

Chung-Hao (C.H.) Lee, Ph.D.

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The University of Oklahoma
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August 2016

EDUCATION

Ph.D. Civil Engineering, December 2011, University of California, Los Angeles (UCLA), Los Angeles, CA
M.S. Civil Engineering, June 2005, National Taiwan University (NTU), Taipei Taiwan
B.S. Civil Engineering, June 2003, National Taiwan University, Taipei Taiwan

PROFESSIONAL EXPERIENCE

08/2016~Present Assistant Professor, School of Aerospace and Mechanical Engineering, The University of Oklahoma, Norman, OK
02/2012~07/2016 ICES Postdoctoral Fellow, Institute for Computational Engineering and Sciences (ICES), The University of Texas at Austin, Austin, TX
09/2015~01/2016 Lecturer, Department of Aerospace Engineering and Engineering Mechanics, The University of Texas at Austin, Austin, TX
01/2014~12/2015 American Heart Association (AHA) Postdoctoral Fellow, The University of Texas at Austin (UT Austin), Austin, TX
09/2007~12/2011 Research Assistant, University of California, Los Angeles, Los Angeles, CA
09/2003~06/2005 Research Assistant, National Taiwan University, Taipei, Taiwan

RESEARCH INTERESTS

1. Multiscale biomechanical modeling of the cardiovascular systems – heart valves
2. Characterization of structural and mechanical properties of soft biological tissues
3. Patient-specific modeling for improved diagnosis and prophylactic disease management
4. Cell mechanics and mechanobiology linking with collagen biosynthesis and tissue growth & remodeling (G&R)
5. Advanced finite element and meshfree methods for image-based computational biomechanics

HONORS AND AWARDS

1. American Heart Association (AHA) Postdoctoral Fellowship, 01/2014–12/2015
2. UT Austin Institute for Computational Engineering and Sciences (ICES) Postdoctoral Fellowship, 02/2012–12/2013

3. First Place Winner for the Dimitris N. Chorafas Foundation Awards, 2011
4. UCLA Dissertation Year Fellowship, 09/2010–08/2011
5. Travel Award from the 1st Global Congress on NanoEngineering for Medicine and Biology (NEMB 2010), 2010
6. Travel Award from the 10th U.S. National Congress on Computational Mechanics, 2009
7. UCLA Chancellor’s Prize Summer Mentorship, 2008 and 2009
8. UCLA Civil Engineering Fellowship, 2007, 2008 and 2009
9. An Honorary Member of the Phi Tau Phi Scholastic Honor Society at National Taiwan University, 2005
10. Story featured on UT Austin ICES website “*Models of mitral valve biomechanics & cell mechanobiology seek to help surgery success rates,*” 11/12/2015
11. Cited in International Science Grid This Week (isgtw) “*Developing models to predict long-term effects of heart repair,*” 04/16/2014
12. Story featured in Reporting Texas “*Researchers work to see the heart more clearly and save lives,*” 12/03/2013

EXTERNAL FUNDING

1. PI, “*Computer-assisted management and treatment of functional tricuspid regurgitation*”, American Heart Association (AHA) Scientist Development Grant (SDG), \$307,049, 07/01/2016–06/30/2020 (100%)
2. PI, “*A novel high-fidelity micro-anatomically accurate model for the improved design of mitral valve repair and remodeling*”, American Heart Association (AHA) Postdoctoral Fellowship, \$95,704, 01/01/2014–12/31/2015 (100%)

INTERNAL FUNDING AND AWARDS

1. PI, “*A novel computational framework for simulations of functional heart valves*”, UT Austin Institute for Computational Engineering and Sciences (ICES) Postdoctoral Fellowship, \$65,796, 02/01/2012–12/31/2013 (100%)
2. PI, “*Atomistic to Continuum Modeling of DNA Molecules*”, UCLA Dissertation Year Fellowship, \$30,988, 09/01/2010–08/31/2011 (100%)

PUBLICATIONS

A. Journal Publications Under Review

1. Lee, C. H., Zhang, W., Feaver, K., Gorman, R. C., Gorman, III, J. H., and Sacks, M.S., “On the *in vivo* function of the mitral heart valve leaflet: insight into tissue-interstitial cell biomechanical coupling,” *Biomechanical Modeling and Mechanobiology*, **submitted in August 2016**, under review
2. Feng, Y., Lee, C. H.*, Sun, L., Ji, S., and Zhao, X., “Characterizing white matter tissue in large strain via asymmetric indentation and inverse finite element modeling,” *Journal of the Mechanical Behavior of Biomedical Materials*, **re-submitted in August 2016**, under review
3. Rego, B. V., Wells, S. M., Lee, C. H., and Sacks, M. S., “Mitral valve remodeling during pregnancy: insights into cell-mediated recovery of tissue homeostasis,” *Journal of the Royal Society Interface*, **submitted in September 2016**, under review

* Equal Contribution

4. Ayoub, S., Lee, C. H., Driesbaugh, K. H., Anselmo, W., Hughes, C. T., Ferrari, G., and Sacks, M. S., "Linking mitral valve interstitial cell deformation to Biosynthetic response: implications for mitral valve repair," *Proceedings of the National Academy of Science*, **submitted in September 2016**, under review

B. Peer-Reviewed Journal Publications

1. Lee, C. H., Rabbah, J. P., Yoganathan, A. P., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., "On the effect of leaflet microstructure and constitutive model on the closing behavior of the mitral valve." *Biomechanical Modeling and Mechanobiology*, 14(6): 1281-1302, 2015
2. Lee, C. H., Zhang, W., Carruthers, C. A., Sacks, J. I., and Sacks, M. S., "On the presence of affine fiber and fibril kinematics in the mitral valve anterior leaflet under simulated physiological loading." *Biophysical Journal*, 108(8): 2074-2087, 2015
3. Lee, C. H., Carruthers, C. A., Ayoub, S., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., "Quantification and simulation of the layer-specific mitral valve interstitial cell deformations under physiological loading." *Journal of Theoretical Biology*, 373: 26-39, 2015
4. Khalighi, A. H., Drach, A., ter Huurne, F. M., Lee, C. H., Bloodworth, C. H., Pierce, E. L., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., "A comprehensive framework for the characterization of the complete mitral valve geometry for the development of a population-averaged model." *Lecture Notes in Computer Science*, 9126: 164-171, 2015
5. Zhang, W., Feng, Y., Lee, C. H., Billiar, K. L., and Sacks, M. S., "A generalized method for the analysis of planar biaxial mechanical data using tethered testing configurations." *Journal of Biomechanical Engineering*, 137: 064501-1-13, 2015
6. Drach, A., Khalighi, A. H., ter Huurne, F. M., Lee, C. H., Bloodworth, C. H., Pierce, E. L., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., "Population-averaged geometric model of mitral valve from patient-specific imaging data." *Journal of Medical Devices*, 9(3): 030952-1-3, 2015
7. Chi, S. W., Lee, C. H., Guan, P. C., and Chen, J. S., "A level set enhanced natural kernel contact algorithm for impact and penetration modeling." *International Journal for Numerical Methods in Engineering*, 102: 839-866, 2015
8. Lee, C. H., Amini, R., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., "An inverse modeling approach for stress estimation in mitral valve anterior leaflet valvuloplasty for in-vivo valvular biomaterial assessment." *Journal of Biomechanics*, 47(9): 2055-2063, 2014
9. Lee, C. H., Oomen, P. J. A., Rabbah, J. P., Yoganathan, A. P., Gorman, R. C., Gorman, III, J. H., Amini, R., and Sacks, M. S., "A high-fidelity and micro-anatomically accurate 3D finite element model for simulations of functional mitral valve." *Lecture Notes in Computer Science*, 7945: 416-424, 2013
10. Aggarwal, A., Aguilar, V. S., Lee, C. H., Ferrari, G., Gorman, III, J. H., Gorman, R. C., and Sacks, M. S., "Patient-specific modeling of heart valves: from images to simulation." *Lecture Notes in Computer Science*, 7945: 141-149, 2013
11. Lee, C. H., and Chen, J. S., "Proper orthogonal decomposition-based model order reduction via radial basis functions for molecular dynamics systems." *International Journal for Numerical Methods in Engineering*, 96: 599-627, 2013
12. Lee, C. H., and Chen, J. S., "RBF-POD reduced-order modeling of DNA molecules under stretching and bending." *Interaction. Multiscale Mechanics*, 6(4): 395-409, 2013
13. Teng, H., Lee, C. H., and Chen, J. S., "On the continuum formulation for modeling DNA loop formation." *Interaction. Multiscale Mechanics*, 4: 219-237, 2012
14. Leu, L. J., and Lee, C. H., "Optimal design system using finite element package as the analysis engine." *Advances in Structural Engineering*, 10: 713-723, 2007

C. Book Chapters

1. Lee, C. H., and Sacks, M.S., “Fiber to organs: how collagen fiber properties modulate the closing behavior of the mitral valve.” *Structure-Based Mechanics of Tissues and Organs*, Springer, pgs. 365-381, 2016
2. Lee, C. H., Amini, R., Sakamoto, Y., Carruthers, C.A., Gorman, R.C., Gorman, III, J. H., and Sacks, M.S., “Mitral valve: a computational framework.” *Multiscale Modeling in Biomechanics and Mechanobiology*, Springer, pgs. 223-256, 2015
3. Chen, J. S., Lee, C. H., Teng, H., and Wang, H., “Atomistic to continuum modeling of DNA molecules.” *Advances in Soft Matter Mechanics*, Springer, pgs. 1-53, 2012

D. Technical Reports

1. Chi, S. W., Lee, C. H., Chen, J. S., Roth, M. J., and Slawson, T. R., “User’s Manual for Nonlinear Meshfree Analysis Program (NMAP) Version 1.0,” *Technical Report*, U.S. Army Corps of Engineer Research and Development Center (ERDC/GSL TR-12-36), 2012
2. Chen, J. S., Chi, S. W., Lee, C. H., Lin, S. P., Marodon, C., and Roth, M. J., “A Multi-scale Meshfree Approach for Modeling Fragment Penetration into Ultra High Strength Concrete,” *Technical Report*, U.S. Army Corps of Engineer Research and Development Center (ERDC/GSL TR-11-35), 2011

E. Articles/Presentations in Referred Conference Proceedings

1. Lee, C. H., Feaver, K., Zhang, W., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Interrelationships between in vivo tissue stress and interstitial cell deformations in the mitral valve anterior leaflet in normal and surgically modified states.*” BMES 2016 Annual Meeting, Minneapolis, MN, October 5-8, 2016
2. Ayoub, S., Lee, C. H., Driesbaugh, K., Anselmo, W., Hughes, C. T., Ferrari, G., and Sacks, M. S., “*Linking cell deformation to biosynthetic response: implications for mitral valve repair.*” BMES 2016 Annual Meeting, Minneapolis, MN, October 5-8, 2016
3. Lee, C. H., Feaver, K., Zhang, W., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Inverse modeling based estimation of in-vivo stresses and their relation to simulated layer-specific interstitial cell deformations in the mitral valve.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C 2016), National Harbor, MD, June 29-July 2, 2016
4. Feng, Y., Lee, C. H., Sun, L., and Fu, S., “*Characterization of white matter using asymmetric indentation and inverse modeling in large strain.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C 2016), National Harbor, MD, June 29-July 2, 2016
5. Ayoub, S., Lee, C. H., Hughes, C. T., Ferrari, G., and Sacks, M. S., “*Linking mitral valve interstitial cell deformation to biosynthetic response: implications for mitral valve repair.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C 2016), National Harbor, MD, June 29-July 2, 2016
6. Feng, Y., Lee, C. H., Sun, L., Okamoto, R. J., and Ji, S., “*Automated estimation of elastic material parameters of a transversely isotropic material using asymmetric indentation and inverse finite element analysis.*” ASME 2015 International Mechanical Engineering Congress and Exposition (ASME 2015 IMECE), Houston, TX, November 13-19, 2015
7. Lee, C. H., Feaver, K., Zhang, W., and Sacks, M. S., “*Inverse models for characterization of the in-vivo valvular mechanical behaviors.*” 52nd Society of Engineering Science Annual Technical Meeting, College Stations, TX, October 26-28, 2015
8. Ayoub, S., Khalighi, A. H., Lee, C. H., and Sacks, M. S., “*The micro-geometric environment of mitral valve interstitial cells under physiological loading.*” 52nd Society of Engineering Science Annual Technical Meeting, College Stations, TX, October 26-28, 2015

9. Lee, C. H., Feaver, K., Zhang, W., and Sacks, M. S., “*Estimation of the mitral valve in vivo stresses in the normal and surgically modified states.*” BMES 2015 Annual Meeting, Tampa, FL, October 7-10, 2015
10. Khalighi, A. H., Drach, A., Lee, C. H., Bloodworth, C. H., Pierce, E. L., Jensen, M. O., Yoganathan, A. P., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Development of a population-averaged model of the complete mitral valve geometry.*” BMES 2015 Annual Meeting, Tampa, FL, October 7-10, 2015
11. Lee, C. H., and Sacks, M. S., “*On the effect of leaflet microstructure and constitutive model on the closing behavior of the mitral valve.*” 13th U.S. National Congress on Computational Mechanics, San Diego, CA, July 26-30, 2015
12. Khalighi, A. H., Drach, A., ter Huurne, F. M., Lee, C. H., Bloodworth, C. H., Pierce, E. L., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., “*A comprehensive framework for the characterization of the complete mitral valve geometry for the development of a population-averaged model.*” 8th International Conference on Functional Imaging and Modeling of the Heart (FIMH2015), Maastricht, the Netherlands, June 25-27, 2015
13. Lee, C. H., Bloodworth, C. H., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., “*Effects of leaflet microstructure and constitutive model on the closing behavior of the mitral valve.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB³C2015), Snowbird, UT, June 17-20, 2015
14. Lee, C. H., Carruthers, C. A., Ayoub, S., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Layer-specific mitral valve interstitial cell deformations under physiological loading.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB³C2015), Snowbird, UT, June 17-20, 2015
15. Ayoub, S., Khalighi, A. H., Lee, C. H., and Sacks, M. S., “*Microgeometry and microenvironment of mitral valve interstitial cells under physiological loads.*” The Summer Biomechanics, Bioengineering and Biotransport Conference (SB³C2015), Snowbird, UT, June 17-20, 2015
16. Lee, C. H., Bloodworth, C. H., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., “*Predictive computational simulations of the functioning mitral valve.*” BMES/FDA Frontiers in Medical Devices Conference, Washington, DC, May 18-20, 2015
17. Khalighi, A. H., Drach, A., ter Huurne, F. M., Lee, C. H., Bloodworth, C. H., Pierce E. L., Jensen, M. O., Yoganathan, A. P., and Sacks, M. S., “*Multi-scale geometric framework for population-averaging of the mitral valve apparatus.*” BMES/FDA Frontiers in Medical Devices Conference, Washington, DC, May 18-20, 2015
18. Drach, A., Khalighi, A. H., Lee, C. H., Jensen, M. O., Bloodworth, C. H., Yoganathan, A. P., and Sacks, M. S., “*Population-averaged geometric model of mitral valve from patient-specific imaging data.*” 14th Annual Design of Medical Devices Conference, Minneapolis, MN, April 13-16, 2015
19. Lee, C. H., Carruthers, C. A., Good, B., Ayoub, S., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Integrated experimental-computational modeling of mitral valve interstitial cell deformation under in-situ physiological loading.*” BMES 2014 Annual Meeting, San Antonio, TX, October 22-25, 2014
20. Bloodworth, C. H., Pierce, E. L., Easley, T. F., Toma, M., Khalighi, A., Lee, C. H., Sacks, M. S., Siefert, A., Jensen, M. O., and Yoganathan, A. P., “*Design of in vitro simulation pipeline for the development of computational mitral valve modeling.*” BMES 2014 Annual Meeting, San Antonio, TX, October 22-25, 2014
21. Lee, C. H., and Sacks, M. S., “*A computational framework for Multiscale modeling of the mitral valve.*” 6th Biennial Meeting on Heart Valve Biology & Tissue Engineering, London, the United Kingdom, September 10-12, 2014

22. Lee, C. H., and Sacks, M. S., “*A computational framework for Multiscale modeling of the mitral valve.*” 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain, July 20-25, 2014
23. Chi, S. W., Lee, C. H., Lin, S. P., and Chen, J. S., “*Level set enhanced frictional kernel contact algorithm for impact and penetration modeling.*” 11th World Congress on Computational Mechanics (WCCM XI), Barcelona, Spain, July 20-25, 2014
24. Lee, C. H., Rabbah, J. P., Yoganathan, A. P., Amini, R., Gorman, III, J. H., Gorman, R. C., and Sacks, M. S., “*A computational paradigm for modeling the functional mitral valve (MV) and MV surgical repair.*” 7th World Congress of Biomechanics (WCB 2014), Boston, MA, July 6-11, 2014
25. Lee, C. H., and Sacks, M. S., “*A computational framework for Multiscale modeling of the mitral valve.*” 17th U.S. National Congress on Theoretical & Applied Mechanics, East Lansing, MI, June 15-20, 2014
26. Feather, K., Zhang, W., Lee, C. H., Tam, H., McGarvey, J. R., Kondo, N., Gorman, R. C., Gorman, III, J. H., Vyavahare, N., and Sacks, M. S., “*A novel experimental/numerical method to assess BHV biomaterial fatigue response in-vivo.*” Society for Biomaterials 2014 Annual Meeting & Exposition, Denver CO, April 16-19, 2014
27. Lee, C. H., Amini, R., Aggarwal, A., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*Effects of local architectural mapping and material model on modeling the mitral valve.*” 3rd International Conference on Computational and Mathematical Biomedical Engineering, Hong Kong, China, December 16-18, 2013
28. Lee, C. H., Gorman, III, J. H., Gorman, R. C., Amini, R., and Sacks, M. S., “*A micro-anatomically accurate finite element model for investigation of functioning mitral valve and its relationship to interstitial cell deformations.*” BMES 2013 Annual Meeting, Seattle, WA, September 25-28, 2013
29. Lee, C. H., and Chen, J. S., “*Multi-scale simulation of protein-induced DNA loop formation.*” 12th U.S. National Congress on Computational Mechanics, Raleigh, NC, July 22-25, 2013 **(keynote presentation)**
30. Lee, C. H., Oomen, P. J. A., Rabbah, J. P., Saikrishnan, N., Yoganathan, A. P., Gorman, R. C., Gorman, III, J. H., and Sacks, M. S., “*A high-fidelity, micro-structurally & anatomically accurate 3D finite element model for functioning heart mitral valve.*” Proceedings of the ASME 2013 Summer Bioengineering Conference (SBC2013), Sun River, OR, June 26-29, 2013
31. Aggarwal, A., Aguilier, V. S., Lee, C. H., Ferrari, G., Gorman, III, J. H., Gorman, R. C., and Sacks, M. S., “*Spline based microstructural mapping for soft biological tissues: application to aortic valves.*” Proceedings of the ASME 2013 Summer Bioengineering Conference (SBC2013), Sun River, OR, June 26-29, 2013
32. Sacks, M. S., Lee, C. H., Gorman, III, J. H., Gorman, R. C., and Yoganathan, A. P., “*A high-fidelity micro-structurally and anatomically accurate 3D finite element model for functioning heart mitral valve.*” 7th Biennial Congress of the Society of Heart Valve Disease, Venice, Italy, June 22-25, 2013
33. Lee, C. H., Oomen, P. J. A., Rabbah, J. P., Yoganathan, A. P., Gorman, R. C., Gorman, III, J. H., Amini, R., and Sacks, M. S., “*A high-fidelity and micro-anatomically accurate 3D finite element model for simulations of functional mitral valve.*” 7th International Conference on Functional Imaging and Modeling of the Heart (FIMH2013), London, the United Kingdom, June 20-22, 2013
34. Aggarwal, A., Aguilier, V. S., Lee, C. H., Ferrari, G., Gorman, III, J. H., Gorman, R. C., and Sacks, M. S., “*Patient-specific modeling of heart valves: from images to simulation.*” 7th International Conference on Functional Imaging and Modeling of the Heart (FIMH2013), London, the United Kingdom, June 20-22, 2013

35. Chi, S. W., Lee, C. H., Lin, S. P., and Chen, J. S., “A level set enhanced kernel contact algorithm for fragment-impact problems.” 3rd South-East European Conference on Computational Mechanics, Kos Island, Greece, June 12-14, 2013
36. Lee, C. H., and Chen, J. S., “Multi-scale modeling of protein-mediated DNA loop formation.” ASME 2012 International Mechanical Engineering Congress & Exposition, Houston, TX, November 9-15, 2012 (**keynote presentation**)
37. Lee, C. H., and Chen, J. S., “POD-based model order reduction for molecular dynamics with radial basis represented force fields.” 3rd International Symposium on Computational Mechanics and 2nd Symposium on Computational Structural Engineering (ISCM III & CSE II), Taipei, Taiwan, December 5-7, 2011
38. Lee, C. H., and Chen, J. S., “POD-based reduced-order simulation for DNA molecules.” 11th U.S. National Congress on Computational Mechanics, Minneapolis, MN, July 25-29, 2011
39. Roth, J. M., Chen, J. S., Slawson, T. R., Rooney, N., Ren, X., Chi, S. W., Lee, C. H., and Guan, P. C., “Multiscale RKPM formulation for modeling penetration of an ultra-high strength concrete material.” 3rd International Conference on Computational Methods in Structural Dynamics and Earthquake Engineering (COMPdyn 2011), Corfu, Greece, May 26-28, 2011
40. Chen, J. S., Chi, S. W., Lee, C. H., Roth, J. M., and Slawson, T. R., “Micro-crack informed multi-scale damage model for fragment-impact modeling.” International Union of Theoretical and Applied Mechanics Symposium Linking Scales in Computations: From Microstructure to Macro-Scale Properties, Pensacola, FL, May 17-19, 2011
41. Lee, C. H., Teng, H., and J.S. Chen, J. S., “Atomistic to continuum modeling of DNA molecules.” 1st Global Congress on NanoEngineering for Medicine and Biology (NEMB 2010), Houston, TX, February 7-10, 2010
42. Lee, C. H., Teng, H., and Chen, J. S., “Atomistic to continuum modeling of DNA molecules.” 10th U.S. Congress on Computational Mechanics, Columbus, OH, July 16-19, 2009
43. Leu, L. J., Lee, C. H., Wang, C. K., and Zhang, M. K., “Object-oriented optimization system using commercial package as the analysis engine,” the 8th U.S. National Congress on Computational Mechanics (USNCCM-8), Austin, TX, July 25-27, 2005

COURSES TAUGHT

The University of Oklahoma

Fall 2016 AME 3723 Numerical Methods for Engineering Computation

The University of Texas at Austin

Fall 2015 ASE 301 Introduction to Computer Programming
(Overall Instructor Rating: 4.1/5.0, Overall Course Rating: 4.0/5.0)

SERVICE DUTIES

A. Professional

1. Co-Guest Editor, Special Issue on “Modeling and Simulation of Native, Diseased, and Prosthetic Heart Valves”, International Journal for Numerical Methods in Biomedical Engineering, 2016
2. Session Chair, “Biomechanics session on Computational and Multiscale Modeling, cellular and cardiovascular”, BMES 2015 Annual Meeting, Tampa, FL, October 7-10, 2015
3. Session Chair, “Minisymposium on Coarse-Grained and Multiscale Modeling in Molecular and Cellular Biomechanics”, 10th U.S. National Congress on Computational Mechanics, Columbus, OH, July 16-19, 2009

4. Abstract Reviewer, American Heart Association Scientific Sessions 2016, New Orleans, LA, November 12-16, 2016
5. Abstract Reviewer, The Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C 2016), National Harbor, MD, June 29-July 2, 2016
6. Judge for Ph.D. Student Paper Competition, The Summer Biomechanics, Bioengineering and Biotransport Conference (SB³C 2015), Snowbird, UT, June 17-20, 2015
7. Member, Biomedical Engineering Society (BMES)
8. Member, American Heart Association (AHA)
9. Member, American Society of Mechanical Engineering (ASME)
10. Member, United States Association for Computational Mechanics (USACM)
11. Member, International Association for Computational Mechanics (IACM)
12. Journal Paper Review:
 - Acta Biomaterialia
 - Biomechanics and Modeling in Mechanobiology
 - Cardiovascular Engineering and Technology
 - Computational Mechanics
 - Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization
 - International Journal for Numerical Methods in Biomedical Engineering
 - International Journal for Numerical Methods in Engineering
 - Interaction and Multiscale Mechanics
 - Journal of Biomechanics
 - Journal of Biomechanical Engineering
 - Journal of Cardiovascular Development and Disease
 - Medical & Biological Engineering & Computing
 - WIREs System Biology and Medicine
13. Book Chapter Review:
 - Advances in Soft Matter Mechanics*, Shaofan Li and Bohua Sun, Springer, 2012

B. Invited Talks in US

1. Computational & Experimental Modeling for Multiscale Biomechanics – Bridging Molecular Biology, Cell Mechanobiology, Tissue Micromechanics with Organ-Level Function, School of Aerospace and Mechanical Engineering, The University of Oklahoma, Norman, OK, March 8, 2016
2. Multiscale Biomechanical Modeling – Bridging Molecular Biology, Cell Mechanobiology, Tissue Mechanics with Organ-Level Function, Department of Biomedical Engineering, Pennsylvania State University, State College, PA, February 24, 2016
3. Computational and Experimental Modeling for Multiscale Biomechanics – Bridging Molecular Biology, Cell Mechanobiology, Tissue Micromechanics with Organ-Level Function, Department of Mechanical Engineering and Engineering Mechanics, Michigan Technological University, Houghton, MI, February 11, 2016
4. Multiscale Computational Biomechanical Modeling – Bridging Molecular Biology, Cell Mechanobiology, Tissue Mechanics with Organ-Level Function, Department Agricultural and Biomedical Engineering, Louisiana State University, Baton Rouge, LA, January 27, 2016
5. Atomistic to Continuum Modeling of DNA Molecules, Institute for Computational Engineering and Sciences, The University of Texas at Austin, Austin, TX, December 15, 2011

C. Invited Talks Overseas

1. Integrated Computational-Experimental Modeling for Heart Valve Biomechanics, College of Civil Engineering, Tongji University, Shanghai, China, June 8, 2016
2. Integrated Computational-Experimental Modeling for Heart Valve Biomechanics, School of Mechanical and Electrical Engineering, Robotics and Microsystems Center, Soochow University, Suzhou, China, June 7, 2016
3. Multiscale Biomechanics – Bridging Molecular Biology, Cell Mechanobiology, Tissue Mechanics with Organ-Level Function, Department of Civil Engineering, National Taiwan University, Taipei, Taiwan, March 17, 2016
4. Predictive Computational Modeling & Design for Engineering and Sciences, Department of Civil Engineering, National Taiwan University, Taipei, Taiwan, March 13, 2014