progress in Damage Mechanics" (with I. Carol and G.Z. Voyiadjis), with 3 sessions and 16 papers, in the *5thU.S. National Congress on Computational Mechanics*, August 4—6, 1999, the University of Colorado, Boulder.

[20] **Member** of the **Technical Program Committee**, the *2000 SPIE 5th Annual International Symposium on Nondestructive Evaluation and Health Monitoring of Aging Infrastructure*, Conference 3994, March 5—9, 2000, Newport Beach Marriott Hotel, CA.

[21] **Chair** of the Session on "US-Japan Cooperative Research Program: Innovative Systems, Materials" (with J. Ramirez), with 7 papers, in the *6th ASCCS International Conference on Steel-Concrete Composite Structures*, March 22—24, 2000, Manhattan Beach Marriott Hotel, Los Angeles, CA.

[22] **Organizer and Chair** of the *Army Research Office Workshop on "Advanced Heterogeneous Systems*" (with M.A. Zikry), June 27—28, 2000, Boelter Hall, University of California, Los Angeles, CA.

[23] **Member** of the **Technical Program Committee**, the *2001 SPIE 6th Annual International Symposium on Nondestructive Evaluation and Health Monitoring of Aging Infrastructure*, March 2001, Newport Beach Marriott Hotel, CA.

[24] **Organizer and Chair** of the **Symposium** on "T.H. Lin 90th Birthday Symposium on Mechanics and Materials" (with G.J. Weng), with 8 sessions and 36 papers, in the *2001 Joint ASCE-ASME-SES Mechanics and Materials Conference*, June 27-29, 2001, Sheraton San Diego Hotel and Marina, CA.

[25] **Organizer and Co-Chair** of the **Symposium** on "Micromechanics of Heterogeneous Materials" (with L.Z. Sun), with 4 sessions and 20 papers, in the *15th ASCE Engineering Mechanics Conference*, June 2-5, 2002, Columbia University, New York City.

[26] **Organizer and Co-Chair** of the **Symposium** on "Micromechanics-Based Materials Modeling and Simulation" (with Lizhi Sun), with 9 sessions and 45 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *2003 ASME Mechanics and Materials Conference*, June 17-20, 2003, Camelback Resort, Scottsdale, Arizona.

[27] **Organizer and Co-Chair** of the **Symposium** on "Recent Advances in Microstructural Mechanics and Damage Mechanics of Materials" (with Lizhi Sun, Chi L. Chow, Elliot Fang), with 5 sessions and 21 papers, sponsored by the Applied Mechanics and Materials Divisions, in the *2004 ASME Winter Meeting (IMECE 2004 Conference)*, November 14-19, 2004, Anaheim Hilton Hotel, CA.

[28] **Chair** of Session 4 of the Symposium on "Mathematical and Computational Foundations of Multiscale Modeling", in the *8th U.S. National Congress on Computational Mechanics*, July 25-27, 2005, Austin Convention Center, Austin, Texas.

[29] **Chair** of the **Local Organizing Committee**, in the ***7th World Congress on Computational Mechanics* (2006)**, with approximately 400 sessions and 1,950 papers and attendees from 60 countries; sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[30] **Member** of the **Technical Program Committee**, in the ***7th World Congress on Computational Mechanics* (2006)**, with approximately 400 sessions and 1,950 papers and attendees from 60 countries; sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[31] **Member** of the **Scientific Advisory Board**, in the ***7th World Congress on Computational Mechanics* (2006)**, with approximately 400 sessions and 1,950 papers and attendees from 60 countries; sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[32] **Conference Co-Chair** and a **Principal Organizer** of the ***7th World Congress on Computational Mechanics* (2006)**, with approximately 400 sessions, 1,950 papers and attendees from 60 countries; sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[33] **Organizer and Chair** of the **Symposium** on "T.H. Lin 95th Birthday Symposium on Computational Mechanics and Materials" (with J.S. Chen and L.Z. Sun), with 4 sessions and 18 papers, in the *7th World Congress on Computational Mechanics*, sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[34] **Organizer and Co-Chair** of the **Symposium** on "Nanomechanics and Nanocomposites" (with L.Z. Sun), with 3 sessions and 15 papers, in the *7th World Congress on Computational Mechanics*, sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[35] **Co-Chair** of Session 1 of the Symposium on "Physically Based Constitutive Models for Metals: Theory and Computation", in the *7th World Congress on Computational Mechanics*, sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[36] **Chair** of Semi-Plenary Lectures I, in the *7th World Congress on Computational Mechanics*, sponsored by the International Association of Computational Mechanics, July 16-22, 2006, Hyatt Regency Century Plaza Hotel, Los Angeles, CA.

[37] **Organizer and Chair** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun and G.Z. Voyiadjis), with 4 sessions and 19 papers, in the *18th ASCE Engineering Mechanics Conference*, June 3-6, 2007, Virginia Polytechnic University, Blacksburg, VA.

[38] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics" (with L.Z. Sun, P. Ladeveze and O. Allix), with 5 sessions and 22 papers, in the *9th U.S. National Congress on Computational Mechanics*, sponsored by the U.S. Association for Computational Mechanics, July22-26, 2007, Hyatt Regency San Francisco, CA.

[39] **Member** of the **Scientific Program Committee**, in the ***9thU.S. National Congress on Computational Mechanics***, sponsored by the U.S. Association for Computational Mechanics, July 22-26, 2007, Hyatt Regency San Francisco, CA.

[40] **Member** of the **Scientific Advisory Board**, in the ***2007 International Symposium on Computational Mechanics***, July 30 to August 1, 2007, Jiuhua Spa and Resort, Beijing, China.

[41] **Member** of the **Scientific Advisory Board**, in the ***3rd Asia-Pacific Congress on Computational Mechanics,*** and ***11th International Conference on Enhancement and Promotion on Computational Methods in Engineering and Science,*** sponsored by the Asia-Pacific Association for Computational Mechanics, Dec. 3-6, 2007, Kyoto Convention Center, Kyoto, Japan.

[42] **Member** of the **Technical Committee**, in the ***First International Workshop on Performance, Protection and Strengthening of Structures under Extreme Loading*** (PROTECT2007), August 20-22, 2007, Whistler, British Columbia, Canada.

[43] **Organizer** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun, G.Z. Voyiadjis and Frederic Dufour), with 4 sessions and 20 papers, in the *19th ASCE Engineering Mechanics Institute Inaugural Conference*, May 18-21, 2008, University of Minnesota, Minneapolis, MN.

[44] **Organizer** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun, G.Z. Voyiadjis and Frederic Dufour), with 3 sessions and 15 papers, in the *First American Academy of Mechanics Conference*, June 17-20, 2008, New Orleans, LA.

[45] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics of Engineering Materials" (with L.Z. Sun, P. Ladeveze and O. Allix), with 5 sessions and 29 papers, in the *8th World Congress on Computational Mechanics (WCCM VIII)* and the *5th European Congress*

on Computational Methods in Applied Science and Engineering (ECCOMAS V), sponsored by the International Association for Computational Mechanics (IACM), the International Union for Theoretical and Applied Mechanics (IUTAM), and the European Community on Computational Methods in Applied Science (ECCOMAS), June30-July 5, 2008, at Lido Convention Center, Venice, Italy.

[46] **Organizer and Co-Chair** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun and G.Z. Voyiadjis), in the *ASME-SES-ASCE Joint Mechanics and Materials Conference*, June24-27, 2009, VPI, Blacksburg, Virginia.

[47] **Member** of the **Scientific Program Committee**, in the ***10th U.S. National Congress on Computational Mechanics***, sponsored by the U.S. Association for Computational Mechanics, July 16-19, 2009, Greater Columbus Convention Center, Columbus, Ohio.

[48] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics of Engineering Materials" (with L.Z. Sun and H.K. Lee), with 4 sessions and 20 papers, in the *10th U.S. National Congress on Computational Mechanics (USNCCM-X)*, sponsored by the U.S. Association for Computational Mechanics (USACM), July16-19, 2009, Greater Columbus Convention Center, Columbus, Ohio.

[49] **Organizer and Co-Chair** of the **Session** on "Application of the Fracture Mechanics to Concrete Structures and Composites" (with K. Subramaniam), with 6 papers, in the **ACI Fall Convention**, sponsored by ACI 446 Committee on Fracture Mechanics of Concrete, November 8-12, 2009, New Orleans, LA.

[50] **Member** of the **Scientific Advisory Board**, in the ***Second International Symposium on Computational Mechanics (ISCM-2)*** and ***12th International Conference on the Enhancement and Promotion of Computational Methods in Engineering and Science (EPMESC-12)***, November 30 to December 3, 2009, Hong Kong and Macau.

[51] **Organizer and Co-Chair** of the **Symposium** on "Modeling of Nanofiller Reinforced Composites /Cementitious Materials" (with H.K. Lee and L.Z. Sun), in the 4th *European Conference on Computational Mechanics (ECCM-4)*, sponsored by the ECCOMAS, May16-21, 2010, Palais des Congres, Paris, France.

[52] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics of Engineering Materials" (with G. Lubineau, L.Z. Sun and P. Ladeveze), with 3 sessions and 14 papers, in the *9thWorld Congress on Computational Mechanics (WCCM-9)*, and *the 4th Asian Pacific Congress on Computational Mechanics (APCOM-4)*, sponsored by the International Association of Computational Mechanics and the Asian Pacific Association of Computational Mechanics, July 19-23, 2010, Sydney Convention Center, Sydney, Australia.

[53] **Organizer and Co-Chair** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun, G.Z. Voyiadjis, G.H. Paulino), with 3 sessions and 18 papers, in the 2010 ASCE Engineering Mechanics Institute Conference (EMI 2010), August 8-11, 2010, USC Campus, Los Angeles, CA.

[54] **Organizer and Co-Chair** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun, G.Z. Voyiadjis, G.H. Paulino), with 3 to 4 sessions, in the 2011 ASCE Engineering Mechanics Institute Conference (EMI 2011), June 2-4, 2011, Northeastern University, Boston, MA.

[55] **Member** of the **Scientific Organizing Committee**, in the ***11th U.S. National Congress on Computational Mechanics***, sponsored by the U.S. Association for Computational Mechanics, July 25-29, 2011, Minneapolis, MN.

[56] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics of Engineering Materials" (with L.Z. Sun and George Z. Voyiadjis), with 3 to 4 sessions, in the *11th U.S. National Congress on Computational Mechanics (USNCCM-XI)*, sponsored by the U.S. Association for Computational Mechanics (USACM), July 25-29, 2011, Minneapolis, MN.

[57] **Organizer and Chair** of the **Symposium** on "Multiscale Damage and Failure Mechanics of Engineering Materials", with 3 sessions (17 papers), in the *3rd International Symposium on Computational Mechanics (ISCM-3)*, and *2nd International Conference on Computational Structural Engineering (CSE-2)*, December 4-7, 2011, National Taiwan University, Taipei, Taiwan.

[58] **Member** of the **Scientific Advisory Board**, in the*3rd International Symposium on Computational Mechanics (ISCM-3)*, and *2nd International Conference on Computational Structural Engineering (CSE-2)*, December 4-7, 2011, National Taiwan University, Taipei, Taiwan.

[59] **Organizer and Co-Chair** of the **Symposium** on "Fundamental Theory for the Performance Evolution and Sensing Control of Urban Metro Structures", in the 2012 International Conference on Computational and Experimental Engineering and Sciences (ICCES'12), April 30-May 4, 2012, Minoa Palace Resort, Crete Island, Greece.

[60] **Organizer and Co-Chair** of the **Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (with L.Z. Sun, G.Z. Voyiadjis, G.H. Paulino), with 3 sessions, in the 2012 Joint Conference of the ASCE Engineering Mechanics Institute and the 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability (EMI/PMC 2012), June 17-20, 2012, University of Notre Dame, Indiana.

[61] **Director, Co-Chairman and Organizer**, the ***First International Conference on Damage Mechanics***, June 24-27, 2012, at the Serbian Chamber of Engineers, Belgrade, Serbia.

[62] **Member** of the **Scientific Committee**, in the ***10th World Congress on Computational Mechanics***, sponsored by the International Association for Computational Mechanics, July 8-13, 2012, Sao Paulo, Brazil.

[63] **Organizer and Co-Chair** of the **Symposium** on "Advances in Geotechnical Engineering", in the 2013 International Conference on Computational and Experimental Engineering and Sciences (ICCES'13), May 24-28, 2013, Seattle, Washington.

[64] **Member** of the **International Scientific Committee**, in the **APCOM'2013**, sponsored by the Asia Pacific Association for Computational Mechanics, Dec. 12-15, 2013, Singapore.

[65] **Director and Co-Organizer**, the ***Second International Conference on Damage Mechanics***, July 8-10, 2015, at the University of Technology at Troyes, Troyes, France.

[66] **Organizer** of the **Mini-Symposium MS-45** on "Multiscale Behavior of Damage and Failure Mechanics" (L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, and G.H. Paulino), in the 2017 ASCE Engineering Mechanics Conference (EMI 2017), June 4-7, 2017, San Diego, CA.

[67] **Organizer** of the **Mini-Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, G.H. Paulino and L.H. Poh), in the 2018 ASCE Engineering Mechanics Conference (EMI 2018), May 29-June 1, 2018, at MIT, Cambridge, MA.

[68] **Director and Co-Organizer**, the ***Third International Conference on Damage Mechanics***, July 4-6, 2018, at Tongji University, Shanghai, China.

[69] **Organizer** of the **Mini-Symposium MS-2** on "Multiscale Behavior of Damage and Failure Mechanics" (L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, G.H. Paulino and L.H. Poh), in the Third International Conference on Damage Mechanics, July 4-6, 2018, at Tongji University, Shanghai, China.

[70] **Organizer** of the **Mini-Symposium** on "Multiscale Behavior of Damage and Failure Mechanics" (L.H. Poh, L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, and G.H. Paulino), in the 2019 ASCE Engineering Mechanics Conference, June 18-21, 2019, at Caltech, Los Angeles, CA.

[71] **Member** of the **International Scientific Committee**, in the 2019 ASCE Engineering Mechanics Conference, sponsored by the American Society of Civil Engineers, Engineering Mechanics Institute, June 18-21, 2019, at Caltech, Los Angeles, CA.

[72] **Organizer** of the **Mini-Symposium MS247** on "Multiscale Behavior of Damage and Failure Mechanics" (L.H. Poh, L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, and G.H. Paulino), in the 2021 ASCE Engineering Mechanics Conference, May 25-28, 2021, at Columbia University, New York City, NY.

[73] **Organizer** of the **Mini-Symposium MS201** on "Multiscale Behavior of Damage and Failure Mechanics" (L.H. Poh, L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, and G.H. Paulino), in the 2022 ASCE Engineering Mechanics Conference, May 31-June 3, 2022, at Johns Hopkins Univ., Baltimore, MD.

[74] **Director**, the ***4th International Conference on Damage Mechanics***, May 15-18, 2023, at Louisiana State University, Baton Rouge, Louisiana.

[75] **Member** of the **International Scientific Committee**, the ***4th International Conference on Damage Mechanics***, May 15-18, 2023, at Louisiana State University, Baton Rouge, Louisiana.

[76] **Organizer** of the **Mini-Symposium MS1** on "Modelling and Characterization of Damage and Fracture" (L.H. Poh, L.Z. Sun, J. Woody Ju, and R. Peerlings), in the ***4th International Conference on Damage Mechanics***, May 15-18, 2023, at Louisiana State University, Baton Rouge, Louisiana.

[77] **Organizer** of the **Mini-Symposium MS303** on "Multiscale Behavior of Damage and Failure Mechanics" (L.H. Poh, O. Giraldo-Londono, L.Z. Sun, J. Woody Ju, G.Z. Voyiadjis, and G.H. Paulino), in the 2023 ASCE Engineering Mechanics Conference, June 6-8, 2023, at Georgia Institute of Technology, Atlanta, Georgia.

[78] **Director**, the ***5th International Conference on Damage Mechanics***, July 16-18, 2025, at National University of Singapore, Singapore.

[79] **Organizer** of the **Mini-Symposium MS1** on "Sustainable Mechanical Performance of Cementitious Materials" (Q. Luo, L.Z. Sun, and J. Woody Ju), in the ***5th International Conference on Damage Mechanics***, July 16-18, 2025, at National University of Singapore, Singapore.

AREAS OF RESEARCH INTEREST

- **Micromechanical damage and healing mechanics** for microcrack- or microvoid-weakened brittle or ductile solids. Interfacial micromechanics of multiphase composite materials. Microcrack *interaction* and *evolution* (nucleation, growth and kinking). Solids with *many* randomly dispersed microcracks or microvoids. Micro-macro correlation in mechanical properties of composite materials. Overall damaged moduli and microcrack kinetics (evolutionary models) based on advanced *micromechanics*, microstructures, and fracture mechanics. 2-D and 3-D *effective medium* micromechanical methods and *statistical micromechanical* interaction methods in tensile and compressive loading. Many randomly distributed interfacial and intergranular microcracks and their effects on composite materials (including ceramics). Micromechanical experimental validation. Efficient computational algorithms for statistical micromechanical evolutionary damage modeling. Statistical microcrack array shielding and amplification effects on a macrocrack tip. Thermo-mechanical-chemical constitutive and damage modeling of airfield concrete pavement under high temperature; coupled heat transfer, mass transport and mechanical stress-strain fields of airfield concrete pavement for JSFs. Microencapsulated self-healing concrete, and DCPD-infiltrated asphalt concrete repair-healing.

- **Continuum elastoplastic damage and healing mechanics** for brittle and ductile solids. Energy-based coupled elasto-(visco-)plastic (visco-)damage theories and computational algorithms. Thermodynamics basis. Physically motivated characterizations of brittle and ductile damage. Damage criteria and evolution equations. Elastic-damage and elastoplastic-damage tangent moduli. *Rate*-dependent damage mechanism. Microcrack opening and closing mechanisms. Isotropic and anisotropic damage models. *Finite strain* elastoplastic damage models. Efficient computational algorithms and operator splitting methods for evolutionary damage modeling within finite element methods. Extensive experimental validation. Structural damage indices and assessment. Microencapsulated self-healing concrete, and DCPD-infiltrated asphalt concrete repair-healing.

- **Micromechanics of heterogeneous composites** with many randomly distributed, strongly *interacting* inhomogeneities. Advanced particulate and fibrous brittle or metal matrix composites. *Ceramics* and ceramic composites. Probabilistic microstructures and microgeometry, including locations, sizes, densities, shapes, orientations, and relative configurations of many inclusions. Strong micromechanical interactions among many inclusions randomly dispersed in a matrix material based on Eshelby's *eigenstrai*n concept. Overall ensemble-volume averaged moduli and material responses rigorously derived from interacting micromechanics and microstructures. Micromechanical experimental validation using SEM (scanning electron microscopy) and X-ray diffractometer. Mechanical (elastic and elasto-visco-plastic) and conductive properties of advanced particulate and fibrous composite materials. Elastic stress fields arising from the single fiber pullout problem. Extension to effective shear viscosities in colloidal suspensions at high shear rates. Efficient numerical algorithms for computational micromechanical modeling of composites.

- **Plasticity** and **viscoplasticity** theories and computational algorithms. Non-smooth multi-surface plasticity and viscoplasticity. Stability, uniqueness, softening, and completeness issues. Efficient operator splitting and return mapping algorithms. *Consistent tangent* moduli for plasticity and viscoplasticity. Unified computational treatment for viscoplasticity and plasticity.

- **Nonlinear computational solid mechanics**. Nonlinear elastoplastic and finite deformation *frictional contact* problems, including *consistent tangent* operators for superior asymptotic rate of convergence, and perturbed and augmented Lagrangian formulations. Advanced constitutive modeling and *finite element* computations for engineering materials and structures. Nonlinear equation solution strategies. Strain softening, material stability, well-posedness, and uniqueness problems. Large scale computations. Structural dynamics and transient analysis with finite element methods. Peridynamics simulations. Machine learning and performance evaluation of tunnels.

- **Nondestructive testing, destructive testing, and chemically induced damage models of concrete** subjected to external aggressive species attack (e.g., sulfate attack). Damage/ deterioration of concrete foundations and construction defects. Modeling of the water/cement ratios, gel porosities and capillary porosities, permeability and damage (microcracking), reduction of elastic properties and tensile strength, damage mechanisms under combined chemical attack and mechanical loads, and service life predictions. Testing by using the low-frequency ultrasonic NDT, 4-point flexural bending tests, direct tension tests, splitting tension tests, and compression tests of the laboratory-cast concrete cylinders and of the concrete cores drilled from actual structures. In-situ impact-echo NDT of concrete structures.

- **Engineering fracture mechanics,** failure analysis. Fatigue and cyclic damage of metals and composites. Residual fracture energy, crack propagation, progressive failure and collapse, ground collapse, rockburst process. Freeze-thaw cycles induced damage on concrete.

- **Innovative pothole patching materials** for asphalt concrete and Portland cement concrete pavements and structures, featuring high-toughness low-viscosity nano-molecular resins.

- **Multi-phase micromechanical modeling** for saturated or unsaturated concrete repaired using the electrochemical deposition method.

- **Micromechanical damage-healing modeling** on microcrack-induced damage for microcapsule-enabled self-healing cementitious composites under tensile loading.
- Structural **damage assessment** due to earthquakes.
- **Computational geomechanics and geotechnical engineering** of soils and rocks.
- **Nanomechanics and nanomaterials** (carbon nanotubes, nanocomposites), interface energy effects, Molecular dynamics simulations, DFT.
- **Biomechanics** of bones and muscles**; computational biomechanics** and micro-damage-healing; biomaterials.
- **Bridge cofferdam**, wave-current interactions. Vortex-induced vibration for deck of long-span girder suspension bridge.
- **Fiber reinforced concrete** and cementitious composites**.** Asphalt concrete and rocks, advanced micro-nanomechanics of damage, healing and material behaviors. High temperature behaviors, thermal damage.
- **Damage, fracture and failure** of concrete foundation and structures.
- **Reliability; service life predictions;** durability of concrete and cementitious composites; sulfate attack problems
- **Environmental assessment and hazard;** risk analysis and management; hazard mitigation; multiphase porous flow and transport

EMERGENCY MAJOR EARTHQUAKE DAMAGE RECONNAISSANCE

- Member of the Special *NSF-sponsored* emergency **Taiwan earthquake damage reconnaissance team**, Central Taiwan, September—October 1999. Seismological, geotechnical, and structural engineering perspectives, and disaster relief. Co-author of Team Reports to NSF and EERI. Co-author of a reconnaissance paper in *Earthquake Spectra* (April 2001 issue, EERI).

PROFESSIONAL SHORT COURSES

- **UCLA Extension Short Courses**, "***Blast Effects Design and Analysis of Structural and Mechanical Systems***", October 29—November 1, 2002; April 22—25, 2003; and April 20—23, 2004. A 4-day, 32-hour intensive short course for government and private industry structural engineers. *Lecturer and UCLA Faculty Coordinator*. A special course on anti-terrorism and physical security. In collaboration with Mr. John Crawford and John Ferritto of Karagozian & Case Structural Engineers, and Prof. J.S. Chen of UCLA. Course Number: *Engineering 847.95*.

EDITOR/REVIEWER FOR JOURNALS AND ORGANIZATIONS

- ***International Journal of Damage Mechanics***; **Editor-in-Chief**, July 2015-present; **Editor**, 2006-present; **Editorial Board**, 1991-2006. The latest ISI JCR **Impact Factor = 5.029 for Year 2020.** SAGE Publications, London, UK.
- **Editorial Board**, ***Journal of Structural Integrity and Maintenance,*** January 2016-present (Taylor & Francis Group, London, U.K.).

- **Editorial Board**, ***Journal of the Chinese Institute of Engineers (JCIE)***, January 2016-present (Taylor & Francis Group, London, U.K.). SCI-indexed.
- ASME ***Journal of Engineering Materials and Technology***; **Associate Technical Editor**, Jan. 1, 1995-June 30, 2001. The American Society of Mechanical Engineers.
- ASME ***Journal of Applied Mechanics***; **Associate Technical Editor**, July 1, 1995-June 30, 2002. The American Society of Mechanical Engineers.
- ***Acta Mechanica*** (An International Journal); **Editorial Board**, March 2008-present. Springer Publications.
- ***ASCE Journal of Nanomechanics and Micromechanics***, **Associate Editor**, Jan. 2010-present. The American Society of Civil Engineers.
- ***Frontiers of Structural and Civil Engineering***, **Editorial Board**, January 2013-present. Springer Publications.
- ***Advances in Structural Engineering*** (An International Journal); **Editorial Advisory Board**, January 2014-present. SAGE Publications, London, UK.
- ***Journal of Composites***, **Editor and Editorial Board**, October 2012-present. Hindawi Publishing Co., USA.
- ***Journal of Chongqing University (English Edition)***; **Editorial Board**, April 2008-present.
- **Research Grants Council of Hong Kong**, **Engineering Panel Member**, Sep. 2008-present.
- Qatar National Research Fund, Engineering Peer Reviewer, 2009-present.
- **KAUST Global Collaborative Research,** UCB AEA Program, **Review Committee Member**, March 2010-present.
- **Research Grants Council of Hong Kong**, **Selection Committee (SC)**, **E-Panel member**, **RGC Joint Research Schemes (JRS) Member** for Germany, France, China and Hong Kong, May 2009-present.
- Research Grants Council of Hong Kong (proposal reviewer, since 1995).
- National Science Foundation (Invited review panelist, since 1991).
- National Research Council (Review panelist of fellowship and associateship programs, since 1992).
- Journal of Applied Mechanics, ASME (since 1991).
- Journal of Engineering Materials and Technology, ASME (since 1993).
- International Journal of Damage Mechanics (since 1992).
- Journal of Engineering Mechanics, ASCE (since 1986).
- International Journal of Engineering Science (since 1987).
- Acta Mechanica (since 1989).
- International Journal of Solids and Structures (since 1987).
- Computer Methods in Applied Mechanics and Engineering (since 1988).
- Journal of Probabilistic Engineering Mechanics (since 1989).

- International Journal of Soil Dynamics and Earthquake Engineering (since 1989).
- Journal of Structural Engineering, ASCE (since 1990).
- Composites Engineering, An International Journal (since 1991).
- ACI Materials Journal (since 1999).
- Journal of Materials Science (since 2005).
- National Science Foundation (proposal reviewer, since 1987).
- Department of Energy (proposal reviewer and committee panelist, since 1987).
- Ocean Engineering (Journal), Elsevier (since 2018).
- Construction and Building Materials (Journal), Elsevier (since 2016).
- Cement and Concrete Research (Journal), Elsevier (since 2009).

COURSES TAUGHT

University of California, Los Angeles

CEE 1 Introduction to Civil Engineering (F1999, F2000, F01)

CEE 108 Introduction to Mechanics of Deformable Solids (F93)

CEE 130 Elementary Structural Mechanics (S17, S19, S20, S21, S23, S24, S25)

CEE 130L/108L Experimental Structural Mechanics (W99, W03—W08, W10—W19)

CEE 135A Elementary Structural Analysis (F15—F24)

CEE 135C Computer Analysis of Structures (S94, S95, S97)

CEE 137 Elementary Structural Dynamics (F94 to F98, F02, F04, F05, F06, F07, F09, F10, F11, F12)

CEE 199 Special Studies (F97—present)

CEE 231 Inelastic Effects in Structures and Materials (W94, S95)

CEE 235B Finite Element Analysis of Structures (W98, W99, W2000, W01)

CEE 236 Stability of Structures (W10, W11)

CEE M230C/MAE M256C Plasticity (S96, S97, S02—S06, S08, S09, S11—S16, W18, S20)

CEE M237A/MAE M269A Dynamics of Structures (W21, W22, W23, W24, W25)

MAE M269A Dynamics of Structures (**MSOL**, S08—present)

CEE 249 Selected Topics in Structural Eng. & Mechanics (F96 to F01, W04 to W08)

CEE 296 Advanced Topics in Civil Engineering (F94—present)

CEE 298 Micromechanics and Damage Mechanics of Advanced Composites (W16)

CEE 375 Teaching Apprentice Practicum (F99—S2002)

CEE 495 Teaching Assistant Training Seminar (F99—S2003)

CEE 597A Preparation for MS Comprehensive Exam (F93—present)

CEE 597B Preparation for PhD Preliminary Exam (F93—present)

CEE 597C Preparation for PhD Qualifying Exam (F93—present)

CEE 598 Research—Master Thesis (F97—present)

CEE 599 Research—Ph.D. Dissertation (F93—present)

Princeton University

CIV 361 Structural Analysis(F87,F88,F89,F90,F91,F92)

CIV 362 Structural Dynamics (S89,S91,S93)

CIV 572 Mechanics of Dissipative Media (S89,S92,S93)

CIV 578 Advanced Finite Element Methods (S91)

CIV 580 Nonlinear Computational Mechanics (S88)

University of California, Berkeley

CE 130 Mechanics of Materials (Summer 86)

COURSES SERVED AS (CO-)INSTRUCTOR-IN-CHARGE

University of California, Los Angeles

CEE 1 Introduction to Civil Engineering (until 6/02)

CEE 15 Introduction to Computing for Civil Engineers

CEE 101 Statics and Dynamics

CEE 108 Introduction to Mechanics of Deformable Solids

CEE 130 Elementary Structural Mechanics

CEE 130F Experimental Fracture Mechanics

CEE 130L/108L Experimental Structural Mechanics

CEE 135A Elementary Structural Analysis

CEE 135B Intermediate Structural Analysis

CEE 135C Finite Element Methods

CEE 137 Elementary Structural Dynamics

CEE 137L Structural Dynamics Laboratory

CEE 141 Steel Structures (until 8/03)

CEE 198 Technical Writing

CEE M230A/MAE M256A Linear Elasticity

CEE M230B/MAE M256B Nonlinear Elasticity

CEE M230C/MAE M256C Plasticity

CEE 231 Inelastic Effects in Structures and Materials

CEE 232 Theory of Plates and Shells

CEE 233 Mechanics of Composite Material Structures

CEE 234 Advanced Topics in Structures Mechanics

CEE 235A Advanced Structural Analysis

CEE 235B Finite Element Analysis of Structures

CEE 235C Nonlinear Structural Analysis

CEE 236 Stability of Structures

CEE M230C/MAE M256C Plasticity

CEE M237A/MAE M269A Dynamics of Structures

CEE 241 Advanced Steel Structures

CEE 244 Structural Loads and Safety for Civil Structures

CEE 246 Structural Response to Ground Motions

CEE 247 Advanced Structural Dynamics for Civil Engineering

CEE 248 Probabilistic Structural Dynamics

CEE 249 Selected Topics in Structural Eng. & Mechanics

CEE 375 Teaching Apprentice Practicum

CEE 495 Teaching Assistant Training Seminar

NEW COURSES DEVISED OR MAJOR REVISION OF EXISTING COURSES

University of California, Los Angeles

CEE 15 Introd. to Computing for Civil Engr. (new course, 2 units) (F2006-present)

CEE 101 Statics and Dynamics (new course) (W2006—present)

CEE 130 Elementary Structural Mechanics (totally revised) (S17—present)

CEE 130L/108L Experimental Structural Mechanics (totally revised) (W99—present)

CEE 231 Inelastic Effects in Structures and Materials (totally revised) (W94—95)

CEE M230A/MAE M256A. Linear Elasticity (new title) (F2005—present)

CEE M230B/MAE M256B. Nonlinear Elasticity (new title) (W2006—present)

CEE M230C/MAE M256C Plasticity (new; cross-listed) (F2006—present)

CEE 235B Finite Element Analysis of Structures (totally revised) (W98—2000)

CEE 236 Stability of Structures (W2010—present)

CEE 249 Selected Topics in Structural Engineering and Mechanics (new) (F96—present)

MAE M269A/CEE M237A Dynamics of Structures (Online MS, new) (S08—present)

MAE M269A/CEE M237A Dynamics of Structures (totally revised) (W21—present)

Princeton University

CIV 580 Nonlinear Computational Mechanics (new) (S88)

PROGRAMS FOR IMPROVEMENT OF TEACHING

University of California, Los Angeles

CEE 130L. (W1999—2002)—Completely revised lab experiments. Received two grants of$10,000 (IIP#00-19) from the Office of Instructional Improvement.

CEE 135C. (S1994)—Introduced/ installed "P-FRAME" program. Receive a $1,900 grant (IIP#94-13) from the Office of Instructional Development.

CEE 137. (F1994)—Introduced "SAP90" program.

CEE 137. (F2000)—Introduced "ANSYS/Ed" program, under a $350 OID mini-grant.

CEE 231. (W1994)—Introduced/ installed "FEAP" program.

CEE M239/MAE 256C. (S1996)—Introduce/ installed "FEAP" program.

Princeton University

CIV 361. (F1989)—Introduced/ installed "P-FRAME" & "FRAME-MAC" programs.

CIV 580. (S1988)—Introduced/ installed "FEAP" program. Also for CIV 572 &CIV 578.

SUPERVISION OF RESEARCH AND STUDENTS

A. *Post-Doctoral Researchers*

[1] Dr. Xiaogong Lee, Jan. 1989 to Feb. 1990, Department of Civil Engineering and Operations Research, Princeton University. Research on two-dimensional and three-dimensional micromechanical damage models for concrete and brittle composite materials.

[2] Dr. Hang Deng, Oct. 1993 to March 1995, Department of Civil and Environmental Engineering, UCLA. Research on micromechanics of randomly dispersed fiber composites, micromechanics of damage, and thermo-micro-mechanics of damage for heterogeneous concrete under high temperatures.

[3] Dr. Kuang-Hui Tseng, Dec. 1994 to Sep. 1995, Department of Civil and Environmental Engineering, UCLA. Research on micromechanics of randomly dispersed fiber and particle reinforced composites, particle reinforced plastic and viscoplastic matrix composites, and micromechanics of damage.

[4] Dr. Lun-Chang Chou, June 1997 to July 1998, Department of Civil and Environmental Engineering, UCLA. Research on micromechanics of fiber composites, and elastic stress fields arising from the single fiber pull-out problem.

[5] Dr. Yong Zhang, June 1997 to June 1998, Department of Civil and Environmental Engineering, UCLA. Research on coupled thermo-micromechanical damage modeling for airfield concrete pavement, mass transport and heat transfer, fracture mechanics and spalling/ scaling damage, and numerical methods (finite differences and finite elements).

[6] **Dr. Lizhi Sun**, April 1998 to June 1999, Department of Civil and Environmental Engineering, UCLA. Research on local micromechanics, ensemble-volume-orientational averaging procedures,

overall elastic/ elastoplastic behavior of spheroidal particle-reinforced brittle/ ductile matrix composites.

[7] Dr. Yong-Bock Rhee, Feb. 1998 to Feb. 1999, Department of Civil and Environmental Engineering, UCLA. Research on computational damage mechanics, localization, and meshless methods.

[8] **Dr. Lisheng Weng**, July 2000 to August 2001, Department of Civil and Environmental Engineering, UCLA. Research on nondestructive and mechanical testing of concrete and composites.

[9] **Dr. Yu-Fu (Paul) Ko**, Jan. to July 2006, Department of Civil and Environmental Engineering, UCLA. Research on micromechanics and damage mechanics of fiber reinforced composites.

[10] Dr. Fariborz M. Tehrani, September 2008 to August 2010, Department of Civil and Environmental Engineering, UCLA. Research on performance-based structural design and analysis of fiber reinforced concrete members.

[11] **Dr. Kuo-Yao (Matt) Yuan**, Jan. to October 2009, and May 2010 to Oct. 2013, Post-doctoral Fellow and then Staff Research Associate, SRA Step III, Department of Civil and Environmental Engineering, UCLA. Research on coupled elastoplastic damage and healing models for geomaterials and composite materials; NIST project of using nano-molecular resin as patching repair material for asphalt potholes, involving multi-scale nano-structural and microstructural modeling, damage modeling, failure mechanism, deformations, fatigue, durability, and service life predictions.

[12] Dr. Yi Wu, Jan. to Oct. 2014; Department of Civil and Environmental Engineering, UCLA. Research on micromechanical damage models for continuous fiber reinforced composite materials.

[13] Dr. A-Zhen Kang, July 2015 to July 2016, Visiting Researcher and Post-Doc at UCLA, from Southwest Jiaotong University (Chengdu, China). Research on Modification and verification of the established flow-structure interaction model, and application of the modified model into realistic simulation of bridge foundations. Currently, Associate Professor, Southwest Jiaotong University.

[14] Dr. Kaihang Han, August 2017 to August 2018, Visiting Assistant Project Scientist and Post-Doc at UCLA, from Beijing Jiaotong University (Beijing, China). Research on fiber reinforced concrete; innovative self-healing concrete; advanced concrete tunnel materials. Assistant Professor rank. Currently, Associate Professor, Shenzhen University, China.

[15] Dr. Xiongyu Hu, May 2019 to May 2021, Visiting Assistant Project Scientist and Post-Doc at UCLA, from Southwest Jiaotong University (Chengdu, China). Research on corrosion, carrying capacity, failure patterns, micromechanical damage model, anti-corrosion, and self-healing concrete for tunnel linings under combined effect of pre-existing cracks and sustained loading. Assistant Professor rank.

[16] Dr. Yingjie Deng, July 2021 to August 2024, Visiting Assistant Project Scientist and Post-Doc at UCLA, from Tongji University (Shanghai, China). Research on fatigue damage mechanics model of semi-rigid asphalt pavement under traffic load and temperature load. Assistant Professor rank.

B. *Visiting Professors and Researchers*

[1] Dr. Kuang-Hui (Kevin) Tseng, Jan. 1994 to Nov. 1994, Visiting Assistant Researcher at UCLA, from the Princeton University. Research on micromechanics and effective elastoplastic behavior of ductile matrix composites containing randomly dispersed inhomogeneities.

[2] Mr. Yaw-Dawn Pai, August 1998 to Feb. 1999, Visiting Researcher at UCLA, on leave from the Institute of Nuclear Energy Research, Taiwan. Research on nondestructive testing of concrete members and structures.

[3] Professor Huaining Ruan, Oct. 1999 to July 2001, Visiting Researcher at UCLA, on leave from Hohai University, China. Research on micromechanics of composites and material modeling. Full Professor rank.

[4] **Professor Jun-Shang (Jay) Kuang**, July 2000 to Jan. 2001, Visiting Associate Professor at UCLA, on leave from the Hong Kong University of Science and Technology. Research on composites and retrofitting of structures. Associate Professor rank.

[5] Professor Geon-Ho Hong, July 2001 to August 2003, Visiting Researcher at UCLA, on leave from Hoseo University, Korea. Research on civil infrastructure repair and rehabilitation in Korea and U.S., and structural health monitoring. Full Professor rank.

[6] **Professor Frank Yazdani**, Sep. 2001 to August 2002, Visiting Associate Professor at UCLA, on leave from the North Dakota State University. Research on damage mechanics, plasticity and computational mechanics. Full Professor and Dept. Chair at NDSU.

[7] Professor Kang-Suk Suh, July 2001 to July 2003, Visiting Researcher at UCLA, on leave from Honam University, Korea. Research on civil engineering construction, construction management and infrastructure. Associate Professor rank and Vice President.

[8] Professor Shiyong Jiang, July 2002 to Dec. 2002, Visiting Researcher at UCLA, on leave from Chongqing University, China. Research on structural health monitoring, seismic retrofitting, repair and rehabilitation methods. Full Professor rank.

[9] Professor Menashi Cohen, Sep. 2002 to August 2003, and Sep. 2004 to Aug. 2005, Visiting Professor at UCLA, on leave from Purdue University. Research on durability and damage of concrete, and materials science of concrete and advanced cementitious composites. Full Professor rank.

[10] Professor Ping-Ju Lin, August 2003 to July 2004, Visiting Researcher at UCLA, on leave from Tungnan Institute of Science & Technology, Taipei, Taiwan. Research on fracture mechanics, microstructures of concrete, interfacial mechanics and micromechanics of concrete. Full Professor and Dept. Chair at Tungnan Institute of S&T.

[11] Professor Jang-Ho Jay Kim, Sep. 2006 to March 2007, Visiting Associate Professor at UCLA, on leave from Sejong University, and Yonsei University (current), Seoul, Korea. Research on fracture mechanics of concrete, and fiber or plastic reinforced concrete. Associate Professor rank.

[12] Mr. Zheng-Han Zhang, March to Oct. 2007, Visiting Researcher at UCLA, on leave from the Ph.D. program of Mechanical Engineering, Yuan-Ze University (Taiwan). Research on the fatigue property of MWCNT/epoxy composite.

[13] Professor Ching S. Chang, Sep. 2007 to Dec. 2007, Visiting Professor at UCLA, on leave from the University of Massachusetts at Amhurst. Research on damage and plasticity of concrete and soils. Full Professor rank.

[14] Dean and Professor Lufeng Yang, August 2007 to August 2008, Visiting Professor at UCLA, on leave from Guangxi University (Nanning, China). Research on structural reliability. Full Professor rank and Dean of School of Civil Engineering and Architecture.

[15] **Ms. Biwan Xu**, Sep. 2007 to March 2009, Visiting Researcher at UCLA, on leave from the Ph.D. program of Materials Science and Engineering, Tongji University (Shanghai, China). Research on hybrid fiber reinforced concrete and fracture toughness of self-consolidating cementitious composites. Co-Advised Ph.D. Thesis Student. Currently: **Full Professor**, School of Civil Engineering, Tongji University.

[16] Professor Volker Slowik, August 2008 to Dec. 2008, Visiting Professor at UCLA, on leave from Leipzig University of Applied Sciences, Germany. Research on concrete durability and fracture mechanics of concrete. Full Professor rank.

[17] Professor Wenhua Wu, October 2008 to October 2009, Visiting Researcher at UCLA, on leave from Dalian University of Technology (Dalian, China). Research on numerical simulation,

thermomechanical coupling, elasto-viscoplastic constitutive modeling, polymer materials and forming processes. Associate Professor rank.

[18] Dr. Genwei Wang, November 2008 to December 2009, Visiting Researcher at UCLA, on leave from Taiyuan University of Technology (Taiyuan, China). Research on surfaces, interfaces and size effects of carbon nanotubes based nanocomposites, including experiments, formulations and modeling. Lecturer rank.

[19] Professor Liang-Jenq Leu, August to December 2009, Visiting Professor at UCLA, on leave from National Taiwan University. Research on topology optimization, finite element methods, and computational structural mechanics. Full Professor rank and Dept. Chair.

[20] Professor Tai-Ping Chang, August 2009 to February 2010, Visiting Professor at UCLA, on leave from National Kaohsiung First University of Science and Technology (Taiwan). Research on structural dynamics, carbon nanotubes, nanomechanics, nanomaterials, structural reliability, risk assessment, and computational structural mechanics. Full Professor rank and Dept. Chair.

[21] Professor Laurent Champaney, August 2009 to August 2010, Visiting Professor at UCLA, on leave from ENS Cachan (Paris, France). Research on structural dynamics, contact problems, reliability, probabilistic analysis, finite element methods, composite materials and structures, and computational structural mechanics. Full Professor rank and Dept. Chair.

[22] Ms. Gangqin Zhang, Oct. 2009 to Nov. 2011, Visiting Researcher at UCLA, on leave from the Ph.D. program of the College of Civil Engineering, Tongji University (Shanghai, China). Research on fiber reinforced concrete, concrete durability, underground tunnel concrete lining and connections, and fiber reinforced concrete with PCMs. Co-Advised Ph.D. Thesis Student. Currently: **Associate Professor,** Zhengzhou University, China.

[23] Ms. Ying Ma, Oct. 2009 to Feb. 2010, Visiting Researcher at UCLA, on leave from the Ph.D. program of the College of Civil Engineering, Southeast University (Nanjing, China). Research on long-term deformation of segmental large-span prestressed concrete box girders.

[24] Dr. Zhiguo Yan, January 2011 to January 2012, Visiting Researcher at UCLA, on leave from Tongji University (Shanghai, China). Research on high temperature and fire resistance modeling tunnel fiber reinforced concrete structures. Assistant Professor rank.

[25] Professor Pengfei Hou, July 2011 to July 2012, Visiting Professor at UCLA, on leave from Hunan University (Changsha, China). Research on smart, piezoelectric composites, and engineering applications of Green's functions to advanced materials. Professor and Department Chair rank.

[26] Professor Yanjun Chang, Jan. 2013 to Jan. 2014, Visiting Researcher at UCLA, on leave from Guangxi University (Nanning, China). Research on damage mechanics, micromechanics, plasticity, metals, metal matrix composites, and textile composites. Currently, Professor rank and Associate Dean.

[27] Professor Chang-Jiang Shao, Sep. 2013 to Oct. 2014, Visiting Researcher at UCLA, on leave from Southwest Jiaotong University (Chengdu, China). Research on damage mechanics, and damage mechanisms of concrete structures under seismic excitations. Associate Professor rank.

[28] Dr. Jun Ma, Sep. 2013 to Sep. 2014, Visiting Researcher at UCLA, on leave from Harbin Institute of Technology (Harbin, China). Research on bridge engineering, and long-term performance research of pre-stressed concrete continuous rigid frame bridges under environmental effects. Assistant Professor rank.

[29] Dr. Ji Zhang, Feb. 2014 to May 2014, Visiting Researcher at UCLA, on leave from Tongji University (Shanghai, China). Research on thermodynamics basis and formulation for continuum damage mechanics of concrete. Assistant Professor rank.

[30] Professor Huiqun Yan, August 2014 to August 2015, Visiting Researcher at UCLA, on leave from Sichuan University (Chengdu, China). Research on recycled concrete materials, composite structural analysis, thermal fatigue, and micromechanics of concrete. Associate Professor rank.

[31] Professor Feng Yue, Sep. 2014 to Sep. 2015, Visiting Researcher at UCLA, on leave from Shanghai Jiaotong University (Shanghai, China). Research on fatigue life, remaining service life and reliability of steel structures and bridges. Associate Professor rank.

[32] Professor Hongguang Li, March 2015 to March 2016, Visiting Researcher at UCLA, on leave from Jilin University (Changchun, China). Research on finite element methods and their applications in engineering, and high performance numerical simulations. Associate Professor rank.

[33] Professor Yan Li, July 2015 to July 2016, Visiting Researcher at UCLA, on leave from Jilin Architectural University (Changchun, China). Research on temperature crack control of concrete structures. Currently, Associate Dean and Full Professor rank.

[34] Dr. A-Zhen Kang, July 2015 to July 2016, Visiting Researcher and Post-Doc at UCLA, on leave from Southwest Jiaotong University (Chengdu, China). Research on Modification and verification of the established flow-structure interaction model, and application of the modified model into realistic simulation of bridge foundations. Currently, **Associate Professor** rank.

[35] Professor Jun Feng, August 2015 to August 2016, Visiting Researcher at UCLA, on leave from Southwest Jiaotong University (Chengdu, China). Research on micromechanical damage mechanics of geological materials, rock mechanics and slope stability analysis, as well as damage, fracture and failure of rocks, slopes and tunnels. Associate Professor rank.

[36] Professor Sheng'ai Cui, March 2016 to March 2017, Visiting Researcher at UCLA, on leave from Southwest Jiaotong University (Chengdu, China). Research on constitutive relations, mechanical properties and micromechanical damage mechanics of new building materials; seismic performance, seismic fragility and seismic risk assessment of bridges. **Full Professor** rank.

[37] Professor Zhiguo Yan, November 2016 to February 2018, Visiting Researcher at UCLA, on leave from Tongji University (Shanghai, China). Research on high temperature and fire resistance modeling tunnel fiber reinforced concrete structures; innovative self-healing advanced materials. Currently, **Full Professor rank** and Department Chair.

[38] Ms. Liying He, November 2016 to February 2018, Visiting Assistant Project Scientist at UCLA, on leave from Shanghai Urban Construction Design & Research Institute. Research on tramway network planning method with urban land use in the one million-population area; guideline of tramway engineering design combined with international experience and Chinese urban civil environment; tramway traffic engineering with ITS modeling and simulation. Vice President rank.

[39] Dr. Kaihang Han, August 2017 to August 2018, Visiting Assistant Project Scientist and Post-Doc at UCLA, from Beijing Jiaotong University (Beijing, China). Research on fiber reinforced concrete; innovative self-healing concrete; advanced concrete tunnel materials. Assistant Professor rank. Currently, Associate Professor, Shenzhen University, China.

[40] Dawei Qin, August 2016 to August 2017, Visiting Ph.D. Student Researcher at UCLA, from Guangxi University (Nanning, China). Research on micromechanics of polycrystalline metals, damage mechanics, and fatigue and fracture mechanics of metals.

[41] Zilong Ti, Ph.D. student, 4th Year; School of Civil Engineering, Southwest Jiaotong University (Chengdu, China). Joint training Ph.D. Student at UCLA, December 2016-December 2017. Dissertation Co-Advisor, since Sep. 2014. Currently, Assistant Professor at Southwest Jiaotong Univ.

[42] Zhiyong Chen, February 2018 to February 2019, Visiting Ph.D. Student Researcher at UCLA, from Guangxi University (Nanning, China). Research on experimental and numerical study on dynamic rockburst, and hard rock failure under true triaxial loading.

[43] Lianhuo Wu, Jan. 2020 to Jan. 2021, Visiting Ph.D. Student Researcher at UCLA, from Southwest Jiaotong University (Chengdu, China). Research on aerodynamics and vortex vibrations of long spanned bridges. Currently: **Assistant Professor**, Fuzhou University (China).

[44] Dr. Xiongyu Hu, May 2019 to May 2021, Visiting Assistant Project Scientist and Post-Doc at UCLA, from Southwest Jiaotong University (Chengdu, China). Research on corrosion, carrying capacity, failure patterns, micromechanical damage model, anti-corrosion, and self-healing concrete for tunnel linings under combined effect of pre-existing cracks and sustained loading. Now **Associate Professor**, Southwest Jiaotong University.

[45] Professor Qunxian (Jason) Huang, August 2019 to August 2020, Visiting Researcher at UCLA, on leave from HuaQiao University (Xiamen, China). Research on mechanical and fatigue behavior of RC bridge girders strengthened with prestressed high-strength steel wire and polymer mortar. Full Professor rank.

[46] Professor Li-min Tian, August 2019 to August 2020, Visiting Researcher at UCLA, on leave from Xi'An University of Architecture and Technology (Xi'An, China). Research on multi-level progressive collapse mechanism and computational method for long-span spatial grid structures. Associate Professor rank.

C. *Habilitation (D'Habilitation a Diriger des Recherches) Jury Member*

[1] Gilles Lubineau, Ph.D., Assistant Professor, December 8, 2008, Ecole Normale Superieure de Cachan, France. Habilitation Thesis Title: "*Vers une pyramide d'outils pour la modelisation et l'identification des materiaux composites*", Habilitation Jury Member.

D. *Doctoral Dissertations (Ph.D.)*

[1] Tsung-Muh Chen, Ph.D., April 7, 1993, Department of Civil Engineering and Operations Research, Princeton University; Dissertation Title: "*Micromechanics and Effective Properties of Particulate Composites and Fluid Suspensions*". Dissertation Advisor.

[2] Kuang-Hui (Kevin) Tseng, Ph.D., Dec. 2, 1994, Department of Civil Engineering and Operations Research, Princeton University; Dissertation Title: "*Effective Elastic and Elastoplastic Behavior of Composite Materials with Randomly Dispersed Interacting Microcracks or Inhomogeneities: Statistical Micromechanical Formulations and Computational Aspects*". Dissertation Advisor.

[3] Lun-Chang Chou, Ph.D., May 23, 1997, Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Elastic Stress Fields Arising from the Single Fiber Pull-out Problem*". Dissertation Advisor. Currently: **Full Professor**, Chien-Kuo Technology University, Taiwan.

[4] Yong Zhang, Ph.D., May 22, 1997, Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Thermo-micromechanical Damage Modeling for Airfield Concrete Pavement*". Dissertation Advisor.

[5] John Hah, Ph.D., June 25, 1997, Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Nonlinear Finite Element Analysis with Parallel Element Modeling Technique*". Dissertation Advisor. Currently: Principal, Creative Engineering Solutions, Inc., Culver City, CA.

[6] **Lizhi Sun**, Ph.D., Feb. 4, 1998; Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Micromechanics and Overall Elastoplasticity of Discontinuously Reinforced Metal Matrix Composites*"; Recipient of UCLA Campus-wide **1997-98Dissertation Year Fellowship**. Recipient of the **1998 Outstanding Ph.D. Award**, School of Engineering and Applied

Science, UCLA. Dissertation Advisor. Currently: **Full Professor and Department Vice Chair**, Dept. of Civil and Environmental Engineering, University of California, Irvine.

[7] **Haeng-Ki Lee**, Ph.D., Oct. 12, 1998; Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Three-Dimensional Micromechanical Damage Models for Effective Elastic and Elastoplastic Behavior of Composite Materials with Inhomogeneities or Microcracks*". Dissertation Advisor. Currently: **Full Professor with tenure and Department Head**, Dept. of Civil Engineering, KAIST (Korean Advanced Institute of Science and Technology), Korea.

[8] Xiaodong Zhang, Ph.D., March 18, 1999; Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Micromechanics and Effective Mechanical Behavior of Composites with Randomly Located Aligned Fibers*". Recipient of the **1999 Outstanding Ph.D. Award**, Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor. Currently: Senior Vice President, ICBC New York.

[9] Hongwei Gong, Ph.D., May 17, 2000; Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*Thermo-Micromechanical Damage Models of Airfield Concrete Pavement under High Temperature Loading*". Dissertation Advisor. Currently: Principal Engineer, Carter and Burgess Architects and Engineers, Los Angeles.

[10] **Lisheng Weng**, Ph.D., May 22, 2000; Department of Civil and Environmental Engineering, UCLA; Dissertation Title: "*On the Investigation of the Effects of Grain Size, Damage and Exciting Frequency upon P-Wave Characteristics of Ultrasonic NDE of Concrete*". Winner of the **2000 ACI-James-Instruments Award for Research in Nondestructive Testing**. Recipient of the **2000 Outstanding Ph.D. Award**, Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor. Currently: Manager and Principal Engineer, **Qualcom Corp.**, San Diego, CA.

[11] Alberto Felix Salamanca Pinzon, Ph.D., Nov. 23, 2004; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Development, Modeling, Identification and Simulation of a Small Shaking Table System*". Dissertation Co-Advisor (with Prof. Joel Conte of UCSD). Currently: Research Associate and Lecturer, NEES Project, Dept. of CEE, UCLA.

[12] **Yu-Fu (Paul) Ko**, Ph.D., Nov. 22, 2005; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Effective Elastoplastic-Damage Model for Fiber-Reinforced Metal Matrix Composites with Evolutionary Fibers Debonding*". Recipient of the **2003 TA of the Year Award** from the ASCE Student Chapter at UCLA. Recipient of the **Martin Rubin Scholarships in AY 2003-2004.** Recipient of the **2003 Concrete Masonry Association of California and Nevada Scholarships**. Recipient of the **2006 Outstanding Ph.D. Award**, Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor. Currently: **Full Professor with tenure**, Dept. of Civil Engineering, California State University, Long Beach.

[13] **Ms. Sejin Oh**, Ph.D., Sep. 7, 2007; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Stationary and Quasi-Static Evolutionary Analysis of Elastic Crack Interaction with Dislocation Arrays*". Recipient of the **2003 Engineering Sciences Summer Institute Fellowships,** Sandia National Lab (at Livermore, CA), under my direction. Recipient of the **Martin Rubin Scholarships in AY 2004—2005**. Recipient of the **2005 TA of the Year Award** from the ASCE Student Chapter at UCLA. Dissertation Advisor. Currently: Principal Research Engineer and Group Leader, Lawrence Livermore National Laboratories, Livermore, CA.

[14] Prechaporn Suwatnodom, Ph.D., Dec. 12, 2007; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*3-D Micromechanical Damage Models, Fiber Pullout Models and Fracture Toughness of Discontinuous Fiber Reinforced Cementitious Composites*". Recipient of the **2001-2005 Thai Government Fellowships**. Recipient of the **Most Outstanding Teaching Assistant of the Year Award** from the Engineering Society of UCLA in **May 2005** (the first recipient from the CEE Dept. ever to receive the Schoolwide TA award). Dissertation Advisor.

Currently: Principal Engineer and Manager, Ministry of Transportation (Bangkok), Thailand Government.

[15] **Fariborz M. Tehrani**, Ph.D., May 22, 2008; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Performance of Steel Fiber Reinforced Concrete in Beam-Column Connections*". Recipient of the **2004 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor. Currently: **Full Professor with tenure**, Dept. of Civil and Geomatics Engineering, California State University, Fresno.

[16] Kuo-Yao (Matt) Yuan, Ph.D., December 18, 2008; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Energy Based Coupled Elastoplastic Damage-Healing Formulations for Earth Moving Processes*". Recipient of the **2005 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor. Currently: Senior Research Engineer, **Boeing Company**, Huntington Beach, CA.

[17] **Keiji Yanase**, Ph.D., August 26, 2009; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Micromechanics and Effective Thermo-Mechanical Damage and Deformation Responses of Composite Materials*". Recipient of the **2007 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor. Currently: **Full Professor**, Dept. of Mechanical Engineering, Fukuoka University, Japan.

[18] Ms. **Biwan Xu**, Ph.D., September 16, 2009; School of Materials Science and Engineering, Tongji University (Shanghai, China). Joint training Ph.D. student at UCLA, September 2007-March 2009. Dissertation Title: "*Modeling Prediction of Tensile Property and Fracture Energy of Hooked End Steel Fiber Reinforced Cementitious Composites*". Dissertation Co-Advisor. Currently: **Full Professor**, School of Civil Engineering, Tongji University.

[19] Shih-Jie (Jay) Huang, Ph.D.; July 14, 2010; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Carbon Nanotube as Biosensors to Detect and Measure Protein Activities Embedded within Lipid Membranes*". Dissertation Advisor.

[20] Ms. Gangqin Zhang, Ph.D., February 27, 2013; College of Civil Engineering, Tongji University (Shanghai, China). Joint training Ph.D. student at UCLA, October 2009-November 2011. Dissertation Title: "*The Durability of Sub-water Tunnel Based on Chloride Ion and Fracture Performance of Hybrid Fiber Reinforced Concrete with PCM*". Dissertation Co-Advisor. Currently: **Associate Professor**, Zhengzhou University, China.

[21] Yu-Kai (Carl) Wang, Ph.D., September 17, 2013; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Multi-level Micromechanical Modeling of Bone Tissues*". Recipient of the **2006 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor.

[22] Ms. Yi Wu, Ph.D., November 21, 2013; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Micromechanical Damage Models for Continuous Fiber Reinforced Composite Materials*". Recipient of the **2008 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor.

[23] **Seongwon (Jason) Hong**, Ph.D., May 22, 2014; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Energy Based Thermo-Elastoviscoplastic Damage-Self Healing Formulations for Bituminous Composites*". Recipient of the **2013 Mendez Scholarships NonProfit**. Dissertation Advisor. Currently: **Associate Professor** (effective March 1, 2021), Dept. of Safety Engineering, Korea National University of Transportation.

[24] Chung-Wen Chuang, Ph.D., November 14, 2014; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Interface Energy and Particle Size Effects on Effective*

Properties and Damage Energy Dissipation in Nanocomposites". Recipient of the **2010 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor.

[25] Chia-So Chuang, Ph.D., November 17, 2014; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Hybrid Fiber Reinforced Concrete Incorporated with Phase Change Material*". Recipient of the **2011 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor.

[26] Qing Chen, Ph.D., June 2015; College of Civil Engineering, Tongji University (Shanghai, China). Dissertation Title: "*Random Micromechanical Model of Multiphase Materials and the Application in Electrochemical Deposition Repair of Concrete*". Dissertation Co-Advisor. Recipient of the **Year 2015 Outstanding doctoral dissertation award** by Tongji University. Currently: **Full Professor**, Tongji University. Recipient of the **National Excellent Young Scholar Award** from the NSFC (equivalent to the NSF Career Award in the USA).

[27] Shuai Zhou, Ph.D., November 4, 2016; College of Civil Engineering, Tongji University (Shanghai, China). Joint training Ph.D. student at UCLA, Sep. 2014-Sep. 2016. Dissertation Title: "*Self-Healing Mechanism and Multiscale Mechanical Model of the Microcapsule-Enabled Concrete*". Dissertation Co-Advisor. Currently: **Associate Professor**, Chongqing University (Chongqing, China).

[28] Ms. Jingmin Liu, Ph.D., May 27, 2017; School of Civil Engineering and Architecture, Guangxi University (Nanning, China). Dissertation title: "*Study on Failure Path-Independent Method for Identification of Structural Failure Mode and System Reliability Analysis*". Dissertation Co-Advisor. Currently: **Associate Professor**, Guangxi University of Science and Technology (Liuzhou, China).

[29] Zilong Ti, Ph.D., June 2018; School of Civil Engineering, Southwest Jiaotong University (Chengdu, China). Joint training Ph.D. Student at UCLA, December 2016-December 2017. Dissertation Co-Advisor. Currently, **Assistant Professor** at the Southwest Jiaotong University (Chengdu, China).

[30] Long Zhou, Ph.D., August 31, 2019; College of Civil Engineering, Tongji University (Shanghai, China). Dissertation Title: "*Mechanical Behaviors of Segmental Linings of Deep-Buried Shield Tunnels Bearing High Inner Water Pressure*". Dissertation Co-Advisor. Currently: **Associate Professor**, Nanjing University of Science and Technology (Nanjing, China).

[31] Dawei Qin, Ph.D., October 31, 2019; School of Civil Engineering, Guangxi University (Nanning, China). Dissertation title: "*Inhomogeneous Deformation Growth of a Metal under Cyclic Loading and Its Influence on Fatigue*". Joint training Ph.D. Student at UCLA, August 2016-August 2017. Dissertation Co-Advisor.

[32] Hao Zhang, Ph.D., November 14, 2019; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Micromechanical Framework for Mechanical Behavior of Asphalt Concrete Materials Featuring High Toughness, Low Viscosity Nano-Molecular Resins*". Recipient of the **2015 Concrete Masonry Association of California and Nevada Scholarships**. Recipient of **T.H. Lin Scholarships** in 2016. Dissertation Advisor. Currently: Senior Forensic Engineer, Donan Engineering (Austin, Texas).

[33] Yinghui Zhu, Ph.D., November 26, 2019; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*The Interface Energy and Particle Size Effects on Nanocomposites*". Recipient of **T.H. Lin Scholarships** in 2015. Recipient of the **2016 Concrete Masonry Association of California and Nevada Scholarships**. Dissertation Advisor. Currently: Senior Structural Engineer, Mobbil Inc. (Los Angeles)

[34] Yao Zhang, Ph.D., August 2020; School of Civil Engineering, Tongji University (Shanghai, China). Dissertation Title: "*Multiscale Study on the Mechanical Properties of Hybrid Fiber Reinforced Cementitious Composites*". Dissertation Co-Advisor. Joint training Ph.D. Student at UCLA, Sep.

2018-Sep. 2019. **Outstanding Doctoral Dissertation Award**, Tongji University. Currently: **Associate Professor**, Shijiazhuang Railway University (Hebei, China).

[35] Zhiyong Chen, Ph.D., November 2020; School of Civil Engineering, Guangxi University (Nanning, China). Dissertation Title: "*Numerical Simulations and Research on the Fracture Evolution of Surrounding Rock of Deep Buried Underground Cavern Based on Peridynamics*". Dissertation Co-Advisor. Joint training Ph.D. Student at UCLA, Jan. 2018-Jan. 2019. **Outstanding Doctoral Dissertation Award**, Guangxi University.

[36] Tien-Shu Chang, Ph.D., Dec. 2021; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Freeze-Thaw Damage of Hybrid Fiber-Reinforced Concrete Containing Microencapsulated Phase Change Material*". Recipient of **T.H. Lin Scholarships** in 2017. Recipient of the **2019 Concrete Masonry Association of California and Nevada Scholarships**. Recipient of the **2019 CESASC Scholarships**. Dissertation Advisor. Currently: Senior Development Engineer, **Intel Corp.**, Chandler, AZ.

[37] Xu Han, Ph.D., May 6, 2022 (final dissertation defense); School of Civil Engineering, Southwest Jiaotong University (Chengdu, China). Dissertation Title: "*Running Safety of Train on Long-Span Bridge under Crosswind Based on Surrogate Model*". Dissertation Co-Advisor, since Sep. 2017.

[38] Dalian Bai, Ph.D., December 6, 2022 (final dissertation defense); School of Civil Engineering, Guangxi University (Nanning, China). Dissertation Title: "*Generalized Plastic Hinge Method for Ultimate Strength Analysis and Design of Steel Frames*". Dissertation Co-Advisor, since Sep. 2018.

[39] Lianhuo Wu, Ph.D., June 2023 (final dissertation defense); School of Civil Engineering, Southwest Jiaotong University (Chengdu, China). Dissertation Title: "*Research on Potential Flow Correction Method for Aerostatic and Aerodynamic Wind Load on Streamlined Box Girders and Wind-Induced Vibration Response"*, Dissertation Co-Advisor, since Sep. 2016. Joint training Ph.D. Student at UCLA, Jan. 2020-Jan. 2021. Currently: Assistant Professor, Fuzhou University (China).

[40] Yue Xi, Ph.D., August 28, 2023 (final dissertation defense); School of Civil Engineering, Tongji University (Shanghai, China). Dissertation Title: "*A High-Precision Assessment Method for Urban Underground Space Resource Based on Multisource Data Voxel Fusion*". Dissertation Co-Advisor, since Sep. 2018.

[41] Jingxi (Jim) Qin, Ph.D., Dec. 2023; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Initiation Mechanisms, Comfort Level and Magnitude Control of Vortex-Induced Vibration (VIV) for Long-Span Box Girder Suspension Bridge*". Dissertation Advisor, since Sep. 2019. Currently: Post-doc Researcher, Hong Kong Polytechnic University.

[42] Mengqi Zhu, Ph.D., Dec. 2023; School of Civil Engineering, Tongji University (Shanghai, China). Dissertation Title: "*Study on the Man-Machine-Rock Mutual Feedback System for TBM Tunneling based on the Knowledge-Informed Machine Learning Model".* Dissertation Co-Advisor, since Sep. 2018.

[43] Aiqing Xu, Ph.D., August 2024; Department of Civil and Environmental Engineering, UCLA. Dissertation Title: "*Multiscale Analysis on Mechanical Properties and Self-Healing Mechanism of Cementitious Composites Featuring Superabsorbent Polymer (SAP)".* Dissertation Advisor, since Sep. 2018. Recipient of **T.H. Lin Scholarships** in 2020. Currently: Post-doc Researcher, Georgia Institute of Technology.

[44] Xiaoyan Man, Ph.D. Candidate, 5th Year; Ph.D. Qualifying Exam passed on March 23, 2023; Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor, since Sep. 2020. Recipient of **Irma Polaski Scholarships** in 2021. Recipient of **T.H. Lin Scholarships** in 2022.

[45] Wenli Zhu, Ph.D. Candidate, 5th Year; Ph.D. Qualifying Exam passed on November 30, 2023; Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor, since Sep. 2020.

[46] Hang Su, Ph.D. student, 5th Year; Preliminary Written Exam passed in July 2020; Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor, since Sep. 2019. Recipient of **T.H. Lin Scholarships** in 2021.

[47] Wanqing Chen, Ph.D. student, 5th Year; School of Civil Engineering, Guangxi University (Nanning, China). Dissertation Advisor, since Sep. 2019.

[48] Peng Deng, Ph.D. Candidate, 4th Year; Ph.D. Qualifying Exam passed on August 22, 2024; Department of Civil and Environmental Engineering, UCLA. Dissertation Advisor, since Sep. 2021.

E. ***Degree of Engineer***

[1] Fariborz Mohammadi Tehrani, degree conferred in Dec. 2003; Department of Civil and Environmental Engineering, UCLA. Research Advisor.

[2] Shih-Jie (Jay) Huang, degree conferred in March 2004; Department of Civil and Environmental Engineering, UCLA. Research Advisor.

[3] Yu-Fu (Paul) Ko, degree conferred in March 2004; Department of Civil and Environmental Engineering, UCLA. Research Advisor.

[4] Sejin Oh, degree conferred in June 2006; Department of Civil and Environmental Engineering, UCLA. Research Advisor.

[5] Kuo-Yao (Matt) Yuan, degree conferred in June 2007; Department of Civil and Environmental Engineering, UCLA. Research Advisor.

F. ***Master Theses/ M.S. Degree***

[1] Tsung-Muh Chen, M.S., June 1990, Department of Civil Engineering and Operations Research, Princeton University, "Effective Elastic Moduli of Two-Dimensional Brittle Solids with Interacting Microcracks".

[2] Kuang-Hui Tseng, M.S., June 1991, Department of Civil Engineering and Operations Research, Princeton University, "A Three-Dimensional Statistical Micromechanical Theory for Brittle Solids with Interacting Microcracks".

[3] Wen-Sen Lin, M.S., June 1992, Department of Civil Engineering and Operations Research, Princeton University, "Evolutionary Micromechanical Damage Models for Polycrystalline Ceramics".

[4] Yong Zhang, M.S. (Plan II), June 1996, Department of Civil and Environmental Engineering, UCLA.

[5] **Lizhi Sun**, M.S. (Plan II), June 1997, Department of Civil and Environmental Engineering, UCLA.

[6] Xiaodong Zhang, M.S. (Plan II), June 1997, Department of Civil and Environmental Engineering, UCLA.

[7] **Haeng-Ki Lee**, M.S. (Plan II), June 1997, Department of Civil and Environmental Engineering, UCLA.

[8] **Lisheng Weng**, M.S. (Plan II), June 1997, Department of Civil and Environmental Engineering, UCLA.

[9] Dalnim Kang, M.S. (Plan II), June 1997, Department of Civil and Environmental Engineering, UCLA.

[10] Hongwei Gong, M.S. (Plan II), June 1998, Department of Civil and Environmental Engineering, UCLA.

[11] Shuen-Ching Cheng, M.S. (Plan II), Sep. 1998, Department of Civil and Environmental Engineering, UCLA.

[12] Chang-Shien Lin, M.S. (Plan II), Dec. 1998, Department of Civil and Environmental Engineering, UCLA.

[13] Pin-Hsiu Yeh, M.S. (Plan II), June 1998, Department of Civil and Environmental Engineering, UCLA.

[14] Hsiao-Chun Chao, M.S. (Plan II), June 1998, Department of Civil and Environmental Engineering, UCLA.

[15] Tanya M. Reidy, M.S. (Plan II), Sep. 1998, Department of Civil and Environmental Engineering, UCLA.

[16] David Bates, M.S. (Plan II), Sep. 1998, Department of Civil and Environmental Engineering, UCLA.

[17] Mikael Azran, M.S. (Plan II), June 1999, Department of Civil and Environmental Engineering, UCLA.

[18] Kregg Koch, M.S. (Plan II), June 2000, Department of Civil and Environmental Engineering, UCLA.

[19] Khoi Do, M.S. (Plan II), June 2000, Department of Civil and Environmental Engineering, UCLA.

[20] Alex J.C. Lee, M.S. (Plan II), June 2000, Department of Civil and Environmental Engineering, UCLA.

[21] Sherwin Shoraka, M.S. (Plan II), June 2000, Department of Civil and Environmental Engineering, UCLA.

[22] Naushad Hossain, **M.S. Thesis**, November 2001, Department of Civil and Environmental Engineering, UCLA; Title: "Characterization of the Young's Modulus of CMOS Thin Films".

[23] Simon H.Y. Fu, **M.S. Thesis**, in progress;. Recipient of the **2000Outstanding M.S. Award**, Department of Civil and Environmental Engineering, UCLA.

[24] **Anny W. Kuo**, M.S. (Plan II), Dec. 2001; Recipient of the **2002Outstanding M.S. Award**, Department of Civil and Environmental Engineering, UCLA.

[25] **Shih-Jie (Jay) Huang**, M.S. (Plan II), Dec. 2001, Department of Civil and Environmental Engineering, UCLA.

[26] **Yu-Fu (Paul) Ko**, M.S. (Plan II), Dec. 2001, Department of Civil and Environmental Engineering, UCLA.

[27] John Cheng-Ming Sun, M.S. (Plan II), Dec. 2001, Department of Civil and Environmental Engineering, UCLA.

[28] **Prechaporn Suwatnodom**, M.S. (Plan II), Dec. 2001, Department of Civil and Environmental Engineering, UCLA.

[29] **Sejin Oh**, M.S. (Plan II), March 2003; Recipient of the **2003Outstanding M.S. Award**, Department of Civil and Environmental Engineering, UCLA.

[30] Alan Edouard Jalil, M.S. (Plan II), June 2003, Department of Civil and Environmental Engineering, UCLA.

[31] Ali Monshizadeh, M.S. (Plan II), June 2003, Department of Civil and Environmental Engineering, UCLA.

[32] Hsiao Tsung Hsiung, M.S. (Plan II), June 2004, Department of Civil and Environmental Engineering, UCLA.

[33] Jorge Chen, M.S. (Plan II), June 2004, Department of Civil and Environmental Engineering, UCLA.

[34] Richard James Henry Gash, M.S. (Plan II), June 2005, Department of Civil and Environmental Engineering, UCLA.

[35] Hodong Han, M.S. (Plan II), June 2005, Department of Civil and Environmental Engineering, UCLA.

[36] Daniel Wook Kwon, M.S. (Plan II), June 2005, Department of Civil and Environmental Engineering, UCLA.

[37] Albert Yo-Jen Chen, M.S. (Plan II), June 2006, Department of Civil and Environmental Engineering, UCLA.

[38] Chen-Min Huang, M.S. (Plan II), June 2006, Department of Civil and Environmental Engineering, UCLA.

[39] Parham Hendifar, M.S. (Plan II), June 2006, Department of Civil and Environmental Engineering, UCLA.

[40] Ashpica Chhabra, M.S. (Plan II), June 2006, Department of Civil and Environmental Engineering, UCLA.

[41] Diane Amy-Marie Hurley, M.S. (Plan II), June 2007, Department of Civil and Environmental Engineering, UCLA.

[42] Xiao Xuan Du, M.S. (Plan II), June2010, Department of Civil and Environmental Engineering, UCLA.

[43] Matthew John Fontanesi, M.S. (Plan II), June 2007, Department of Civil and Environmental Engineering, UCLA.

[44] Adam Thomas Holman, M.S. (Plan II), June 2007, Department of Civil and Environmental Engineering, UCLA.

[45] Albert Tam, M.S. (Plan II), June 2008 expected, Department of Civil and Environmental Engineering, UCLA.

[46] Kuo-Yao (Matt) Yuan, M.S. (Plan II), June 2007, Department of Civil and Environmental Engineering, UCLA.

[47] Alessandro Paglia, **M.S. Thesis**, September 2009, Department of Civil and Environmental Engineering, UCLA; Title: "A Fiber Pull-out Based Model for Synthetic Fiber Reinforced Concrete Beams under a Flexural Load".

[48] Pierre Alex Augustin, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[49] Jan Yi Chen, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[50] Kamalpreet Singh Kalsi, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[51] Larry Quach, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[52] Cameron Brooke Samuelson-Sanford, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[53] Yi Wu, M.S. (Plan II), June 2008, Department of Civil and Environmental Engineering, UCLA.

[54] Nergal Daniel, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[55] Michael Allen Guzzi, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[56] Michael Charles Hillman, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[57] Camille Marodon, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[58] Derrick Masulis, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[59] Andrew Ahmad Ziaei, M.S. (Plan II), June 2009, Department of Civil and Environmental Engineering, UCLA.

[60] Alexander Ryan Chung, M.S. (Plan II), Dec. 2010 (expected), Department of Civil and Environmental Engineering, UCLA.

[61] Armin Mehdizadeh, M.S. (Plan II), Dec. 2010, Department of Civil and Environmental Engineering, UCLA.

[62] Nima Nikbakht, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[63] Anthony Sefong Wong, M.S. (Plan II), Dec. 2010 (expected), Department of Civil and Environmental Engineering, UCLA.

[64] Kuntai Cyrus Jeff Lin, M.S. (Plan II), June 2011, Department of Civil and Environmental Engineering, UCLA.

[65] Hsuan-Ju Hung, M.S. (Plan II), March 2011, Department of Civil and Environmental Engineering, UCLA.

[66] Simson Ka-Hing Chiu, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[67] Yajuan Duan, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[68] Hubert Helouis, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[69] Phuong-Quynh Ho, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[70] Angela Lynne Lin, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[71] Ehsan Mohajerani, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[72] Tyler Bret Moser, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[73] Khoi Phu Pham, M.S. (Plan II), June 2012, Department of Civil and Environmental Engineering, UCLA.

[74] Maham Haghighat, M.S. (Plan II), Dec. 2012, Department of Civil and Environmental Engineering, UCLA.

[75] Han Meng, **M.S. Thesis**, 3rd Year; College of Civil Engineering, Tongji University (Shanghai, China). Thesis Advisor, June 2018. Title: "Mechanical Experiments and Numerical Simulation for Segment Joints in Deep Buried and Drainage Shield Tunnel".

[76] Xiaoyan Man, M.S. (Plan II), June 2020, Department of Civil and Environmental Engineering, UCLA.

G. *Engineer Theses (B.S.) and Senior Independent Work*

[1] Eric Grogan, B.S., June 1988, Department of Civil Engineering and Operations Research, Princeton University, "Computer Analysis of780 Third Avenue: A Comparison of Braced and Unbraced Structures". (with David Billington)

[2] Ricardo J. Azcarate, B.S., June 1989, Department of Civil Engineering and Operations Research, Princeton University, "Zaragosa International Bridge Design".

[3] **Sarah Billington**, B.S., June 1990, Department of Civil Engineering and Operations Research, Princeton University, "Structural Analysis of Crown Hall (by Mies van der Rohe) at the Illinois Institute of Technology". Currently: **Assistant Professor**, Dept. of Civil and Environmental Engineering, Stanford University.

[4] Nancy Lin, B.S., June 1992, Department of Civil Engineering and Operations Research, Princeton University, "Akashi-Kaikyo Bridge".

[5] **Amy Teske**, B.S., June 1993, Department of Mechanical and Aerospace Engineering, Princeton University, "Micromechanics of Particulate and Fibrous Composites".

[6] **Simon H.Y. Fu**, B.S., June 1999; CEE 199 Independent Study, Winter—Spring 1999; Department of Civil and Environmental Engineering, UCLA, "Nondestructive evaluation of concrete".

[7] Huei-Ping (Sophia) Fong, B.S., June 1999; CEE 199 Independent Study, Winter—Spring 1999; Department of Civil and Environmental Engineering, UCLA, "Nondestructive Evaluation of Laboratory-Cast Concrete Specimens".

[8] **Encarnacion Gutierrez**, B.S., June 2002; CEE 199 Independent Study, Spring—Fall 2000, Winter—Spring 2001, Summer—Fall 2001, Winter—Spring 2002, under the sponsorship of UCLA/ **CARE** Research Stipends through **MSD** or **CAMP** grants ($1,000 for each academic quarter), 2001 Summer Research Program (Faculty Advisor), and **UC LEADS** Program ($6,000); Recipient of UCLA School of Engineering **2002 Harry M. Showman Prize** in June 2002 Commencement; Recipient of UCLA College of Letters and Science **2002 Vice Provost's Prize** for the **Best Physical Sciences/Engineering Research Article** published in the UCLA *Undergraduate Science Journal (Vol. 15,pp. 51—54,Spring 2002,entitled "On the Investigation of the Attenuation of P-Wave Amplitude in Concrete with Simulated Deterioration", under my research supervision)*; Department of Civil and Environmental Engineering, UCLA, "Nondestructive ultrasonic evaluation of field concrete specimens".

[9] Laura Basualdo, B.S., June 2008; UCLA Center for Excellence in Engineering and Diversity (**CEED**), Research Intensive Series in Engineering for Underrepresented Populations (**RISE-UP**), $1,000 for each academic quarter, Winter and Spring 2007; CEE 199 Independent Study, Spring 2007; "Fracture Toughness of Discontinuous Steel Fiber Reinforced Cementitious Composites"; Research Internship, Summer 2007.

[10] Yiu B. Lee, B.S., Dec. 2007; CEE 199 Independent Study, Fall 2007; Department of Civil and Environmental Engineering, UCLA, "Seismic Performance-Based Design and Application of Fiber-Reinforced Concrete to Beam-Column Connections".

[11] Simson Chiu, B.S., June 2011; CEE 199 Independent Study, Fall 2010, Winter 2011, Spring 2011; Department of Civil and Environmental Engineering, UCLA.

[12] Khoi Phu Pham, B.S., June 2011; CEE 199 Independent Study, Fall 2010, Winter 2011, Spring 2011; Department of Civil and Environmental Engineering, UCLA.

[13] Hoi Yee (Winnie) Wan, B.S., June 2011; CEE 199 Independent Study, Spring 2011; Department of Civil and Environmental Engineering, UCLA.

[14] Mikael Tayoba, B.S., Dec. 2011; CEE 199 Independent Study, Fall 2011; Department of Civil and Environmental Engineering, UCLA.

H. Member of numerous **Ph.D**. qualifying exam and dissertation committees, and **M.S.** thesis committees for other graduate students at UCLA, Princeton University and Rutgers University. (1987—present) for the Departments of Civil and Environmental Engineering, Mechanical and Aerospace Engineering, and Materials Science and Engineering. Doctoral dissertation *examples* include:

[1] Dr. Michael Tang, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1988. (Advisor: Prof. Peter C.Y. Lee)

[2] Dr. Janpu Hou, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1988. (Advisor: Prof. Peter C.Y. Lee)

[3] Dr. Edmondo DiPasquale, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1988. (Advisor: Prof. Ahmet Cakmak)

[4] Dr. Jong-Seh Lee, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1989. (Advisors: Prof. Peter C.Y. Lee and Prof. Jean H. Prevost)

[5] Dr. Alexandros Yiagos, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1990. (Advisor: Prof. Jean H. Prevost)

[6] Dr. Haluk Ors, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1990. (Advisor: Prof. Jean H. Prevost)

[7] Dr. Young-Gurl Kim, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1990. (Advisor: Prof. Peter C.Y. Lee)

[8] Dr. Laurence R. Bentley, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1990. (Advisor: Prof. George Pinder)

[9] Dr. Binod K. Bhartia, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1990. (Advisor: Prof. Erik VanMarcke)

[10] Dr. Yangping Qiu, Dept. of Mechanical and Aerospace Engineering, Rutgers University, Ph.D., awarded in 1990. (Advisor: Prof. George J. Weng)

[11] Dr. Xiaocong Guo, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1991. (Advisor: Prof. Peter C.Y. Lee)

[12] Dr. G. Christensen, Dept. of Chemical Engineering, Princeton University, Ph.D., awarded in 1991. (Advisor: Prof. William Schowalter)

[13] Dr. Andronikos Theoharis, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1991. (Advisor: Prof. M. Shinozuka)

[14] Dr. Ian Hunt, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1992. (Advisor: Prof. D. Billington)

[15] Dr. Colby Swan, Dept. of Civil Engineering, Princeton University, Ph.D. awarded in 1993. (Advisor: Prof. Ahmet Cakmak)

[16] Dr. Cathy Famiglietti, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1993. (Advisor: Prof. Jean H. Prevost)

[17] Dr. Jiashi Yang, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1993. (Advisor: Prof. Peter C.Y. Lee)

[18] Dr. Gordon Fenton, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1993. (Advisor: Prof. Erik Van Marcke)

[19] Dr. Jiun-Der Yu, Dept. of Civil Engineering, Princeton University, Ph.D., awarded in 1995. (Advisor: Prof. Peter C.Y. Lee)

[20] Dr. Claes T. Christensen, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1995. (Advisor: Prof. Richard B. Nelson)

[21] Dr. Wei Zhong, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1996. (Advisor: Prof. T.H. Lin)

[22] Dr. Ningjun Teng, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1997. (Advisor: Prof. T.H. Lin)

[23] Dr. Yung-Chiun Her, Dept. of Materials Science and Engineering, UCLA, Ph.D., awarded in 1998. (Advisor: Prof. Jenn-Ming Yang)

[24] Dr. Mark Lin, Dept. of Mechanical and Aerospace Engineering, UCLA, Ph.D., awarded in 1998. (Advisor: Prof. Thomas Hahn)

[25] Dr. Hilal Taweel, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1998. (Advisor: Prof. Stanley Dong)

[26] Dr. Hsueh-Chun (Snow) Lin, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1998. (Advisor: Prof. Stanley Dong)

[27] Dr. Chia-Jui (Fisher) Yu, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1998. (Advisor: Prof. Lewis P. Felton)

[28] Dr. Charles Ming-Tsai Denq, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1999. (Advisor: Prof. Stanley Dong)

[29] Dr. Chao-Hsun (Steve) Huang, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1999. (Advisor: Prof. Stanley Dong)

[30] Dr. Amr Hakam, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 1999. (Advisor: Prof. Lawrence Selna)

[31] Dr. Deok-Yong Park, Dept. of Materials Science and Engineering, UCLA, Ph.D., awarded in 2000. (Advisor: Prof. Jenn-Ming Yang)

[32] Dr. Hongchang Lin, Dept. of Mechanical and Aerospace Engineering, UCLA, Ph.D., awarded in 2000. (Advisor: Prof. Satya Atluri)

[33] Dr. Chu-Chung Hsu, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 2001. (Advisor: Prof. Mladen Vucetic)

[34] Dr. Sandrine Lermit, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in 2001. (Advisor: Prof. John Wallace)

[35] Dr. Vyacheslav A. Tsyfanskiy, Dept. of Materials Science and Engineering, UCLA, Ph.D., awarded in 2001. (Advisor: Prof. Alan J. Ardell)

[36] Dr. Frank Jyh-Herng Shih, Dept. of Mechanical and Aerospace Engineering, UCLA, Ph.D., awarded in 2002. (Advisor: Prof. Ajit Mal)

[37] Dr. Dongdong Wang, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in Aug. 2003. (Advisor: Prof. J.-S. Chen)

[38] Dr. Sauvik Banerjee, Dept. of Mechanical and Aerospace Engineering, UCLA, Ph.D., awarded in Dec. 2003. (Advisor: Prof. Ajit Mal)

[39] Dr. Kutay Oracal, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in June 2004. (Advisor: Prof. John Wallace)

[40] Dr. Ming Wen, Dept. of Mechanical and Aerospace Engineering, UCLA, Ph.D., awarded in Dec. 2005. (Advisor: Prof. Nasr Ghoniem)

[41] Mr. Jianming Huang, Ph.D. awarded, Dept. of Mechanical and Aerospace Engineering, UCLA, 2002—present. (Advisor: Prof. Nasr Ghoniem)

[42] Dr. Hiu Hung Yong, Ph.D. awarded in Feb. 2005, Dept. of Materials Science and Engineering, UCLA. (Advisor: Prof. Thomas Hahn)

[43] Dr. Kidong Park, Dept. of Civil and Environmental Engineering, Ph.D., awarded in Dec. 2005. (Advisor: Prof. Emeritus Gary Hart)

[44] Dr. Guocai Wu, Dept. of Materials Science and Engineering, UCLA, Ph.D., awarded in Dec. 2005. (Advisor: Prof. Jenn-Ming Yang)

[45] Dr. Youcai Wu, Dept. of Civil and Environmental Engineering, UCLA, Ph.D., awarded in Dec. 2005. (Advisor: Prof. J.-S. Chen)

[46] Dr. Xinwei Zhang, Dept. of Civil and Environmental Engineering, UCLA, Ph.D. awarded in June 2006. (Advisor: Prof. J.-S. Chen)

[47] Dr. Shafigh Mehraeen, Dept. of Civil and Environmental Engineering, UCLA, Ph.D. awarded in Jan. 2005. (Advisor: Prof. J.-S. Chen)

[48] Dr. Can Alpdogan, Ph.D. awarded in June 2008; Dept. of Civil and Environmental Engineering, UCLA, 9/2004—6/2008. (Advisor: Prof. E. Taciroglu)

[49] Mr. Andrew Paul Friedman, Ph.D. candidate, Dept. of Mechanical and Aerospace Engineering, UCLA, 8/2004—present. (Advisor: Prof. O. Bendiksen)

[50] Dr. Jerko Kocijan, Ph.D. awarded in March 2005, Dept. of Civil and Environmental Engineering, UCLA. (Advisor: Prof. M. Vucetic)

[51] Dr. Hailong Teng, Ph.D. awarded in March 2008, Dept. of Civil and Environmental Engineering, UCLA, 12/2004—3/2008. (Advisor: Prof. J.-S. Chen)

[52] Dr. Hsiu-Ying Chung, Ph.D. awarded in Dec. 2007; Dept. of Materials Science and Engineering, UCLA, 2/2005—12/2007. (Advisor: Prof. Jenn-Ming Yang)

[53] Dr. Ali Ahmed Abou-Sena, Ph.D. awarded in March 2007, Dept. of Mechanical and Aerospace Engineering, UCLA, 2005—March 2007. (Advisor: Prof. Mohamed A. Abdou)

[54] Dr. Tong Qiu, Ph.D. awarded in June 2005, Dept. of Civil and Environmental Engineering, UCLA. (Advisor: Prof. Patrick Fox)

[55] Dr. Wei Hu, Ph.D. awarded in Dec. 2007; Dept. of Civil and Environmental Engineering, UCLA, 6/2004—12/2007. (Advisor: Prof. J.-S. Chen)

[56] Dr. Pai-Chen Guan, Ph.D. awarded in Dec. 2008, Dept. of Civil and Environmental Engineering, UCLA, 6/2005—12/2008. (Advisor: Prof. J.-S. Chen)

[57] Dr. Simin Rachel Khoshbin, Ph.D. awarded in March 2007, Dept. of Materials Science and Engineering, UCLA, 4/2006—3/2007. (Advisor: Prof. Jenn-Ming Yang)

[58] Dr. Sudipta Chatterjee, Ph.D. awarded in Dec. 2007; Dept. of Mechanical and Aerospace Engineering, UCLA, 6/2006—12/2007. (Advisor: Prof. Gregory P. Carman)

[59] Dr. Hyoung-Il Kim, Ph.D. awarded in June 2008, Dept. of Mechanical and Aerospace Engineering, UCLA, 10/2006—6/2008. (Advisor: Prof. Vijay Gupta)

[60] Dr. Vinay Sriram, Ph.D. awarded in Sep. 2008, Dept. of Materials Science and Engineering, UCLA, 12/2006—present. (Advisor: Prof. Jenn-Ming Yang)

[61] Dr. Chia-Chan Hsu, Ph.D. awarded in August 2009, Dept. of Materials Science and Engineering, UCLA, 9/2007—8/2009. (Advisor: Prof. Jenn-Ming Yang)

[62] Dr. Sheng-Wei Chi, Ph.D. awarded in Dec. 2009, Dept. of Civil and Environmental Engineering, UCLA, 9/2007—12/2009. (Advisor: Prof. J.-S. Chen)

[63] Dr. Kai Chen, Ph.D. awarded in August 2009, Dept. of Materials Science and Engineering, UCLA, 11/2007—8/2009. (Advisor: Prof. King-Ning Tu)

[64] Dr. William Elmer, Ph.D. awarded in June 2010, Dept. of Civil and Environmental Engineering, UCLA, 3/2008—6/2010. (Advisor: Prof. E. Taciroglu)

[65] Dr. Po-Ching Yeh, Ph.D. awarded in June 2011, Dept. of Materials Science and Engineering, UCLA, 9/2008—6/2011. (Advisor: Prof. Jenn-Ming Yang)

[66] Dr. Harsh Kumar Baid, Ph.D. awarded in June 2012, Dept. of Mechanical and Aerospace Engineering, UCLA, 3/2009—6/2012. (Advisor: Prof. Ajit Mal)

[67] Dr. Judy Ping Yang, Ph.D. awarded in June 2012, Dept. of Civil and Environmental Engineering, UCLA, 7/2010—6/2012. (Advisor: Prof. J.-S. Chen)

[68] Dr. Henry Alonso Colorado Lopera, Ph.D., Dept. of Materials Science and Engineering, UCLA, 7/2010—6/2016. (Advisor: Prof. Jenn-Ming Yang)

[69] Dr. Shi-Yu Xu, Ph.D. awarded in Dec. 2010, Dept. of Civil and Environmental Engineering, UCLA, 9/2007—12/2010. (Advisor: Prof. Jian Zhang)

[70] Ms. Bala Priyadarshini Shanmugam, M.S. awarded in June 2011, Dept. of Civil and Environmental Engineering, UCLA, 1/2011—6/2011. (Advisor: Prof. J.-S. Chen)

[71] Dr. Yuan-Wei Chang, Ph.D. awarded in August 2015, Dept. of Materials Science and Engineering, UCLA, 7/2012—8/2015. (Advisor: Prof. Jenn-Ming Yang)

[72] Dr. Bandar Abdulaziz AlMangour, Ph.D. awarded in June 2017, Dept. of Materials Science and Engineering, UCLA, 10/2015—6/2017. (Advisor: Prof. Jenn-Ming Yang)

[73] Dr. Jacob William Stremfel, Ph.D., awarded in August 2018, Dept. of Materials Science and Engineering, UCLA, 10/2017—8/2018. (Advisor: Prof. Jenn-Ming Yang)

[74] Dr. Mohammad Alabdullah, Ph.D., awarded in Dec. 2019, Dept. of Mechanical and Aerospace Engineering, UCLA, 9/2015—12/2019. (Advisor: Prof. Nasr Ghoniem)

[75] Dr. Arian Ghazari, Ph.D., awarded in March 2022, Dept. of Mechanical and Aerospace Engineering, UCLA, 2/2019—3/2022. (Advisor: Prof. Nasr Ghoniem)

[76] Dr. Tait McLouth, Ph.D., awarded in August 2020, Dept. of Materials Science and Engineering, UCLA, 3/2019—8/2020. (Advisor: Prof. Jenn-Ming Yang)

[77] Dr. Leonardo Araque, Ph.D., awarded in June 2022, Dept. of Mechanical and Aerospace Engineering, UCLA, 6/2021—6/2022. (Advisor: Prof. Ajit Mal)

[78] Mr. Chen Wei, Ph.D. candidate, passed Ph.D. qualifying exam in December 2021, Dept. of Mechanical and Aerospace Engineering, UCLA, 12/2021—present. (Advisor: Prof. Lihua Jin)

[79] Dr. Lifu (Kiris) Wang, Ph.D., awarded in March 2023, Dept. of Mechanical and Aerospace Engineering, UCLA, 6/2019—3/2023. (Advisor: Prof. Ajit Mal)

SERVICE/ ADMINISTRATIVE RESPONSIBILITIES

University of California, Los Angeles:

- Member, Awards Committee, Department of Civil and Environmental Engineering, UCLA (7/2024-6/2025).
- Acting Chair**,** on a Professor, Step VI, promotion case (for Department Chair), CEE Department, UCLA (5-12/2023).
- Member, *Ad Hoc* Review Committee, on an Associate Professor promotion case, CEE Department, UCLA (7-12/2022).
- Member, HSSEAS School-level Endowed Chairs Search Committee, School of Engineering and Applied Science, UCLA (7/2021-6/2022). Six endowed chairs.
- Member, *Ad Hoc* Review Committee, on an Associate Professor endowed chair (Englekirk) reappointment, CEE Department, UCLA (4-6/2021).
- Member, HSSEAS School-level Endowed Chairs Search Committee, School of Engineering and Applied Science, UCLA (7/2018-6/2021). Three endowed chairs.
- Member, Faculty Search Committee for a new Geotechnical faculty position, Department of Civil and Environmental Engineering, UCLA (7/2018-6/2020).
- Chair**,** *Ad Hoc* Review Committee, on a Full Professor and Chair merit increase case, CEE Department, UCLA (12/2019-1/2020).
- Member, Faculty Executive Council, School of Engineering and Applied Science, UCLA (7/2015-6/2018).
- Member, Awards Committee, Department of Civil and Environmental Engineering, UCLA (7/2015-6/2019).
- Member**,** *Ad Hoc* Review Committee, on an Assistant Professor 4th year appraisal case, CEE Department, UCLA (7-12/2017).

- Chair**,** *Ad Hoc* Review Committee, on a Full Professor promotion case, CEE Department, UCLA (Fall 2016).
- Acting Chair**,** on a Professor, Step VI, promotion case (for Department Chair), CEE Department, UCLA (Fall 2016).
- Member, Strategic Planning Committee, Theme 2 (Sustainable Urban Systems), Department of Civil and Environmental Engineering, UCLA (9/2015-present).
- Chair**,** *Ad Hoc* Review Committee, on an Adjunct Full Professor appointment case, CEE Department, UCLA (Fall 2012).
- Member, Rice Junior Chair Search Committee, CEE Department, UCLA (11/2009-6/2010).
- Chair**,** *Ad Hoc* Review Committee, on an Assistant Professor tenure and promotion review case, CEE Department, UCLA (Fall 2010).
- Member**,** *Ad Hoc* Review Committee, on a "Professor Step VI" merit increase and promotion review case, CEE Department, UCLA (Fall 2009).
- Faculty Chair, **Professor T.H. Lin Endowed Scholarship** ($60,000), 2009.
- Chair, Senior Faculty Search Committee, CEE Department, UCLA (9/2007-2009).
- Member**,** *Ad Hoc* Review Committees, on a 4th year appraisal and merit increase review case for an Assistant Professor, CEE Department, UCLA (Fall 2008).
- Member of Organizing Committee, Schoolwide Technology Forum and Research Review, School of Engineering and Applied Science, UCLA (8/2006-6/2007).
- Member**,** *Ad Hoc* Review Committees, on an Assistant Professor tenure and promotion review case, and on two 4th year appraisal and merit increase review cases for Assistant Professors, CEE Department, UCLA (Fall 2006).
- **Founding Sponsor (Donor)** of the **Boelter Society**, School of Engineering and Applied Science, UCLA, 1998-99.
- Member**, Council on Planning and Budget, Academic Senate**, UCLA (7/2003-6/2005); regular meetings with UCLA Chancellor, Provost, and Vice Chancellors on strategic planning, academic program planning, university-wide budget for academic and capital programs, and periodic reviews of all academic and professional colleges and schools.
- **Chair,** *Ad Hoc* Review Committee, on a 4th year appraisal and merit increase review for an assistant professor, CEE Department, UCLA (Fall 2004).
- Member**,** Merit Increase Review Committee, CEE Department, UCLA (2005-2006).
- Lead Member, Award and Honor Committee, CEE Dept. (2002-present).
- **Department Chairman**, Civil and Environmental Engineering Department, UCLA (9/1/1999-7/1/2002); responsible for all department budget, space, personnel actions, laboratories, recruitment and retention of faculty and staff.
- CEE **Department Representative** to **ABET/CSAB Committe**e, School of Engineering and Applied Science, UCLA (4/2004-8/2007); prepare and organize efforts on ABET documentation and reviews.
- **Chair**, **Planning & Task Committee**, CEE Department, UCLA (7/2002-9/2009); **Member** (9/2009-present) academic planning, budget and strategic planning of the department; courses and curricula review, planning.

- **Chair, Structures and Mechanics Program**, CEE Department, UCLA (7/2001-2012); responsible for all academic matters, curriculum, graduate exams, and resources of the program.
- Member**,** Merit Increase Review Committee, on a Full Professor merit increase case, CEE Department, UCLA (1/2005-2/2005).
- **Chair,** *Ad Hoc* Promotion Review Committee, on a Full Professor promotion case, CEE Department, UCLA (8/2002-12/2002).
- Lead Member**,** *Ad Hoc* Promotion Review Committee, on a Full Professor promotion case, CEE Department, UCLA (8/2002-12/2002).
- Lead Member, Merit Increase Committee, on a Full Professor merit increase case, CEE Department, UCLA (11/2002-1/2003).
- Lead Member, Awards and Honors Committee, CEE Department, UCLA (7/2002-present).
- Member**, University of California** *Registry of Medical, Public Health and Scientific Experts in Terrorism*, UCOP (10/2002-present).
- Member, (Inaugural) Alumni Awards Committee of the Engineering Alumni Association, UCLA (Spring 2002).
- Alternate Member, New Engineering I (Engineering V) Space Committee, UCLA (4/2001—2003).
- Member, Honors and Awards Committee, School of Engineering and Applied Science, UCLA (2000-2001).
- Department Representative to Legislative Assembly, Academic Senate, UCLA (9/1999-8/2000).
- Faculty Co-Advisor, ASCE Student Chapter, UCLA (9/1999-2000).
- **Chair**, Award and Honor Committee, CEE Department, UCLA (1998-99).
- Member, Staff Incentive Award Committee, School of Engineering and Applied Science, UCLA (1999).
- **Department Vice Chair and Undergraduate Advisor**, CEE Department, UCLA (7/1994-6/98); responsible for undergraduate programs, admissions, open houses and retention.
- **Chair, Structures and Mechanics Program**, CEE Department, UCLA (1/1996-9/98).
- Member or Chair, **Planning & Task Committee**, CEE Department, UCLA (1997-98; 1999-2012).
- Department Representative to Legislative Assembly, Academic Senate, UCLA (1994-97).
- OAC Computing Support Coordinator for CEE Department, UCLA (1994-2002).
- Member, *Ad Hoc* Committee (on a tenured Full Professor appointment), for the Committee on Academic Personnel of the Academic Senate, UCLA (March-May 1997).
- Member, Merit Increase Committee, CEE Department, UCLA (1996-97).
- **Chair**, Merit Increase Committee, CEE Department, UCLA (1994-95).
- Member, Departmental Retreat Committee, CEE Department, UCLA (1997).
- Member, Student Conduct Standing Committee, School of Engineering and Applied Science, UCLA (1995—present).
- Member, Planning & Task Committee, CEE Department, UCLA (1994-95).

- Member, Courses and Curricula Committee, CEE Department, UCLA (1993-95).
- Member, *Ad Hoc* Committee (on a tenure and promotion case), for the Committee on Academic Personnel of the Academic Senate, UCLA (April-June 1994).
- Member, Structures Faculty Search/Recruitment Committee, CEE Department, UCLA (1994-present).
- Faculty Interviewer for the Regents Scholarship Program, UCLA (1994).

Princeton University:

- Member, "Interdepartmental Committee for the Program in Engineering Physics", Princeton University, appointed by Dean of Faculty on behalf of the President (1991-1993).
- Member, "Interdepartmental Committee for the Program in Architecture and Engineering", Princeton University (1991-1993).
- Undergraduate advisor, the Structures and Mechanics Program (including all Classes), Department of Civil Engineering and Operations Research, Princeton University (1990-1993).
- Freshmen advisor for the first-year undergraduate students in School of Engineering and Applied Sciences, Princeton University (1991-1992).
- Faculty advisor for the ASCE Student Chapter of Princeton University (1991-1992).
- Organizer and coordinator, Structures and Mechanics Seminars, Department of Civil Engineering and Operations Research, Princeton University (1987-1993).
- Member, "Curriculum Committee", Princeton Materials Institute, Princeton University (1990-1992).
- Undergraduate advisor (Class of 1991), Department of Civil Engineering and Operations Research, Princeton University (1988-1990).
- Member, "Graduate Curriculum Committee", Department of Civil Engineering and Operations Research, Princeton University (1989-1990).

MAJOR CONTRIBUTIONS AS A DEPARTMENT CHAIR (1999—2002)

- Establishing a new **Industry Affiliates Program** to enhance the interaction with civil and environmental industry and to raise unrestricted funds (Jan. 2000—June 2002). Current IAP **Patrons** include CTS Cement Manufacturing Company, Englekirk and Sabol Inc., Exponent Failure Analysis Associates, Jenkins, Gales and Martinez Inc., Kiewit Pacific Co.; and current IAP **Members** include Morley Builder, and Praad Geotechnical, Inc.
- **New Departmental Endowment**: *Martin Rubin Endowed Scholarship*, $51,000 (2001).
- Acquiring **new faculty positions** to replace/augment departing or retiring faculty: (1) one new faculty position in Water Resources System Engineering (Year 2002,successfully hiring one Assistant Professor); (2) one new faculty position in Environmental Engineering (Year 2002, successfully hiring one Assistant Professor); and (3) two new faculty positions in Structural Engineering and Mechanics (Year 2001, successfully hiring one Associate Professor and one Assistant Professor).
- Successfully facilitating two non-productive senior faculty retirements in 2001 and 2004; replaced with two new productive tenure-track faculty in Structural Engineering (2001—2005).
- **Upgrading** the Structural undergraduate teaching labs (CEE 130L. 135L, 137L, 142L) in 2000—2001 before and after the ABET review; including new PCs, printers, function generators, electronic balance, and calibration and proofing of three MTS universal load frames, etc.

- Preparation and oversight of the October 2000 ABET review and campus visit. Successfully passed the ABET review for six years.
- **Reducing** the annual departmental **deficits** from about $150,000 in 1997—1998 and 1998—99 AY (before my appointment) to basically $0 in 1999—2002. Restore the CEE Dept. to a healthy financial status with clean budgets and no deficit.
- Successful investigation and handling (collaborating with Dean and Vice Chancellor) of **academic personnel problems** of a tenured professor from overseas during 2000-2001, leading to the resignation of the person in question in 2001; preventing protracted long-term troubles for the Dept., School and University; saving UCLA hundreds of thousands of dollars in costs.
- Joining the new Engineering I Space and Building Committee.
- Launching and sustaining the new **CEE Department Newsletters** in Spring 2001 for alumni and friends; available in hard copy and on the dept. web page.
- Major revision to the CEE undergraduate curriculum; enhancing the quality of undergraduate education and training.
- Acquiring $50,000 **Engineering Initiative funds** for the CEE Dept., 2001—2002 and beyond.
- Acquiring new labs and student offices for many CEE faculty.
- Establishing many joint courses in solid mechanics with the Mechanical and Aerospace Engineering Department, and several joint courses in finite element methods with the Biomedical Engineering Program.
- Establishing the inaugural Departmental **Industry Advisory Board** (with 15 members), to meet in October 2002, providing advices on curriculum, research, resources and fund raising.
- Acquiring new LCD data projector, premium sound system and versatile digital switcher for multimedia digital presentations and web meetings in CEE Dept. conference room, to benefit faculty, students and invited guests.

COMMUNITY SERVICES

- **Outreach** program for the Los Angeles Unified School District (**LAUSD**) in 2000—2001 AY, through a novel small shaking table science demonstration project for the middle school science teachers and students, under the lead of Associate Dean MacKenzie.
- **Public relation educator** for the Civil Engineering community, via news articles by the *LA Times*, *San Francisco Chronicle*, and *Atlanta Journal and Constitution*, to promote the career and employment of civil engineers, Oct.—Nov. 2001.
- **Public relation educator** for the Civil Engineering community, via news articles by the *San Francisco Chronicle*, on the collapse of the World Trade Center Twin Towers due to terrorist attack, Oct.—Nov. 2001;and via news article by the *Inland Valley Daily Bulletin*, on airport terminal safety and blast resistance design, Jan. 29, 2002 (Ontario, CA).
- **Public relation educator** for the Civil Engineering community, via TV interviews by *KCAL 9* (Channel 9), *KNBC* (Channel 4), and *CBS News* on the collapse of the World Trade Center Twin Towers due to terrorist attack, and structural safety of skyscrapers and bridges, Oct.—Nov. 2001.
- **Public relation educator** for the Civil Engineering community, via news article by the *ABC News.com* on "A Good Use for Bad Vibes: Wireless Sensor Is Powered by the Shakes", concerning vibration sensors and wireless sensor network for structural health monitoring, June 6—13, 2002.

SEMINARS, PRESENTATIONS, INVITED LECTURES

[1] "A parameter estimation algorithm for inelastic material models" (J.W. Ju, J.C. Simo, K.S. Pister and R.L. Taylor), Second International Conference and Short Course on Constitutive Laws for Engineering Materials: Theory and Application, University of Arizona, Tucson, Jan. 5, 1987.

[2] "On strain-based continuum damage models: formulation and computational aspects" (J.C. Simo, J.W. Ju, K.S. Pister and R.L. Taylor), Second International Conference and Short Course on Constitutive Laws for Engineering Materials: Theory and Application, University of Arizona, Tucson, Jan. 7, 1987.

[3] "Strain and stress based continuum elastoplastic damage models" (J.W. Ju), Department of Civil Engineering and Department of Aerospace Engineering, Texas A&M University. Feb. 19, 1987.

[4] "Strain and stress based continuum elastoplastic damage models" (J.W. Ju), Civil Engineering Program, Division of Engineering and Applied Science, California Institute of Technology, March 5, 1987.

[5] "Strain and stress based continuum elastoplastic damage models" (J.W. Ju), Department of Civil Engineering, University of Illinois at Urbana-Champaign, March 19, 1987.

[6] "Strain and stress based continuum elastoplastic damage models" (J.W. Ju), Structures and Mechanics Program, Department of Civil Engineering, Princeton University, March 30, 1987.

[7] "Strain and stress based continuum damage models" (J.W. Ju), Department of Mechanical Engineering, Stanford University, April 9, 1987.

[8] "Strain and stress based continuum damage models" (J.W. Ju), *Structural Engineering, Mechanics and Materials Seminar Series*, Department of Civil Engineering, University of California — Berkeley, June 18, 1987.

[9] "On energy-based coupled elastoplastic damage models" (J.W. Ju), U.S. Army Materials Technology Laboratory, Watertown, Massachusetts, Dec. 12, 1987.

[10] "Finite element solution of nonlinear frictional contact problems via perturbed Lagrangian formulation" (J.W. Ju), *International Conference on Computational Engineering Science (ICES-88),* Georgia Institute of Technology, Atlanta, April 13, 1988.

[11] "Finite element solution of frictional contact problems by perturbed and augmented Lagrangian formulations" (J.W. Ju), *ASCE Engineering Mechanics Division Specialty Conference*, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, May 25, 1988.

[12] "On novel energy-based coupled elastoplastic damage models" (J.W. Ju), *ASME/SES Joint Applied Mechanics Conference*, University of California, Berkeley, June 20 and 22, 1988.

[13] "On rate-dependent strain-based continuum damage models: alternative formulations and computational aspects" (J.W. Ju), *ASME/SES Joint Applied Mechanics Conference*, University of California, Berkeley, June 22, 1988.

[14] "On energy-based coupled elastoplastic damage theories" (J.W. Ju), Departments of Civil Engineering and Mechanical Engineering, University of Akron, Ohio, August 30, 1988.

[15] "Perturbed and augmented Lagrangian formulations for the finite element solution of nonlinear frictional contact problems" (J.W. Ju),and *On energy-based coupled elastoplastic damage theories*, Computational Mechanics Division of Tire Research, General Tire Inc., Akron, Ohio, August 31, 1988.

[16] "On micromechanically based damage models for concrete" (J.W. Ju), ASCE/ASME Third Joint Mechanics Conference, University of California, San Diego, July 12, 1989.

[17] "On two-dimensional self-consistent micromechanical damage models for brittle solids" (J.W. Ju), Institute of Applied Mechanics, National Taiwan University, Taipei, Taiwan, July 25, 1989.

[18] "On three-dimensional self-consistent micromechanical damage models for brittle solids under tension and compression" (J.W. Ju), Department of Mechanics and Materials Science, Rutgers University, New Jersey, March 1, 1990.

[19] "On two- and three-dimensional self-consistent micromechanical damage models for brittle solids under tension and compression" (J.W. Ju), Department of Materials Science and Mineral Engineering, and Department of Civil Engineering, University of California, Berkeley, March 13, 1990.

[20] "On three-dimensional self-consistent micromechanical damage models for brittle solids under tension and compression" (J.W. Ju), 1990 Southeastern Conference on Theoretical and Applied Mechanics (SECTAM XV), Atlanta, Georgia, March 22, 1990.

[21] "On two-dimensional micromechanical damage models for brittle solids with interacting microcracks" (J.W. Ju), International Conference on Micromechanics of Failure of Quasi-Brittle Materials, Albuquerque, New Mexico, June 6, 1990.

[22] "On three-dimensional self-consistent micromechanical damage models for brittle solids" (J.W. Ju), Department of Mechanical Engineering, University of Pittsburgh, Pennsylvania, Sept. 25, 1990.

[23] "On elastoplastic visco-damage modeling and strain softening" (J.W. Ju), DNA Conference on Computational Structural Dynamics, Menlo Park, California, Oct. 11, 1990.

[24] "On three-dimensional self-consistent micromechanical damage models for brittle solids under tension and compression" (J.W. Ju), Department of Mechanical Engineering and Applied Mechanics, University of Pennsylvania, Philadelphia, Oct. 18, 1990.

[25] "On two-dimensional statistical micromechanical damage theories for brittle solids with interacting microcracks" (J.W. Ju), ASME Winter Annual Meeting, Symposium on *Damage Mechanics in Engineering Materials*' Dallas, Texas, Nov. 26, 1990.

[26] "On statistical micromechanical evolutionary damage models for brittle solids" (J.W. Ju), Department of Theoretical and Applied Mechanics, University of Illinois at Urbana-Champaign, Feb. 13, 1991.

[27] "On isotropic and anisotropic damage variables in continuum damage mechanic" (J.W. Ju), ASCE Engineering Mechanics Specialty Conference, Symposium on *Damage Mechanics: Theory and Computation*', Columbus, Ohio, May 20, 1991.

[28] "On statistical micromechanical process damage models for brittle solids with interacting microcracks" (J.W. Ju), ASCE Engineering Mechanics Specialty Conference, Session on *Micromechanics, Creep, and Rate Effects in Geomaterials*, Columbus, Ohio, May 21, 1991.

[29] "Consistent tangent moduli for a class of viscoplasticity" (J.W. Ju), Department of Civil Engineering, Rensselaer Polytechnic Institute, Sept. 18, 1991.

[30] "Two- and three-dimensional second order statistical micromechanical theories for brittle materials with interacting microcracks" (J.W. Ju), International Union of Theoretical and Applied Mechanics Symposium on *Local Mechanics Concepts for Composite Material Systems*, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, Oct. 29, 1991.

[31] "A complete second order statistical micromechanical theory for brittle solids with microcracks" (J.W. Ju), Society of Engineering Science 28th Annual Technical Meeting, Composites Symposium, University of Florida, Gainesville, Nov. 8, 1991.

[32] "Micromechanics and effective properties of elastic particulate composites" (J.W. Ju), Department of Mechanical Engineering and Applied Mechanics, University of Rhode Island, March 17, 1992.

[33] "On statistical micromechanical theories for brittle solids containing interacting microcracks"(J.W. Ju), Third International Conference on Computational Plasticity, Session on Damage Mechanics, Univ. Politecnica de Catalunya, Barcelona, Spain, April 9, 1992.

[34] "Recent development in two-dimensional statistical micromechanical theories for brittle solids with interacting microcracks" (J.W. Ju and T.M. Chen), 1992 ASME Summer Mechanics Meeting, Symposium on *Computational Models and Methods in Composites*, Arizona State University, Tempe, Arizona, April 29, 1992.

[35] "Consistent tangent moduli for viscoplasticity and plasticity: unified treatment" (J.W. Ju), 1992 ASME Summer Mechanics Meeting, Symposium on *Plastic Flow and Creep*, Arizona State University, Tempe, Arizona, April 30, 1992.

[36] "Micromechanical modeling of brittle heterogeneous particulate composites" (J.W. Ju), 1992 ASME Summer Mechanics Meeting, Symposium on *Damage Mechanics and Plasticity*, Arizona State University, Tempe, Arizona, May 1, 1992.

[37] "On statistical micromechanical models for brittle solids with randomly located interacting microcracks" (J.W. Ju), School of Aerospace Engineering, Georgia Institute of Technology, May 14, 1992.

[38] "Two-dimensional statistical micromechanical models for microcracked brittle solids" (J.W. Ju and K.H. Tseng), 1992 ASCE Engineering Mechanics Specialty Conference, Session on *Material Softening and Damage Mechanics*, Texas A&M University, College Station, Texas, May 25, 1992.

[39] "Micromechanics and effective properties of elastic particulate composites" (J.W. Ju), 1992 ASCE Engineering Mechanics Specialty Conference, Session on *Coupled Models of Damage and Inelastic Deformation in Composite Materials*, Texas A&M University, College Station, Texas, May 25, 1992.

[40] "An improved two-dimensional statistical micromechanical theory for brittle solids with randomly located interacting microcracks" (J.W. Ju), Department of Mechanical and Industrial Engineering, New Jersey Institute of Technology, Oct. 21, 1992.

[41] "An improved two-dimensional statistical micromechanical theory for elastic solids with accurate microcrack interaction models" (J.W. Ju and K.H. Tseng), 1992 ASME Winter Annual Meeting, Symposium on *Damage Mechanics and Localization*, Anaheim, California, Nov. 11, 1992.

[42] "Effective moduli of elastic composites containing microcracks or microvoids" (J.W. Ju and T.M. Chen), 1992 ASME Winter Annual Meeting, Symposium on *Damage Mechanics in Composites*, Anaheim, California, Nov. 11, 1992.

[43] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju and T.M. Chen), 1992 ASME Winter Annual Meeting, Symposium on *The Macroscopic Behavior of Heterogeneous Materials from the Microstructure*, Anaheim, California, Nov. 12, 1992.

[44] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Mechanical Engineering, Yale University, Feb. 10, 1993.

[45] "Consistent tangent moduli for computational viscoplasticity and plasticity: unified treatment" (J.W. Ju), Department of Mechanical and Aerospace Engineering, Rutgers University, Feb. 22, 1993.

[46] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Mechanical Engineering, University of Pittsburgh, March 3, 1993.

[47] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Aerospace Engineering, Mechanics and Engineering Science, University of Florida, Gainesville, March 19, 1993.

[48] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Civil Engineering, University of California, Los Angeles, March 23, 1993.

[49] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Mechanical Engineering, State University of New York at Stony Brook, March 26, 1993.

[50] "Micromechanics and effective moduli of elastic composites with randomly dispersed inhomogeneities" (J.W. Ju), Department of Civil, Environmental and Architectural Engineering, and Department of Mechanical Engineering, University of Colorado, Boulder, April 5, 1993.

[51] "Evolutionary micromechanical damage models for polycrystalline ceramics" (J.W. Ju and W.S. Lin), 1993 First Joint ASCE/ASME/SES Joint Mechanics Conference, Symposium on *Homogenization and Constitutive Modeling for Heterogeneous Materials*, Charlottesville, Virginia, June 7, 1993.

[52] "Micromechanics and effective elastoplastic moduli of metal matrix composites" (J.W. Ju and T.M. Chen), 1993 First Joint ASCE/ASME/SES Joint Mechanics Conference, Symposium on *Micromechanics of Random Media*, Charlottesville, Virginia, June 8, 1993.

[53] "Micromechanics and effective elastoplastic behavior of two-phase metal matrix composites" (J.W. Ju and T.M. Chen), 1993 ASME Winter Annual Meeting, Symposium on *Micromechanics of Composites*, New Orleans, Louisiana, Dec. 1, 1993.

[54] "Micromechanics and effective elastoplastic behavior of two-phase metal matrix composites" (J.W. Ju), Department of Materials Science and Engineering, University of California, Los Angeles, Jan. 14, 1994.

[55] "A micromechanical approach for predicting effective elastoplastic behavior of metal matrix composites" (J.W. Ju), 12th U.S. National Congress on Applied Mechanics, Symposium on *Micromechanics and Inelasticity of Metal Matrix Composites*, Seattle, Washington, June 28, 1994.

[56] "Effective elastoplastic behavior of two-phase metal matrix composites: micromechanics and computational aspects" (J.W. Ju and K.H. Tseng), Conference on Recent Developments in Finite Element Analysis, Palo Alto, California, Sept. 20, 1994.

[57] "Effective elastoplastic behavior of two-phase ductile matrix composites: statistical micromechanics and computational aspects" (J.W. Ju and K.H. Tseng), Symposium on Damage Mechanics in Composites, 1994 Intl. Mechanical Engineering Conf. and Expo., Chicago (Hyatt Regency), Illinois, Nov. 10, 1994.

[58] "Effective elastic and elastoplastic behavior of brittle and ductile matrix composites: probabilistic micromechanics and computational aspects" (J.W. Ju), Invited Lecture at the Kajima Technical Research Institute, Tokyo, Japan, Dec. 21, 1994.

[59] "An improved two-dimensional micromechanical theory for brittle solids with randomly located interacting microcracks" (J.W. Ju), Invited Lecture at Department of Civil Engineering, University of Tokyo, Japan, Dec. 22, 1994.

[60] “On micromechanical evolutionary damage models for polycrystalline ceramics” (J.W. Ju), Invited Lecture at Institute of Applied Mechanics, National Taiwan University, Taipei, Taiwan, Dec. 27, 1994.

[61] “Effective elastoplastic behavior of two-phase ductile matrix composites: micro-mechanics and computational aspects” (J.W. Ju and K.H. Tseng), Symposium on Modeling for Materials with Discontinuities and Heterogeneities, 1995 ASCE Engineering Mechanics Conference, Boulder, Colorado, May 22, 1995.

[62] “Experimental investigation of crack interaction and coalescence" (J.W. Ju, H. Deng and M.E. Fourney), Symposium on Damage Mechanics in Engineering Materials, 1995 ASCE Engineering Mechanics Conference, Boulder, Colorado, May 22, 1995.

[63] “Micromechanical formulation of the yielding behavior of elastoplastic ductile matrix containing many randomly distributed voids” (J.W. Ju and K.H. Tseng), Symposium on Micromechanical Modeling and Damage Characterization in Advanced Materials, 1995 ASME Joint Applied Mechanics and Materials Conference, UCLA, Los Angeles, California, June 29, 1995.

[64] “Effective elastoplastic behavior of two-phase ductile matrix composites: return mapping algorithm and finite element implementation” (J.W. Ju and K.H. Tseng), Symposium on Numerical Methods in Structural Mechanics, 1995 ASME Joint Applied Mechanics and Materials Conference, UCLA, Los Angeles, California, June 29, 1995.

[65] “Local interaction among randomly located two fibers and a microcrack” (J.W. Ju), Symposium on Recent Advances in Damage Mechanics, 1995 ASME Joint Applied Mechanics and Materials Conference, UCLA, Los Angeles, California, June 30, 1995.

[66] “Effective elastoplastic behavior of two-phase ductile matrix composites: a micromechanical framework” (J.W. Ju), Invited Lecture at the Department of Mechanical and Aerospace Engineering, Arizona State University, Tempe, Arizona, March 8, 1996.

[67] “Thermo-micromechanical damage modeling of airfield concrete pavement” (J.W. Ju and Y. Zhang), Symposium on Modeling of Materials with Discontinuities and Heterogeneities, 1996 ASCE Engineering Mechanics Conference, Fort Lauderdale, Florida, May 21, 1996.

[68] “Advanced thermo-mechanical damage modeling of airfield concrete pavement” (J.W. Ju and Y. Zhang), Symposium on Failure Mechanisms in Brittle Materials, 1996 Int. Mechanical Engineering Congress and Exposition, Atlanta Hilton and Towers, Atlanta, Georgia, November 20, 1996.

[69] “A thermo-mechanical model for airfield concrete pavement under transient high temperature loadings” (J.W. Ju and Y. Zhang), US Air Force Contractor/Grantee Meeting, Lansdowne Conference Resort, Lansdowne, Virginia, February 3, 1997.

[70] “Thermomechanical constitutive and damage models for airfield concrete pavement under transient high temperature loadings” (J.W. Ju and Y. Zhang), Symposium on Damage Mechanics in Engineering Materials, 1997 Joint ASME/ASCE/SES Mechanics and Materials Conference (McNU97), Northwestern University, Evanston, Illinois, June 30, 1997.

[71] “Micromechanics and effective elastoplastic behavior of metal matrix composites containing aligned spheroidal inhomogeneities” (J.W. Ju and L.Z. Sun), Symposium on Homogenization and Micromechanics of Composites, 1997 Joint ASME/ASCE/SES Mechanics and Materials Conference (McNU97), Northwestern University, Evanston, Illinois, July 2, 1997.

[72] “3-D thermomechanical constitutive and damage models for airfield concrete pavement under transient high temperature loadings” (J.W. Ju and Y. Zhang), Simo Symposium, 4th U.S. National Congress on Computational Mechanics, Hyatt Regency, San Francisco, California, August 6, 1997.

[73] "3-D thermomechanical constitutive and damage models for airfield concrete pavement under transient high temperature loadings" (J.W. Ju and Y. Zhang), Symposium on Failure Predictions in Dynamic Environments: Constitutive Failure Models, 1997 Int. Mechanical Eng. Congress & Expo., Wyndham Anatole Hotel, Dallas, Texas, November 18, 1997.

[74] "Advanced coupled thermo-mechanical damage model for airfield concrete pavement for the next generation Joint Strike Fighters" (J.W. Ju and Y. Zhang), US Air Force Contractor/Grantee Meeting, Bay Point Marriott Resort, Panama City, Florida, January 18, 1998.

[75] "Ultrasonic NDE of the stiffness degradation of concrete subject to environmental attack" (J.W. Ju and L.S. Weng, et al.), 1998 ASNT Spring Conference and Asia-Pacific NDE Conference, Disneyland Hotel, Anaheim, California, March 26, 1998.

[76] "Ultrasonic NDE of the stiffness degradation of concrete subject to environmental attack" (J.W. Ju and L.S. Weng, et al.), 1998 SPIE Int. Symposium on NDE for Aging Infrastructures, San Antonio, Texas, April 1, 1998.

[77] "Coupled thermo-mechanical damage model for airfield concrete pavement for Joint Strike Fighters" (J.W. Ju, H.W. Gong and Y. Zhang), US Air Force Contractor/Grantee Meeting, San Diego Marriott, La Jolla, California, May 17, 1998.

[78] "Thermo-hygro-mechanical damage modeling for airfield concrete pavement at high temperature" (J.W. Ju and Y. Zhang), 1998 ASCE Engineering Mechanics Conference, San Diego Marriott, La Jolla, California, May 18, 1998.

[79] "Elastic stress fields arising from single fiber pullout problem: analytical solutions" (J.W. Ju, L.C. Chou, Y. Nobuta and K. Horikoshi), 1998 ASCE Engineering Mechanics Conference, San Diego Marriott, La Jolla, California, May 19, 1998.

[80] "Micromechanics and elastic moduli of fiber reinforced composites" (J.W. Ju and X.D. Zhang), 1998 ASCE Engineering Mechanics Conference, San Diego Marriott, La Jolla, California, May 19, 1998.

[81] "Elastoplasticity of MMCs with aligned spheroidal particles" (J.W. Ju and L.Z. Sun), 1998 ASCE Engineering Mechanics Conference, San Diego Marriott, La Jolla, California, May 19, 1998.

[82] "Damage assessment of concrete subjected to environmental attack using ultrasonic NDE" (J.W. Ju and L.S. Weng), 1998 QNDE Conference, Snowbird Resort, Utah, July 21, 1998.

[83] "Damage assessment and service life prediction of concrete subject to external sulfate attack" (J.W. Ju, L.S. Weng, S. Mindess and A. Boyd), Quebec Symposium on Sulfate Attack Mechanisms, Hotel Loews-Le Concorde, Quebec City, Quebec, Canada, Oct. 6, 1998.

[84] "Elastic degradation, damage and service life prediction of concrete subject to environmental attack using ultrasonic NDE and tensile testing" (J.W. Ju and L.S. Weng), 1998 ACI Fall Convention, Westin Century Plaza, Los Angeles, California, Oct. 26, 1998.

[85] "Elastic degradation and service life prediction of concrete subject to environmental attack using ultrasonic NDE and tensile testing" (J.W. Ju and L.S. Weng), 1999 SPIE Int. Symposium on Nondestructive Evaluation Techniques for Aging Infrastructure and Manufacturing, Newport Beach Marriott Hotel, Newport Beach, California, March 4, 1999.

[86] "An indirect tension test for concrete" (S. Mindess, A.J. Boyd and J.W. Ju), 1999 ACI Spring Convention, Hyatt Regency Hotel, Chicago, Illinois, March 15, 1999.

[87] "Micromechanical damage models for effective elastoplastic behavior of ductile matrix composites considering evolutionary complete or partial particle debonding" (J.W. Ju), Dept. of Aeronautical Engineering, California Institute of Technology, Pasadena, May 13, 1999.

[88] "Effective elastoplastic behavior of ductile matrix composites containing randomly located aligned elliptical fibers" (J.W. Ju and X.D. Zhang), 5th U.S. National Congress on Computational Mechanics, University of Colorado, Boulder, August 4, 1999.

[89] "Micromechanical damage and constitutive modeling for impact simulation of random fiber composite structures" (J.W. Ju, H.K. Lee and S. Simunovic), 5th U.S. National Congress on Computational Mechanics, University of Colorado, Boulder, August 5, 1999.

[90] "On the effects of exciting frequencies, grain sizes and damage on the ultrasonic non-destructive evaluation of concrete" (J.W. Ju, L.S. Weng and Y. Liu), Fall 1999 American Concrete Institute Convention, Omni Inner Harbor Hotel, Baltimore, Maryland, November 1, 1999.

[91] "The Ji-Ji Taiwan Earthquake of 21 September 1999: Geological, geotechnical and structural engineering observations, and disaster relief" (J.W. Ju, J.P. Stewart and J.W. Wallace), Department of Civil and Environmental Engineering, and Center of East Asian Studies, UCLA, Ackerman Union, November 4, 1999.

[92] "The Ji-Ji Taiwan Earthquake of 21 September 1999: Geological, geotechnical and structural engineering observations, and disaster relief" (J.W. Ju), Conejo Valley Chinese Cultural Association Seminar, Thousand Oaks, November 6, 1999.

[93] "On the effects of exciting frequencies, aggregate sizes and damage on the ultrasonic amplitude attenuation of concrete" (J.W. Ju, L.S. Weng and Y. Liu), 1999 Far East International Conference on Nondestructive Evaluation (FENDT), Kaoshiong, Taiwan, November 8-11, 1999.

[94] "Micromechanics and effective elastoplastic behavior of spheroidal particle reinforced metal matrix composites" (L.Z. Sun and J.W. Ju), 1999 International Mechanical Engineering Conference and Exhibition, American Society of Mechanical Engineers, Opryland Hotel, Nashville, Tennessee, November 15, 1999.

[95] "On the effects of exciting frequencies, aggregate sizes and damage on the ultrasonic non-destructive evaluation of concrete" (J.W. Ju, L.S. Weng and Y. Liu), 1999 International Mechanical Engineering Conference and Exhibition, American Society of Mechanical Engineers, Opryland Hotel, Nashville, Tennessee, November 16, 1999.

[96] "Micromechanical damage models for effective elastoplastic behavior of metal matrix composites considering evolutionary partial particle debonding" (J.W. Ju), Dept. of Civil Engineering and Dept. of Mechanical Engineering, Northwestern University, Evanston, IL, March 3, 2000.

[97] "Effects of exciting frequencies, aggregate sizes and damage in ultrasonic non-destructive evaluation of concrete" (J.W. Ju, L.S. Weng and Y. Liu), 2000 SPIE Int. Symposium on Nondestructive Evaluation of Aging Aircraft, Airports and Aerospace Hardware, Newport Beach Marriott Hotel, California, March 8, 2000.

[98] "Frequency-dependent amplitude attenuation characteristics technique: A novel method for ultrasonic nondestructive testing of concrete" (J.W. Ju and L.S. Weng), Spring 2000 American Concrete Institute Convention, Sheraton Harbor Island Hotel, San Diego, California, March 27 and 28, 2000.

[99] "Effective elastoplastic model of particle reinforced metal matrix composites with interfacial debonding" (L.Z. Sun and J.W. Ju), ASCE 14th Engineering Mechanics Conference, University of Texas, Austin, May 23, 2000.

[100] "Micromechanics and overall elastoplastic responses of discontinuously reinforced metal matrix composites" (L.Z. Sun and J.W. Ju), 7th Annual International Conference on Composites Engineering, Denver, Colorado, July 3, 2000.

[101] "Modeling of impact damage evolution in discontinuously reinforced carbon fiber composites" (H.K. Lee, S. Simunovic and J.W. Ju), Symposium on Fracture and Failure in Solids, International Conference on Computational Engineering Science (ICES2000), West Coast Anaheim Hotel, California, August 24, 2000.

[102] "Incidents of soil liquefaction from the 921 Chi Chi (Taiwan) Earthquake" (J.P. Stewart, D.B. Chu, R.B. Seed, and J.W. Ju, et al.), International Workshop on Annual Commemoration of Chi-Chi Earthquake, Taipei, Taiwan, Sep. 18, 2000.

[103] "Micromechanics and overall mechanical responses of particle-reinforced composites with interfacial damage" (L.Z. Sun and J.W. Ju), 2000 International Mechanical Engineering Conference and Exhibition, American Society of Mechanical Engineers, Orlando, Florida, November 10, 2000.

[104] "Characterization of the Young's modulus of CMOS thin films" (N. Hossain, J.W. Ju, B. Warneke and K.S.J. Pister), ASTM Symposium on Mechanical Properties of Structural Films, Rosen Centre Hotel, Orlando, Florida, November 15, 2000.

[105] "Elastoplastic damage behavior of particle-reinforced composites with evolutionary interfacial debonding" (Lizhi Sun and J.W. Ju), T.H. Lin 90th Birthday Symposium on Mechanics and Materials, ASME-ASCE-SES Joint 2001 Mechanics and Materials Conference, Sheraton San Diego Hotel and Marina, June 27, 2001.

[106] "Micromechanical damage modeling of evolutionary particle cracking in metal matrix composites" (Lizhi Sun and J.W. Ju), Symposium on Experiments and Modeling of Failure of Modern Materials, ASME-ASCE-SES Joint 2001 Mechanics and Materials Conference, Sheraton San Diego Hotel and Marina, June 28, 2001.

[107] "Effective elastoplastic damage model for fiber reinforced metal matrix composites with evolutionary complete fiber debonding" (J.W. Ju and H.N. Ruan), Symposium on Multi-Scale Modeling of Materials, ASME-ASCE-SES Joint 2001 Mechanics and Materials Conference, Sheraton San Diego Hotel and Marina, June 29, 2001.

[108] "Effect of particle cracking on elastoplastic behavior of metal matrix composites" (Lizhi Sun and J.W. Ju), Symposium on Computational Failure Mechanics, 6th US National Congress on Computational Mechanics, Dearborn, Michigan, August 1-4, 2001.

[109] "Micromechanical damage modeling of metal matrix composites" (J.W. Ju), Invited Lecture, Engineering Science Summer Institute, Sandia National Laboratories, Livermore, California, August 16, 2001.

[110] "Micromechanics-based effective elastoplastic and damage modeling of particle-reinforced metal matrix composites" (J.W. Ju), Invited Lecture, Department of Mechanical and Aerospace Engineering, University of California, San Diego, March 4, 2002.

[111] "Reinforced concrete and steel frame buildings subject to blast effects and progressive collapse due to terrorist attack" (J.W. Ju), Invited Presentation, RAND Corp. and HSSEAS Meeting on Anti-Terrorism Technologies, The Rice Room, University of California, Los Angeles, May 20, 2002.

[112] "Effective elastoplastic damage model for fiber-reinforced metal matrix composites with evolutionary complete fiber debonding" (J.W. Ju and H.N. Ruan), Symposium on Micromechanics of Heterogeneous Materials, 15th ASCE Engineering Mechanics Conference, Columbia University, New York, June 3, 2002.

[113] "Influence of particle cracking on plastic behavior of discontinuously reinforced composites using micromechanics approach" (Lizhi Sun, H.T. Liu and J.W. Ju), Symposium on Micromechanics of Heterogeneous Materials, 15th ASCE Engineering Mechanics Conference, Columbia University, New York, June 3, 2002.

[114] "Micromechanical modeling of particle debonding process and its influence on the effective elastoplastic behavior of composites" (Lizhi Sun, H.T. Liu and J.W. Ju), Symposium on Plasticity and Damage Mechanics, 14th U.S. National Congress on Theoretical and Applied Mechanics, Virginia Tech, Blacksburg, Virginia, June 27, 2002.

[115] "A micromechanical damage model for MMCs with evolutionary interfacial arc microcracks" (J.W. Ju and Lizhi Sun), Symposium on Recent Advances in Damage Mechanics, 2002 International Mechanical Engineering Congress and Exposition, New Orleans, Nov. 20, 2002.

[116] "Micromechanics-based elastoplastic and interfacial damage modeling of particle reinforced composites" (Lizhi Sun, H.T. Liu and J.W. Ju), Symposium on Micromechanics-based Materials Modeling and Simulation, 2003 ASME Mechanics and Materials Conference, Scottsdale, Arizona, June 19, 2003.

[117] "Micromechanical evolutionary elastoplastic damage model for fiber reinforced metal matrix composites with fiber debonding" (J.W. Ju, H.N. Ruan, and Y.F. Ko), Symposium on Mathematical and Computational Foundation on Multiscale Modeling, Second International Conference on Multi-scale Materials Modeling, UCLA, Los Angeles, CA, Oct. 13, 2004.

[118] ACI 446 Technical Committee, Fracture Mechanics of Concrete, Chairman of committee meeting held on Oct. 25, 2004, at San Francisco Hilton Hotel, in connection with Fall 2004 American Concrete Institute Convention.

[119] "Micromechanical evolutionary elastoplastic damage model for fiber reinforced metal matrix composites with fiber debonding" (J.W. Ju, Y.F. Ko and H.N. Ruan), Symposium on Recent Advances in Microstructural Mechanics and Damage Mechanics of Materials, 2004 ASME Winter Meeting (IMECE 2004 Conference), Anaheim Hilton Hotel, Anaheim, CA, November 18, 2004.

[120] "Micromechanics-based elastoplastic and damage modeling of particle reinforced composites" (H.T. Liu, L.Z. Sun, and J.W. Ju), Symposium on Recent Advances in Microstructural Mechanics and Damage Mechanics of Materials, 2004 ASME Winter Meeting (IMECE 2004 Conference), Anaheim Hilton Hotel, Anaheim, CA, November 19, 2004.

[121] ACI 446 Technical Committee, Fracture Mechanics of Concrete, Chairman of committee meeting held on April 18, 2005, at New York Hilton Hotel, in connection with Spring 2005 American Concrete Institute Convention.

[122] "Effective elastoplastic damage model for fiber reinforced metal matrix composites with evolutionary partial fiber debonding" (J.W. Ju, Y.F. Ko, and H.N. Ruan), Symposium on Mathematical and Computational Foundations of Multiscale Modeling, 2005 8th U.S. National Congress on Computational Mechanics, Austin Convention Center, Austin, Texas, July 26, 2005.

[123] "Novel strain-energy based hybrid isotropic and anisotropic elastoplastic damage and healing models for soils" (J.W. Ju), Invited Lecture, Department of Civil and Environmental Engineering, University of California, Irvine, November 17, 2005.

[124] "Novel strain-energy based hybrid isotropic and anisotropic elastoplastic damage and healing models for soils" (J.W. Ju, K-Y Yuan and Anny Kuo), Session A (Improving the Performance and Reliability of Infrastructure), 2006 UCLA Engineering Research Review, May 5, 2006.

[125] "Novel strain-energy based hybrid isotropic elastoplastic damage and healing models for soils" (J.W. Ju, K-Y Yuan and Anny Kuo), in the T.H. Lin 95th Birthday Symposium on Computational Mechanics and Materials, 2006 World Congress on Computational Mechanics, Hyatt Regency Century Plaza Hotel, Los Angeles, CA, July 17, 2006.

[126] "Elastoplastic modeling of progressive interfacial debonding for fiber reinforced metal matrix composites" (J.W. Ju and Y.F. Ko), in the Symposium on Physically Based Constitutive Models for

Metals, 2006 World Congress on Computational Mechanics, Hyatt Century Plaza Hotel, Los Angeles, CA, July 18, 2006.

[127] "Investigation of the crack-dislocation interaction effects and fatigue crack growth model" (J.W. Ju and Sejin Oh), in the Symposium on Nanomechanics and Nanocomposites, 2006 World Congress on Computational Mechanics, Hyatt Century Plaza Hotel, Los Angeles, CA, July 18, 2006.

[128] "Persistence length control of the polyelectrolyte layer-by-layer self-assembly on carbon nanotubes" (A. Noy, Jay Huang, A. Artyukhin, Y. Wang, J.W. Ju and P. Stroeve), in the Symposium on Nanomechanics and Nanocomposites, 2006 World Congress on Computational Mechanics, Hyatt Century Plaza Hotel, Los Angeles, CA, July 18, 2006.

[129] "A three-dimensional stress analysis of a penny-shaped crack interacting with a spherical inclusion" (H.K. Lee and J.W. Ju), in the T.H. Lin 95th Birthday Symposium on Computational Mechanics and Materials, 2006 World Congress on Computational Mechanics, Hyatt Regency Century Plaza Hotel, Los Angeles, CA, July 18, 2006.

[130] "Introduction to damage mechanics, and elastoplastic micromechanical modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), **Invited Plenary College-wide Lecture**, College of Engineering, University of Michigan, Dearborn, October 27, 2006.

[131] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Construction Engineering, National Taiwan University of Science and Technology, Taipei, November 22, 2006.

[132] "Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Civil Engineering and Institute of Applied Mechanics, National Taiwan University, Taipei, November 23, 2006.

[133] "On micromechanical formulation to accommodate the second-order perturbation due to interactions of microcracks and inclusions in brittle composites" (H.K. Lee and J.W. Ju), in the International Conference on Computational and Experimental Engineering Sciences (ICCES-07), Miami Beach Resort, Miami, Florida, January 3-8, 2007.

[134] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Civil Engineering, National Taipei University of Technology, Taipei, March 28, 2007.

[135] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju and K. Yanase), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 18th ASCE Engineering Mechanics Conference, Virginia Tech, Blacksburg, June 5, 2007.

[136] "Effect of progressive interfacial debonding on mechanical behavior of particle-reinforced composites", (H.T. Liu, L.Z. Sun and J.W. Ju), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 18th ASCE Engineering Mechanics Conference, Virginia Tech, Blacksburg, June 5, 2007.

[137] "Hybrid coupled elastoplastic damage and healing formulations for geomaterials during earth moving processes" (J.W. Ju, K.Y. Yuan and A.W. Kuo), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 18th ASCE Engineering Mechanics Conference, Virginia Tech, Blacksburg, June 6, 2007.

[138] "Hybrid coupled elastoplastic damage and healing formulations for geomaterials during earth moving processes" (J.W. Ju, K.Y. Yuan and A.W. Kuo), Symposium on Numerical Techniques for

the Modeling of Failure in Solids, 9thU.S. National Congress on Computational Mechanics, Hyatt Regency San Francisco, July24, 2007.

[139] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju and K. Yanase), **Keynote Speaker**, Symposium on Multiscale Damage and Failure Mechanics, 9thU.S. National Congress on Computational Mechanics, Hyatt Regency San Francisco, July25, 2007.

[140] "Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stress" (J.W. Ju and K. Yanase), **Semi-Plenary Speaker**, International Symposium on Computational Mechanics, Beijing, China, July 30, 2007.

[141] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China, August 2, 2007.

[142] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju), Invited Lecture, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China, August 3, 2007.

[143] "Hybrid coupled elastoplastic damage and healing models for geomaterials during earth moving processes" (J.W. Ju), Invited Lecture, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China, August 6, 2007.

[144] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Engineering Mechanics, Dalian University of Technology, Dalian, China, August 7, 2007.

[145] "3-D micromechanical elastoplastic damage modeling of particle reinforced composites with interfacial arc microcracks" (J.W. Ju), Invited Lecture, Institute of Mechanics, Chinese Academy of Sciences, Beijing, China, August 9, 2007.

[146] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Civil Engineering Division, Samsung Corp., Seoul, South Korea, August 14, 2007.

[147] "Hybrid coupled elastoplastic damage and healing models for geomaterials during earth moving processes" (J.W. Ju), Invited Lecture, Civil Engineering Division, Samsung Corp., Seoul, South Korea, August 14, 2007.

[148] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Civil and Environmental Engineering, Yonsei University, Seoul, South Korea, August 16, 2007.

[149] "Introduction to damage mechanics, and Micromechanical elastoplastic damage modeling of progressive interfacial debonding for fiber-reinforced composites", (J.W. Ju), Invited Lecture, Department of Civil and Environmental Engineering, Korean Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea, August 17, 2007.

[150] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju and K. Yanase), **Session Keynote**, Symposium on Recent Advances in Damage and Fracture of Engineering Materials, 2007 International Mechanical Engineering Conference and Exhibition, Washington State Convention Center and Sheraton Seattle Hotel, Seattle, November 15, 2007.

[151] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju), Invited Lecture, Department of Civil Engineering, Johns Hopkins University, Baltimore, Maryland, February 5, 2008.

[152] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju), Invited Lecture, College of Engineering, University of Delaware, March 3, 2008.

[153] "Macro-element modeling of steel fiber-reinforced concrete" (J.W. Ju and F. Tehrani), Invited presentation, in Session on "Multi-Scale Description of Concrete Performance", sponsored by ACI Committee 236 (Concrete Material Science) in the Spring 2008 American Concrete Institute Conference, Hyatt Century Plaza Hotel, Los Angeles, March 30, 2008.

[154] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, Department of Civil Engineering, National Central University, Taiwan, May 6, 2008.

[155] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, Department of Civil Engineering, National Taiwan University, May 8, 2008.

[156] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju, K. Yanase and L.Z. Sun), invited speaker, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, 2008 Inaugural ASCE Engineering Mechanics Institute Conference (EM08), University of Minnesota, Minneapolis, May 18-21, 2008.

[157] "Introduction to damage mechanics, and applications to materials and structures", (J.W. Ju), Invited Lecture, Technology Forum (Annual Research Review), School of Engineering and Applied Science, UCLA, May 27, 2008.

[158] "Elastoplastic micromechanical damage mechanics for composites with progressive partial fiber debonding and thermal residual stress" (J.W. Ju and K. Yanase), **Keynote Speaker**, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, Joint IACM – IUTAM Symposium, 2008 World Congress on Computational Mechanics VIII, Lido Convention Center, Venice, Italy, July 3, 2008.

[159] "Interfacial debonding and mechanical behavior of particle-reinforced composites" (H.T. Liu, Lizhi Sun, and J.W. Ju), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, Joint IACM – IUTAM Symposium, 2008 World Congress on Computational Mechanics VIII, Lido Convention Center, Venice, Italy, July 4, 2008.

[160] "Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, Department of Aerospace Engineering, Texas A&M University, College Station, TX, February 12, 2009.

[161] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, Department of Civil Engineering, Hong Kong University of Science and Technology, Hong Kong, March 2, 2009.

[162] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, Department of Building and Construction, City University of Hong Kong, March 4, 2009.

[163] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju), Invited Lecture, Laboratory of Mechanics and Technology (LMT), ENS Cachan/CNRS/Universite Paris VI, Cachan (Paris), France, March 31, 2009.

[164] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju), Invited Lecture, Department of Construction Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan, April 28, 2009.

[165] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju), Invited Lecture, Department of Civil Engineering, National Taiwan University, Taipei, Taiwan, April 29, 2009.

[166] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju and K. Yanase, et al.), **Keynote Speaker**, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 10th U.S. National Congress on Computational Mechanics, Greater Columbus Convention Center, Columbus, Ohio, July 18, 2009.

[167] "Size-dependent probabilistic micromechanical damage mechanics for particle-reinforced metal matrix composites", (J.W. Ju and K. Yanase), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 10th U.S. National Congress on Computational Mechanics, Greater Columbus Convention Center, Columbus, Ohio, July 18, 2009.

[168] "Modeling of capillary pressure build-up and cracking in early age concrete", (Volker Slowik and J.W. Ju), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 10th U.S. National Congress on Computational Mechanics, Greater Columbus Convention Center, Columbus, Ohio, July 18, 2009.

[169] "Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stresses", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering and Architecture, Guangxi University, Nanning, China, September 15, 2009.

[170] "Applications of moment curvature analysis and fracture mechanics to flexural steel fiber reinforced concrete sections", (F.M. Tehrani and J.W. Ju), Session on Application of Fracture Mechanics to Concrete Structures and Composites, the ACI Fall Convention, New Orleans Convention Center, New Orleans, November 8, 2009.

[171] "Fiber pullout modeling and fracture toughness of steel fiber reinforced cementitious composites", (J.W. Ju and P. Suwatnodom), Session on Application of Fracture Mechanics to Concrete Structures and Composites, the ACI Fall Convention, New Orleans Convention Center, New Orleans, November 8, 2009.

[172] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju and K. Yanase), **Plenary Speaker**, the 2nd International Symposium on Computational Mechanics, and the 12th International Conference on the Enhancement and Promotion of Computational Methods in Engineering and Science, Hong Kong (Holiday Inn Gold Mile Hotel) and Macau (MGM Grand Hotel), November 30, 2009.

[173] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju), Invited Lecture, Department of Building and Construction, City University of Hong Kong, December 4, 2009.

[174] "Introduction to damage mechanics, and Elastoplastic micromechanical damage mechanics for composites with progressive fiber debonding and thermal residual stresses", (J.W. Ju), Invited Lecture, College of Civil Engineering, Tongji University, Shanghai, December 7, 2009.

[175] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, April 9, 2010.

[176] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju), Invited Lecture, Department of Civil Engineering, KAIST, Korea, April 12, 2010.

[177] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, April 16, 2010.

[178] "Probabilistic micromechanics-based damage mechanics and homogenization of composite materials for high-reliability and life expectancy", (J.W. Ju), **Invited Chair Professor Lecture**, School of Civil Engineering and Architecture, Guangxi University, Nanning, May 25, 2010.

[179] "Fiber pullout modeling and fracture toughness of steel fiber reinforced cementitious composites", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, June 26, 2010.

[180] "Hybrid coupled elastoplastic damage and healing models for geomaterials during earth moving processes", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, July 2, 2010.

[181] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju and K. Yanase), **Keynote lecture**, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, Sydney Convention Center, Sydney, Australia, July 20, 2010.

[182] "The modified Eshelby tensor and effective properties of spherical particle reinforced composite materials", (K. Yanase and J.W. Ju), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, 9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics, Sydney Convention Center, Sydney, Australia, July 20, 2010.

[183] "Toughening behaviors of unidirectional fibrous composites", (K. Yanase and J.W. Ju), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 2010 ASCE Engineering Mechanics Conference, USC campus, Los Angeles, CA, August 9, 2010.

[184] "Multi-level elastoplastic damage mechanics for elliptical fiber reinforced composites with evolutionary fiber debonding", (J.W. Ju and Y-F Ko), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 2010 ASCE Engineering Mechanics Conference, USC campus, Los Angeles, CA, August 9, 2010.

[185] "Fiber pullout modeling and fracture energy of steel fiber reinforced cementitious composites", (J.W. Ju and P. Suwatnodom), Symposium on Multiscale Behavior of Damage and Failure Mechanics, 2010 ASCE Engineering Mechanics Conference, USC campus, Los Angeles, CA, August 9, 2010.

[186] "The modified Eshelby tensor and effective properties of particle reinforced composite materials", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, September 10, 2010.

[187] "Size-dependent probabilistic micromechanical damage mechanics for particle-reinforced MMCs", (J.W. Ju), Invited Lecture, Pratt & Whitney Rocketdyne Inc., Canoga Park, Los Angeles, CA, February 18, 2011.

[188] "Size-dependent probabilistic damage micromechanics for particle-reinforced metal matrix composites", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Guangxi University, Nanning, China, June 21, 2011.

[189] "Fiber pullout modeling and fracture toughness of steel fiber reinforced cementitious composites", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Guangxi University, Nanning, China, June 23, 2011.

[190] "Toughening behavior of unidirectional fiber reinforced composites containing a crack-like flaw", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering, Tongji University, Shanghai, June 30, 2011.

[191] "Size-dependent probabilistic damage micromechanics and toughening mechanism for particle or fiber reinforced composites", (J.W. Ju and K. Yanase), **Keynote lecture**, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 11th U.S. National Congress on Computational Mechanics, Hilton Minneapolis, Minneapolis, July 25, 2011.

[192] "Micromechanics and viscoelastic behavior of particle reinforced composites with damaged interfaces", (K. Yanase, J.W. Ju and K.Y Yuan), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 11th U.S. National Congress on Computational Mechanics, Hilton Minneapolis, Minneapolis, July 25, 2011.

[193] "Effect of fiber cracking on elastoplastic behavior of fiber reinforced metal matrix composites", (Y.F. Ko and J.W. Ju), Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 11th U.S. National Congress on Computational Mechanics, Hilton Minneapolis, Minneapolis, July 25, 2011.

[194] "Hybrid coupled elastoplastic damage and healing models for geomaterials during earth moving processes", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering and Architecture, Guangxi University, Nanning, September 14, 2011.

[195] "The modified Eshelby tensor and effective properties of particle reinforced composite materials", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering and Architecture, Guangxi University, Nanning, September 19, 2011.

[196] "Hybrid coupled elastoplastic damage and healing models for geomaterials during earth moving processes", (J.W. Ju), **Invited Chair Professor Guest Lecture**, College of Civil Engineering, Tongji University, Shanghai, September 21, 2011.

[197] "Size-dependent probabilistic damage micromechanics and toughening mechanism for particle or fiber reinforced composites", (J.W. Ju and K. Yanase), **Semi-plenary Lecture**, the 3rd International Symposium on Computational Mechanics and the 2nd International Symposium on Computational Structural Engineering, National Taiwan University, Taipei, December 5, 2011.

[198] "Effect of fiber cracking on elastoplastic behavior of fiber reinforced metal matrix composites", (J.W. Ju and Y.F. Ko), Invited Talk, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, the 3rd International Symposium on Computational Mechanics and the 2nd International Symposium on Computational Structural Engineering, National Taiwan University, Taipei, December 6, 2011.

[199] "Size-dependent probabilistic damage micromechanics and toughening behavior of particle/fiber reinforced composites", (J.W. Ju), Invited Lecture, SEMM Program, Department of Civil and Environmental Engineering, University of California, Berkeley, February 13, 2012.

[200] "Numerical simulations of mechanical properties of innovative pothole patching materials featuring high toughness, low viscosity nano-molecular resins", (K.Y. Yuan, W. Yuan, J.W. Ju, J.M. Yang,

W. Kao, and L. Carlson), Invited Talk, 2012 SPIE Smart Structures/NDE Conference, Town & Country Resort and Convention Center, San Diego, California, March 14, 2012.

[201] "Multi-level micromechanical modeling of intelligent self-healing mechanisms and effective moduli of concrete and cementitious composites", (J.W. Ju et al.), **Keynote speaker**, Symposium on "Fundamental Theory for the Performance Evolution and Sensing Control of Urban Metro Structures", the 2012 International Conference on Computational and Experimental Engineering and Sciences (ICCES'12), Minoa Palace Resort, Crete, Greece, May 1, 2012.

[202] "Size-dependent probabilistic damage micromechanics and toughening mechanism for particle or fiber reinforced composites", (J.W. Ju and K. Yanase), **Plenary Lecture**, the First International Conference on Computational Mechanics (ICDM-1), held at Serbian Commerce of Engineers, Belgrade, Serbia, on June 26, 2012.

[203] "Size-dependent probabilistic damage micromechanics and toughening mechanism for particle or fiber reinforced composites", (J.W. Ju), Invited Lecture, Department of Civil and Environmental Engineering, Hong Kong University of Science and Technology, August 27, 2012.

[204] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (J.W. Ju), National 1000 Talents Program **Plenary Lecture**, College of Civil Engineering, Tongji University, March 13, 2013.

[205] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (K.Y. Yuan, W. Yuan, J.W. Ju, J.M. Yang, W. Kao, and L. Carlson), Invited Talk, 2013 SPIE Smart Structures/NDE Conference, Town & Country Resort and Convention Center, San Diego, California, March 13, 2013.

[206] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (J.W. Ju), **Invited Chair Professor Lecture**, College of Civil Engineering and Architecture, Guangxi University, March 25, 2013.

[207] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (J.W. Ju, K.Y. Yuan, et al.), **Keynote lecture**, 2013 ICCES Conference, Hilton Bellevue, Seattle, Washington, May 25, 2013.

[208] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (J.W. Ju, K.Y. Yuan, et al.), **Plenary Speaker**, 2013 International Workshop on Life-Cycle Performance of Concrete Structures, Hong Kong Polytechnic University, Hong Kong, June 15, 2013.

[209] "Mechanical properties of innovative pothole patching materials featuring high-toughness low-viscosity nano-molecular resins", (J.W. Ju, K.Y. Yuan, et al.), **Plenary Speaker**, the Fourth National Symposium on Tunnel, Underground Space, and Transportation Infrastructures, Fuyuan Ambassador Hotel, Enshi, Hubei, China, August 1, 2013.

[210] "Effective transverse elastic moduli of three-phase hybrid fiber-reinforced composites with randomly located and interacting aligned circular fibers of distinct elastic properties and sizes", (Y.F. Ko and J.W. Ju), Invited Talk, Symposium on Multiscale Damage and Failure Mechanics of Engineering Materials, 2013 ASCE EMI Engineering Mechanics Conference, Northwestern University, Evanston, Illinois, August 5, 2013.

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B. *Books and Journals Edited*

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D. *Papers in Professional Society Magazines*

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