

Chien-hong Lin (林建宏)

Associate Professor

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EDUCATION

- **Ph.D.** 2014, *Mechanical Engineering*, Texas A&M University, College Station, Texas, USA
- **M.S.** 2001, *Biomedical Engineering*, National Cheng Kung University, Tainan, Taiwan
- **B.S.** 1999, *Mechanical Engineering*, National Taipei University of Technology, Taipei, Taiwan

Dr. Lin has a broad background in *Solid Mechanics*. He has published >10 articles in peer-reviewed journals/book, presented at many conferences/workshops, and committed to plenty of professional activities in scientific communities. In addition, he is quite gifted in mechanical design and instrumentation via his industrial experience.

PROFESSIONAL EXPERIENCE

• Employment

2022-present **Associate Professor**, Dept. of Mechanical Engineering, National Cheng Kung University, Tainan, Taiwan
2017-present **Affiliate Faculty**, Dept. of Biomedical Engineering, National Cheng Kung University, Tainan, Taiwan
2017-2022 **Assistant Professor**, Dept. of Mechanical Engineering, National Cheng Kung University, Tainan, Taiwan
2017 **Assistant Professor**, Dept. of Mech. & Mechatronic Eng., National Taiwan Ocean University, Taiwan
2016 **Postdoctoral Fellow**, Dept. of Mechanical Engineering, Johns Hopkins University, Baltimore, MD, USA
2015-2016 **Manufacturing Assistant Manager**, Honghua America LLC, Houston, Texas, USA
2014-2015 **Mechanical Engineer**, Honghua America LLC, Houston, Texas, USA
2014 **Mechanical Engineer**, Texma Petroleum Machinery LLC, Houston, Texas, USA
2010-2014 **Graduate Research Assistant**, Texas A&M University, College Station, Texas, USA
2005-2008 **Mechanical Engineer**, Haisiang Co. Ltd., New Taipei City, Taiwan
2001-2005 **Research Assistant**, Academia Sinica, Taipei, Taiwan

• Professional Leadership

2018-present **Member of General Council**, Association of Computational Mechanics Taiwan

RESEARCH INTEREST

Dr. Lin current research interest concerns **Modeling of Engineering Materials**, particularly, on nonlinear and time dependent constitutive material modeling, micromechanics of composites and functionally graded materials, multi-scale analyses of heterogeneous materials subject to coupled thermal, electrical, and mechanical stimuli, coupled

mechanical and transport analyses in multifunctional composites, time-dependent degradation of polymers and composites, numerical and finite element methods.

AWARDS AND HONORS

2023	Incentive Compensation Award , College of Engineering, National Cheng Kung University
2022	Incentive Compensation Award , College of Engineering, National Cheng Kung University
2022	Outstanding Mechanical Faculty , Chinese Society of Mechanical Engineers, Kaohsiung Section, Taiwan
2022	Outstanding Mentor Award , Dept. of Mechanical Engineering, Nat'l Cheng Kung University
2022	Outstanding Teaching Award , Dept. of Mechanical Engineering, Nat'l Cheng Kung University
2021	Incentive Compensation Award , College of Engineering, National Cheng Kung University
2021	Outstanding Teaching Award , Dept. of Mechanical Engineering, Nat'l Cheng Kung University
2021	Distinguished Alumni Award , Dept. of Mechanical and Electro-mechanical Eng., National Ilan University
2020	New Faculty Research Fund , NT\$150,000, Office of Research and Development, Nat'l Cheng Kung University
2019	New Faculty Research Fund , NT\$150,000, Office of Research and Development, Nat'l Cheng Kung University
2018	New Faculty Research Fund , NT\$100,000, College of Engineering, National Cheng Kung University
2015	Employee of the Quarter , Second quarter in 2015, Honghua America, LLC
2014	3rd Place Award , Student Poster Competition, MEEN Engineering Day, Texas A&M University, April, 5th, 2014
2014	4th Place Award , Poster Design Competition, Texas A&M University, February, 2014
2008	Graduate Scholarship , US\$1,000 for non-resident tuition exemption, Texas A&M University, February, 2018
2000	Honorable Mention Award , 2000 Conference on Biomechanics, I-Shou University, November, 2000
1999	Distinguished Mechanical Design Award , Student Project Competition, Nat'l Taipei University of Technology

• Awards for Students

2021	M. N. Kurniawati C. Lai Y. Huang T. K. N. Ngo Z. W. Yeoh	Silver Award , 2021 UAiTED Innovation Competition
2019	Y. Zhan	The 30th Professor Ke-rang Li Scholarship , NT\$10,000, National Cheng Kung University
2018	Y. Zhan	Travel Award , NT\$45,000, Ministry of Science and Technology, MOST-107-2922-I-006-272
2018	Y. Zhan	The 29th Professor Ke-rang Li Scholarship , NT\$10,000, National Cheng Kung University
2018	S. Chen	Travel Award , NT\$28,000, Ministry of Science and Technology, MOST-107-2922-I-006-138
2017	Y. Chuang I. Huang H. Chou Y. Lin	Honorable Mention Award , Student Project Competition, Nat'l Taiwan Ocean University

COURSES TAUGHT

A. Graduate Level

ME7307	<i>Micromechanics</i>
BME7005	<i>Biodesign (1)</i>
BME7006	<i>Biodesign (2)</i>

B. Undergraduate Level

ME1300	<i>Applied Mechanics (1)</i>
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PROFESSIONAL SHORT COURSES TAUGHT

August 9, 2018 “Design and Prototyping of User-customized Assistive Devices,” *BioDesign Summer Course* (生技醫材設計與開發課程), National Cheng Kung University, Tainan, Taiwan, (two hours lecture).

INVITED TALKS

1. Lin, C., “Constitutive modeling of magnetostrictive polymer composites,” Institute of Applied Mechanics, *National Taiwan University*, Taipei, Taiwan, March 28, 2022.
2. Lin, C., “Introduction to Mechanics of Materials and Micromechanics,” Department of Mechanical and Electro-Mechanical Engineering, *National Ilan University*, Yilan, Taiwan, October 20, 2021.
3. Lin, C., “Modular Design of Specialized Wheelchairs for Cerebral Palsy: Research & Development Process,” Department of Biomedical Engineering, *National Yang-Ming University*, Taipei, Taiwan, September 19, 2019.
4. Lin, C., “Constitutive Modeling of Smart Composites,” Department of Mode and Die Engineering, *National Kaohsiung University of Science and Technology*, Kaohsiung, Taiwan, March 4, 2019.
5. Lin, C., “Modeling of Active Composites,” 2018 Strategic Partnership Forum (2018 亞洲工學院策略聯盟會議), National Cheng Kung University, Tainan, Taiwan, September 3, 2018.
6. Lin, C., “Micromechanics of Piezoelectric Composites,” Department of Mechanical Engineering, *National Cheng Kung University*, Tainan, Taiwan, March 6, 2018.
7. Lin, C., “Micromechanics of Composite Materials,” Department of Mechanical and Mechatronic Engineering, *National Taiwan Ocean University*, Keelung, Taiwan, March 20, 2017.

RESEARCH GRANTS

1. Principal Investigator, “A new unit cell-based micromechanics model for smart composites,” funded by Ministry of Science and Technology, proposal number 111-2221-E-006-148-MY2, from 1 August 2022 through 31 July 2024, NT\$1,750,000.
2. Principal Investigator, “Analysis of Viscoelastic Response under Cyclic Loading in Fiber-reinforced Magnetostrictive Composites,” funded by Ministry of Science and Technology, proposal number 110-2221-E-006-148, from 1 August 2021 through 31 July 2022, NT\$823,000.
3. Principal Investigator, “A Constitutive Model of Coupled Magneto-thermo-mechanical Hysteresis Behavior for Giant Magnetostrictive Materials,” funded by Ministry of Science and Technology, proposal number 109-2221-E-006-211, from 1 August 2020 through 31 July 2021, NT\$799,000.
4. Principal Investigator, “Micromechanics-based Model of Nonlinear Magnetoelectric Fibrous Composites,” funded by Ministry of Science and Technology, proposal number 107-2218-E-006-021-MY2, from 1 February 2018 through 31 January 2020 (extended to July 2020), NT\$1,648,000.

STUDENT RESEARCH ADVISING

A. Master

1. You-shu Zhan, Fall 2017-Spring 2019
Thesis title: *A Constitutive Model for Ferromagnetic Alloys: A Fully Coupled Analysis*
2. Sheng-hsiang Chen, Fall 2017-Fall 2019 (co-advise with Prof. Tei-Chen Chen)

Thesis title: *Mechanical Analysis of Rib-reinforced Rectangular Thin-walled Vessel under Internal Pressure*

3. Kuo-jung Shen, Fall 2018-Spring 2020

Thesis title: *Modeling of Nonlinear Viscoelastic Behavior of Magnetostrictive Composites*

4. Obul Reddy Lacchaiahgari, Spring 2019-Fall 2020 (co-advise with Prof. Wen-Bin Young)

Thesis title: *Studies on Water Absorption of Silane Treated Mercerized Bamboo-Epoxy Composites*

5. Fang-yu Liu, Fall 2019-Spring 2021

Thesis title: *Effective Time-dependent and Nonlinear Responses of Three-phase Magneto-electro-elastic Composites*

6. Ying-zhao Lin, Fall 2019-Spring 2021

Thesis title: *Micromechanics of Magnetostrictive and Magnetoelectric Composite Materials: Effective Nonlinear Behavior*

7. An-po Chou, Fall 2019-Spring 2021

Thesis title: *Analysis of the Viscoelastic Response of Functionally Graded Piezoelectric Beams*

8. Zhong-yi Lin, Fall 2020-Spring 2022

Thesis title: *Micromechanics modeling of nonlinear magnetoelectric coupling of magnetostrictive-piezoelectric composites*

9. Yu-cheng Hung, Fall 2020-Spring 2022

Thesis title: *Modeling of viscoelastic responses of magnetostrictive polymer matrix composites*

10. Ying-ru Lu, Fall 2020-Spring 2022

Thesis title: *Effective nonlinear behavior of hybrid magnetostrictive composite material*

11. Chia-Ju Lin, Fall 2021-2023

Thesis title: *The effective time-dependent and nonlinear responses of hybrid magnetostrictive composites*

12. Hong-Yang Kuo, Fall 2021-2023

Thesis title: *Mathematical modeling of time-dependent behavior of magnetostrictive-piezoelectric composites*

13. Yi-Chuan Lin, Fall 2022-

14. Yu-Chun Huang, Fall 2022-

15. Bo-Jun Zhang, Fall 2022-

16. Chun-Che Tsao, Fall 2022-

17. Chen-Yu Lin, Fall 2023-

18. Tsung-Han Wang, Fall 2023-

19. Kuan-Lin Lai, Fall 2023-

B. Undergraduate Student

1. Yu-chang Chuang, I-ning Huang, Hsiao-cheng Chou, and Yu-chen Lin, National Taiwan Ocean University, Spring 2017

Project title: Computer-aided design for straight beams

This project won the Honorable Mention Award.

C. High School Student

1. Mira Michels-Gualtieri, Garrison Forest School, Owings Mills, Maryland, USA, Spring 2016
Project title: Supporting the underdogs of science: mechanical engineering and CAD

PUBLICATIONS

A. Articles in Refereed Journals

1. Lin, C.*, Y. Zhan, and Z. Deng*. 2023. "Constitutive Modeling of Oriented and Non-oriented Magnetostrictive Particulate Composites," **Composite Structures**, 311:116781. (SCIE, Q1, 8/138, 5.43%, MECHANICS, IF:6.603)
2. Lin, C.*, and Y. Hung. 2023. "Viscoelastic Effects on the Overall Responses of Terfenol-D/polymer Composites," **International Journal of Solids and Structures**, 262-263:112087. (SCIE, Q2, 41/138, 29.35%, MECHANICS, IF:3.667)
3. Lin, C.*, and F. Liu. 2022. "Effective Nonlinear Responses of Three-phase Magnetoelectric Composites," **Scientific Reports**, 12:15101. (SCIE, Q2, 19/73, 26.03%, MULTIDISCIPLINARY SCIENCES, IF:4.996)
4. Lin, C.*, and F. Liu. 2022. "Effective Time-dependent Behavior of Three-phase Polymer Matrix Smart Composites," **Composite Structures**, 289:115457. (SCIE, Q1, 8/138, 5.43%, MECHANICS, IF:6.603)
5. Lin, C.*. 2022. "Effective Properties of 0-3, 1-3, and 2-2 Composites Based on Unified Unit-cell Micromechanics Model," **Mechanics Research Communications**, 119:103807. (SCIE, Q2, 63/138, 45.29%, MECHANICS, IF:2.749)
6. Lin, C.*, and Y. Lin. 2021. "Analysis of Nonlinear Piezomagnetism for Magnetostrictive Terfenol-D Composites," **Journal of Magnetism and Magnetic Materials**, 540:168490. (SCIE, Q3, 35/69, 50%, PHYSICS, CONDENSED MATTER, IF:3.097)
7. Lin, C.*, and Y. Lin. 2021. "Nonlinear Magnetoelectric Coupling in Magnetostrictive-piezoelectric Composites," **Composite Structures**, 276:114558. (SCIE, Q1, 8/138, 5.43%, MECHANICS, IF:6.603)
8. Zhan, Y., and C. Lin*. 2021. "Micromechanics-based Constitutive Modeling of Magnetostrictive 1–3 and 0–3 Composites," **Composite Structures**, 260:113264. (SCIE, Q1, 8/138, 5.43%, MECHANICS, IF:6.603)
9. Shen, K., and C. Lin*. 2021. "Micromechanical Modeling of Time-dependent and Nonlinear Responses of Magnetostrictive Polymer Composites," **Acta Mechanica**, 232(3):983-1003. (SCIE, Q2, 66/138, 47.46%, MECHANICS, IF:2.645)
10. Zhan, Y., and C. Lin*. 2020. "A Constitutive Model of Coupled Magneto-thermo-mechanical Hysteresis Behavior for Giant Magnetostrictive Materials," **Mechanics of Materials**, 148:103477. (SCIE, Q2, 42/136, 30.51%, MECHANICS, IF:3.266)
11. Lin, C., and A. Muliana. 2016. "Nonlinear and Rate-dependent Hysteretic Responses of Active Hybrid Composites," **Materials Sciences and Applications**, 7(1):51-72. (Non-SCI)
12. Lin, C., and A. Muliana. 2015. "Nonlinear Electro-mechanical Responses of Functionally Graded Piezoelectric Beams," **Composites Part B: Engineering**, 72:53-64. (SCIE, Q1, 4/85, 4.12%, ENGINEERING, MULTIDISCIPLINARY, IF:3.850)
13. Li, P., K. L. White, C. Lin, D. Kim, A. Muliana, R. Krishnamoorti, R. Nishimura, H.-J. Sue. 2014. "Mechanical Reinforcement of Epoxy with Self-assembled Synthetic Clay in Smectic Order," **ACS Applied Materials & Interfaces**, 6(13):10188-10195. (SCIE, Q1, 23/260, 8.85%, MATERIALS SCIENCE, MULTIDISCIPLINARY, IF:6.723)
14. Lin, C., and A. Muliana. 2014. "Polarization Switching Responses of 1-3 and 0-3 Active Composites," **Composite Structures**, 116:535-551. (SCIE, Q1, 3/24, 12.5%, MATERIALS SCIENCE, COMPOSITES, IF:3.318)
15. Tajeddini, V., C. Lin, A. Muliana, and M. Lévesque. 2014. "Average Electro-mechanical Properties and Responses of Active Composites," **Computational Materials Science**, 82:405-414. (SCIE, Q2, 80/260, 30.77%, MATERIALS SCIENCE, MULTIDISCIPLINARY, IF:2.131)
16. Lin, C., and A. Muliana. 2014. "Micromechanical Models for the Effective Time-dependent and Nonlinear Electromechanical Responses of Piezoelectric Composites," **Journal of Intelligent Material Systems and Structures**, 25(11):1306-1322. (SCIE, Q2, 84/260, 32.31%, MATERIALS SCIENCE, MULTIDISCIPLINARY, IF:2.072)

17. Lin, C., and A. Muliana. 2013. "Micromechanics Models for the Effective Nonlinear Electro- mechanical Responses of Piezoelectric Composites," *Acta Mechanica*, 224(7):1471-1492. (SCIE, Q2, 67/139, 48.2%, MECHANICS, IF:1.268)
18. Muliana, A., and C. Lin. 2011. "A Multi-scale Formulation for Predicting Non-linear Thermo-electro-mechanical Response in Heterogeneous Bodies," *Journal of Intelligent Material Systems and Structures*, 22(8):723-738. (SCIE, Q2, 64/232, 27.59%, MATERIALS SCIENCE, MULTIDISCIPLINARY, IF:1.953)
19. Hsiao, T.-H., C. Lin, T.-T. Lee, J.-Y. Cheng, P.-K. Wei, E.-Y. Chuang, and K. Peck. 2010. "Verifying Expressed Transcript Variants by Detecting and Assembling Stretches of Consecutive Exons," *Nucleic Acids Research*, 38(20):e187. (SCIE, Q1, 30/286, 10.49%, BIOCHEMISTRY & MOLECULAR BIOLOGY, IF:7.863)

* indicates correspondence author.

B. Book Chapter

1. Lin, C., and A. Muliana. "Micromechanics Modeling of Hysteretic Responses of Piezoelectric Composites," Creep and Fatigue in Polymer Matrix Composites, 2nd edition, Ed. R. M. Guedes, Woodhead Publishing, 2019, pp. 121-155.

C. Articles in Conference Proceedings

1. Huang, Y. and C. Lin*. "Micromechanical analysis of magneto-elastic properties of smart fibrous composites," oral presentation at the 40th National Conference on Mechanical Engineering of CSME, Dec. 01-02, 2023, Changhua, Taiwan.
2. Lin, Y. and C. Lin*. "A micromechanics model for the effective coefficient of thermal expansion of 0-3 composites," oral presentation at the 40th National Conference on Mechanical Engineering of CSME, Dec. 01-02, 2023, Changhua, Taiwan.
3. Tsao, C. and C. Lin*. "Constitutive modeling of thermoelastic properties of layered composites," oral presentation at the 40th National Conference on Mechanical Engineering of CSME, Dec. 01-02, 2023, Changhua, Taiwan.
4. Zhang, B. and C. Lin*. "Predictions of overall magnetoelectric properties of unidirectional fiber composites," oral presentation at the 40th National Conference on Mechanical Engineering of CSME, Dec. 01-02, 2023, Changhua, Taiwan.
5. Huang, Y. and C. Lin*. "Estimations of piezomagnetic properties of multifunctional layered composites," oral presentation at the 47th National Conference on Theoretical and Applied Mechanics, Nov. 17-18, 2023, Yunlin, Taiwan.
6. Lin, Y. and C. Lin*. "Effective thermoelastic properties of 1-3 composites," oral presentation at the 47th National Conference on Theoretical and Applied Mechanics, Nov. 17-18, 2023, Yunlin, Taiwan.
7. Tsao, C. and C. Lin*. "Magnetoelectric properties and responses for 2-2 composites: A micromechanics formulation," oral presentation at the 47th National Conference on Theoretical and Applied Mechanics, Nov. 17-18, 2023, Yunlin, Taiwan.
8. Zhang, B. and C. Lin*. "Analysis of magneto-electro-elastic behavior of particulate active aggregates," oral presentation at the 47th National Conference on Theoretical and Applied Mechanics, Nov. 17-18, 2023, Yunlin, Taiwan.
9. Lin, C. and C. Lin*. "Effective nonlinear piezomagnetic behavior of magnetostrictive hybrid composites," oral presentation at the 39th National Conference on Mechanical Engineering of CSME, Dec. 02-03, 2022, Maioli, Taiwan.
10. Kuo, H. and C. Lin*. "Average viscoelastic responses of piezoelectric 0-3 composites," oral presentation at the 39th National Conference on Mechanical Engineering of CSME, Dec. 02-03, 2022, Maioli, Taiwan.
11. Lin, C. and C. Lin*. "Analysis of linear piezomagnetism for magnetostrictive hybrid composites," oral presentation at the 46th National Conference on Theoretical and Applied Mechanics, Nov. 18-19, 2022, Kaohsiung, Taiwan.
12. Kuo, H. and C. Lin*. "The response for piezoelectric fiber composites with viscoelastic constituents," oral presentation at the 46th National Conference on Theoretical and Applied Mechanics, Nov. 18-19, 2022, Kaohsiung, Taiwan.
13. Lin, C. and C. Lin*. "Constitutive Modeling of Magneto-thermo-mechanical Couplings of 2-2 Composites," 38th National Conference on Mechanical Engineering of CSME, Dec 03-04, 2021, Tainan, Taiwan.

14. Hung, Y. and **C. Lin***. "Modeling of Viscoelastic Responses of Smart Polymer Matrix Composites," *38th National Conference on Mechanical Engineering of CSME*, Dec 03-04, 2021, Tainan, Taiwan.
15. Lu, Y. and **C. Lin***. "Effective Responses of Hybrid Multifunctional Composite Materials," *38th National Conference on Mechanical Engineering of CSME*, Dec 03-04, 2021, Tainan, Taiwan.
16. Lin, C. and **C. Lin***. "Overall Properties of 1-3 Composites: A Review of Micromechanics Models," oral presentation at the *45th National Conference on Theoretical and Applied Mechanics*, Nov. 18-19, 2021, New Taipei City, Taiwan.
17. Hung, Y. and **C. Lin***. "Analysis of Hysteretic Behavior of Smart 2-2 Composites," oral presentation at the *45th National Conference on Theoretical and Applied Mechanics*, Nov. 18-19, 2021, New Taipei City, Taiwan.
18. Lu, Y. and **C. Lin***. "Effective Properties and Responses of Hybrid Magnetostrictive Composites," oral presentation at the *45th National Conference on Theoretical and Applied Mechanics*, Nov. 18-19, 2021, New Taipei City, Taiwan.
19. Liu, F. and **C. Lin***. "Nonlinear Magnetoelastic Behavior of a Polymer Reinforced by Active Particles," oral presentation at the *44th National Conference on Theoretical and Applied Mechanics*, Nov. 26-27, 2020, Yilan, Taiwan.
20. Shen, G. and **C. Lin***. "Time-dependent Response of Piezomagnetic Fibrous Composites," oral presentation at the *43th National Conference on Theoretical and Applied Mechanics*, Nov. 29-30, 2019, Taichung, Taiwan.
21. Zhan, Y. and **C. Lin***. "Time-dependent Response of Aluminum-base Metal Matrix Composites," oral presentation at the *42th National Conference on Theoretical and Applied Mechanics*, Nov. 23-24, 2018, Taipei, Taiwan.
22. Chen, S. and **C. Lin***. "Effective Magnetoelectric Properties of Fiber-reinforced Composites with Imperfect Interface," co-authored presentation at the *6th Asian Conference on Mechanics of Functional Materials and Structures*, Oct. 26-29, 2018, Tainan, Taiwan.
23. Lin, W. and **C. Lin***. "A Micromechanical Model for Active Woven Composites," co-authored presentation at the *6th Asian Conference on Mechanics of Functional Materials and Structures*, Oct. 26-29, 2018, Tainan, Taiwan.
24. Zhan, Y. and **C. Lin***. "Constitutive Modeling of Multiferroic Particle-reinforced Composites," co-authored presentation at the *6th Asian Conference on Mechanics of Functional Materials and Structures*, Oct. 26-29, 2018, Tainan, Taiwan.
25. Chen, S. and **C. Lin***. "Analysis of electro-magneto-mechanical coated fiber-reinforced composites," oral presentation at *4th Association of Computational Mechanics Taiwan Conference*, Oct. 15-18, 2018, Yilan, Taiwan.
26. Lin, W. and **C. Lin***. "Average Properties and Responses of Smart Woven Composites," oral presentation at *4th Association of Computational Mechanics Taiwan Conference*, Oct. 15-18, 2018, Yilan, Taiwan.
27. Zhan, Y. and **C. Lin***. "Modeling of Multifunctional Particulate Composites," oral presentation at *4th Association of Computational Mechanics Taiwan Conference*, Oct. 15-18, 2018, Yilan, Taiwan.
28. **Lin, C.*** "Comparison of Micromechanical Predictions for Fiber-reinforced Composites," oral presentation at the *41th National Conference on Theoretical and Applied Mechanics*, Nov. 24-25, 2017, Tainan, Taiwan.
29. **Lin, C.** and A. Muliana. "Rate-dependent Hysteretic Response of Electro-active Composites: A Micromechanical Analysis," co-authored presentation at the *9th Int. Conf. Mech. Time-Dep. Mat.*, May 27-30, 2014, Montréal, Canada.
30. **Lin, C.** and A. Muliana. "A Micromechanical Model for Analyzing Responses of a Piezoelectric Hybrid Composite," oral presentation at *American Society for Composites – 28th Tech. Conf.*, Sept. 9-11, 2013, State College, PA, USA.
31. Tajeddini, V., **C. Lin**, A. Muliana, and M. Lévesque. "The effect of microstructural morphologies on the effective electro-mechanical properties of piezoelectric particle composites," co-authored presentation at *2012 ASME Int. Mech. Eng. Congress Expo.*, Nov. 9-15, 2012, Houston, TX, USA.
32. **Lin, C.** and A. Muliana. "Analyzing Thermo-Electro-Mechanical Response of Active Composites," co-authored presentation at *American Society for Composites – 26th Technical Conference/2nd Joint US-Canada Conference on Composites*, Sept. 26-28, 2011, Montréal, Canada.
33. **Lin, C.** and A. Muliana. "A Multi-scale Model for Analyzing Nonlinear Response of Active Composites," co-authored presentation at the *16th Int. Conf. Comp. Struct. (ICCS16)*, Jun. 28-30, 2011, Porto, Portugal.
34. **Lin, J.**, and K. Chung, "Design of Clinical Seating/Positioning Evaluation System," co-authored presentation at *1999 International Conference on Biomedical Engineering*, pp. 156-157, December 17-18, 1999, Tainan, Taiwan.

D. Presentations at Conference and Workshops

1. Lin, Y. and **C. Lin***. "Micromechanics analysis of effective response of magnetostrictive-piezoelectric composites," presentation at *the JOINT EVENT: ICCS26 - 26th International Conference on Composite Structures & MECHCOMP8 - 8th International Conference on Mechanics of Composites*, Jun. 27-30, 2023, Virtual Event, University of Porto, Portugal.
2. **C. Lin***. "Unified unit-cell micromechanics model for effective mechanical properties of particulate, fibrous, and laminated composite materials," presentation at *the WCCM-APCOM 2022, the joint 15th World Congress on Computational Mechanics (WCCM XV) and 8th Asia Pacific Congress on Computational Mechanics (APCOM VIII)*, Jul. 31-Aug. 5, 2022, Virtual Event, Yokohama, Japan.
3. Zhan, Y. and **C. Lin***. "Constitutive Modeling of Magneto-active Composites with Fibrous and Particulate Terfenol-D Reinforcements," co-authored presentation at *16th U.S. National Congress on Computational Mechanics*, Jul. 25-29, 2021, Virtual Event hosted by University of Illinois at Urbana-Champaign and Northwestern University, Chicago, Illinois, USA.
4. Zhan, Y. and **C. Lin***. "Micromechanical Analysis of Coupled Magnetoelastic Responses for a Fiber-reinforced Polymer-Matrix Composite," co-authored presentation at *the Engineering Mechanics Institute Conference 2021*, May 25-28, 2021, Virtual Event hosted by Columbia University, New York, NY, USA.
5. Shen, K. and **C. Lin***. "Nonlinear and Time-dependent Responses of Magnetostrictive Composites," oral presentation at *the 44th National Conference on Theoretical and Applied Mechanics*, Nov. 26-27, 2020, Yilan, Taiwan.
6. Jerripothula, V. S. K. and **C. Lin***. "Effective Properties of Particulate Composites: A Micromechanical Study," oral presentation at *the 44th National Conference on Theoretical and Applied Mechanics*, Nov. 26-27, 2020, Yilan, Taiwan.
7. Chou, A. and **C. Lin***. "Modeling of An Active Beam with Functionally Graded Layers," oral presentation at *the 44th National Conference on Theoretical and Applied Mechanics*, Nov. 26-27, 2020, Yilan, Taiwan.
8. Lin, Y. and **C. Lin***. "Estimation of Multiphysics Coupled Properties of Two-phase Fibrous Composites," oral presentation at *the 44th National Conference on Theoretical and Applied Mechanics*, Nov. 26-27, 2020, Yilan, Taiwan.
9. Zhan, Y. and **C. Lin***. "Nonlinear Magneto-mechanical Behavior of Smart Composites: A Micromechanical Study," co-authored presentation at *Asian Pacific Cong. on Comput. Mech. 2019*, Dec. 18-21, 2019, Taipei, Taiwan.
10. Shen, G. and **C. Lin***. "Rate-dependent Magneto-elastic Coupling Response of Ferromagnetic Particle Reinforced Composites," co-authored presentation at *Asian Pacific Cong. on Comput. Mech. 2019*, Dec. 18-21, 2019, Taipei, Taiwan.
11. Chen, C. and **C. Lin***. "Average Nonlinear Behavior of Active Matrix Composites Incorporating Piezomagnetic Fibers," co-authored presentation at *Asian Pacific Cong. on Comput. Mech. 2019*, Dec. 18-21, 2019, Taipei, Taiwan.
12. Zhan, Y. and **C. Lin***. "Micromechanics Modeling of Multiferroic Particulate Composites," co-authored presentation at *15th U.S. National Congress on Computational Mechanics*, Jul. 28-Aug. 1, 2019, Austin, TX, USA.
13. Chen, S. and **C. Lin***. "Analysis of Coated Fibrous Multiferroic Composites Subjected to Large Electric Driving Field," co-authored presentation at *2018 ASME Int. Mech. Eng. Congress Expo.*, Nov. 9-15, 2018, Pittsburgh, PA, USA.
14. Lin, W. and **C. Lin***. "Micromechanical Modeling of Nonlinear Responses of Active Woven Composites," co-authored presentation at *2018 ASME Int. Mech. Eng. Congress Expo.*, Nov. 9-15, 2018, Pittsburgh, PA, USA.
15. Zhan, Y. and **C. Lin***. "Average Behavior of Nonlinear Magneto-electro-elastic Particulate Composites," co-authored presentation at *2018 ASME Int. Mech. Eng. Congress Expo.*, Nov. 9-15, 2018, Pittsburgh, PA, USA.
16. **Lin, C.** "Average Responses of Fiber-reinforced Composites with an Enhanced Matrix," oral presentation at *3rd Association of Computational Mechanics Taiwan Conference*, Oct. 19-20, 2017, Tainan, Taiwan.
17. **Lin, C.** and A. Muliana. "A Multiscale Analysis of Functionally Graded Piezoelectric Beams," oral presentation at *2016 ASME Int. Mech. Eng. Congress Expo.*, Nov. 11-17, 2016, Phoenix, AZ.
18. **Lin, C.** and A. Muliana. "Constitutive Modeling of Nonlinear Piezoelectric Particle-reinforced Composites," oral presentation at *2nd Association of Computational Mechanics Taiwan Conference*, Oct. 20-21, 2016, Taipei, Taiwan.
19. **Lin, C.** and A. Muliana. "A Micromechanical Model for the Effective Polarization Switching Responses of Piezoelectric Hybrid Composites," oral presentation at *2015 ASME Int. Mech. Eng. Congress Expo.*, Nov. 13-19, 2015, Houston, TX.
20. Li, P., K. L. White, **C. Lin**, D. Kim, R. Krishnamoorti, A. Muliana, R. Nishimura, H.-J. Sue. 2015. "Ultrastrong epoxy nanocomposites containing self-assembled synthetic clay in smectic order," co-authored presentation at *249th American Chemical Society National Meeting & Exposition*, Mar. 22-26, 2015, Denver, CO.
21. **Lin, C.**, and A. Muliana. "Micromechanical Analyses on Electro-mechanical Hysteresis of 1-3, 0-3, and Functionally Graded Composites," oral presentation at *the 1th Int. Conf. Mech.Comp.*, Jun. 8-12, 2014, Long Island, NY.

22. Lin, C. and A. Muliana. "Rate-dependent Electro-mechanical Coupling Response of Active Composites," oral presentation at *2013 ASME Int. Mech. Eng. Congress Expo.*, Nov. 15-21, 2013, San Diego, CA.
23. Lin, C. and A. Muliana. "Effective Nonlinear Responses of Piezoelectric Fibrous and Hybrid Composites," oral presentation at *2012 ASME Int. Mech. Eng. Congress Expo.*, Nov. 9-15, 2012, Houston, TX.
24. Lin, C. and A. Muliana. "Micromechanics Model for Nonlinear Multi-field Responses of Active Composites," oral presentation at *ASME Applied Mechanics and Materials Conf. (McMAT 2011)*, May 30-Jun. 1, 2011, Chicago, IL.
25. Lin, C. and A. Muliana. "Micromechanics Model for Nonlinear Multi-field Responses of Active Composites," oral presentation at 14th Annual Student Research Week at Texas A&M University, Match 21-25, 2011, College Station, TX.
26. Muliana, A. and C. Lin. "A Micromechanical Model for Active Polymer Matrix Composites," co-authored presentation at *2010 ASME Int. Mech. Eng. Congress Expo.*, Nov. 12-18, 2010, Vancouver, Canada.
27. Muliana, A., K. Li and C. Lin. "A Multi-scale Study for Active Fiber Composites with Field Coupling Effects," co-authored presentation at *9th World Congress on Computational Mechanics*, July 19-23 2010, Sydney, Australia.
28. Lin, J., K. Chung, and H. Lin, "Design and Development in Specialized Seating/Positioning Wheelchair for the Cerebral Palsied," co-authored presentation at *2000 International Conference on Biomechanics*, pp. B50, November 25, 2000, Kaohsiung, Taiwan.

E. Research Posters

1. Lin, C., C. Lin, H. Kuo, Y. Huang, Y. Lin, C. Tsao, and B. Zhang. "A unified micromechanics model for constitutive modeling of fully coupled multiferroic composites," *40th National Conference on Mechanical Engineering of CSME*, Dec. 01-02, 2023, Changhua, Taiwan.
2. Lin, C., C. Lin, Y. Lu, C. Yang, C. Lin, and H. Kuo. "Analysis of viscoelastic response under cyclic loading in fiber-reinforced magnetostrictive composites," *39th National Conference on Mechanical Engineering of CSME*, Dec. 02-03, 2022, Maioli, Taiwan.
3. Lin, C., Y. Zhan, and Y. Lin. "A Constitutive Model of Coupled Magneto-thermo-mechanical Hysteresis Behavior for Giant Magnetostrictive Materials," *38th National Conference on Mechanical Engineering of CSME*, Dec 03-04, 2021, Tainan, Taiwan.
4. Lin, C. and K. Shen. "Micromechanics-based Model of Nonlinear Magnetolectric Fibrous composites," *37th National Conference on Mechanical Engineering of CSME*, Nov 20-21, 2020, Yunlin, Taiwan.
5. Lin, C. and Y. Zhan. "Micromechanics-based Model of Nonlinear Magnetolectric Fibrous composites," *36th National Conference on Mechanical Engineering of CSME*, Dec 7-8, 2019, Taipei, Taiwan.
6. Lin, C. and A. Muliana. "Micromechanical Models for Nonlinear Active Composites," *The 3rd Annual Johns Hopkins Postdoctoral Retreat*, May 16, 2016, Baltimore, MD.
7. Lin, C. and A. Muliana. "Micromechanics Modeling of Piezoelectric Composites," *3rd Annual Student Research Poster Competition, Texas A&M University*, Apr. 17, 2014, College Station, TX.
8. Tajeddini, V., C. Lin, A. Muliana, and M. Lévesque. "Electro-mechanical Responses of Piezoelectric Composites," *3rd Annual Student Research Poster Competition, Texas A&M University*, Apr. 17, 2014, College Station, TX.
9. Lin, C. and A. Muliana. "Micromechanics Modeling of Piezoelectric Composites," *Mechanical Engineering Day, Texas A&M University*, Apr. 5, 2014, College Station, TX.
10. Tajeddini, V., C. Lin, A. Muliana, and M. Lévesque. "Electro-mechanical Responses of Piezoelectric Composites," *Mechanical Engineering Day, Texas A&M University*, Apr. 5, 2014, College Station, TX.
11. Tajeddini, V., C. Lin, A. Muliana, and M. Lévesque. "Electro-mechanical Responses of Piezoelectric Composites," *2014 Pi Tau Sigma National Convention, Texas A&M University*, Feb. 22, 2014, College Station, TX.
12. Tajeddini, V., C. Lin, A. Muliana, and M. Lévesque "Electro-mechanical Responses of Piezoelectric Composites," *Spring 2013 MEEN Student Poster Competition, Texas A&M University*, Apr. 26, 2013, College Station, TX.

PROFESSIONAL SOCIETY AFFILIATION

2011-present **Member**, American Society of Mechanical Engineers (ASME)

SERVICES AND SYNERGISTIC ACTIVITIES

A. Conference Organizer

1. *38th National Conference on Mechanical Engineering of CSME (CSME2021)*, Dec 3-4, 2021, Tainan, Taiwan.
2. *7th Asian-Pacific Congress on Computational Mechanics (APCOM2019)*, December 17-20, 2019, Taipei, Taiwan.
3. *6th Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS2018)*, October 26-29, 2018, Tainan, Taiwan.

B. Mini-Symposium Organizer and Session Chair

1. *"Multifunctional Composite Materials Modeling and Experiments,"* 15th World Congress on Computational Mechanics & 8th Asian Pacific Congress on Computational Mechanics (WCCM-APCOM 2022), July 31-August 5, 2022, Yokohama, Japan. (with Drs. Pradeep Gudlur and Junwei Xing)
2. *"Micromechanics,"* ASC 36th Annual Technical Conference (ASC36), Sept. 19-22, 2021, Virtual Event hosted by Texas A&M University, College Station, TX, USA. (with Dr. Brett Bednarczyk)
3. *"Multiphysics Modeling of Multifunctional Composite Materials,"* 7th Asia Pacific Congress on Computational Mechanics (APCOM2019), December 18-21, 2019, Taipei, Taiwan. (with Profs. Xinrui Niu and Yan Li)
4. *"Mechanics of Multifunctional Materials and Structures,"* 2nd International Conference on Mechanics (ICM2018), October 15-18, 2018, Yilan, Taiwan.

C. Invited Session Chair

1. *"Solid Mechanics - 1,"* 42th National Conference on Theoretical and Applied Mechanics (CTAM2018), Nov. 23-24, 2018, Taipei, Taiwan.
2. *"Mechanics Contact and Nonlinear Mechanics,"* and *"Bio-Mechanics,"* 6th Asian Conference on Mechanics of Functional Materials and Structures (ACMFMS2018), October 26-29, 2018, Tainan, Taiwan.

D. Lead Guest Editor for Journals

1. *"Computational Modelling of Multifunctional Composite Materials,"* Advances in Mechanical Engineering, Publisher: Sage, 2016-2017

E. University and Community Services

1. Research Planning Committee, Department of Mechanical Engineering, National Cheng Kung University, 2021-2022
2. Convener, Solid Mechanics Division, Dept. of Mechanical Engineering, National Cheng Kung University, 2020-2021
3. Review Committee, Student Exchange Programs, National Cheng Kung University, 2020
4. Academic Committee, Department of Mechanical Engineering, National Cheng Kung University, 2019-2020
5. Review Committee, Emergency Generator Maintenance, National Cheng Kung University, 2019-present
6. International Student Exchange Program committee, Department of Mechanical Engineering, National Cheng Kung University, 2019-present
7. PhD committee for (>2 student), 2018-present
8. Master of Science committee for (>20 students), 2018-present
9. Lead of Judge committee, Mechanical Engineering Project Competition, Department of Mechanical Engineering, National Cheng Kung University, June 30, 2018
10. Judge, Course of Usability and User Interface Design, Department of Industrial Design, National Cheng Kung University, May 14, 2018

11. Judge, Spring 2013 MEEN Student Poster Competition, Department of Mechanical Engineering, Texas A&M University, April 26, 2013

F. Reviewer Board Member

1. Nanomaterials (*MDPI*), 2020-present
2. International Journal of Molecular Sciences (*MDPI*), 2020-present

G. Journal Reviewer

1. Applied Mathematical Modelling (*Elsevier*)
2. Applied Sciences (*MDPI*)
3. Composite Structures (*Elsevier*)
4. Composites Science and Technology (*Elsevier*)
5. Catalysts (*MDPI*)
6. Crystals (*MDPI*)
7. Current Analytical Chemistry (*Bentham Science*)
8. Energies (*MDPI*)
9. Engineering Computations (*Emerald Insight*)
10. Information (*MDPI*)
11. International Journal of Fracture (Springer)
12. International Journal of Molecular Sciences (*MDPI*)
13. Journal of Alloys and Compounds (*Elsevier*)
14. Journal of Composite Materials (*Scientific Research Publishing*)
15. Journal of Engineering Materials and Technology (ASME Digital Collection)
16. Journal of Engineering Mathematics (*Springer Nature*)
17. Journal of Intelligent Material Systems and Structures (*Sage*)
18. Journal of Magnetism and Magnetic Materials (*Elsevier*)
19. Journal of Mechanics (*Cambridge Core*)
20. Journal of Mechanics Engineering and Automation (*David Publishing Company*)
21. Journal of Mechanics in Medicine and Biology (*World Scientific*)
22. Journal of Technology Innovations in Renewable Energy (*Lifescience Global*)
23. Journal of the Chinese Institute of Engineers (Taylor & Francis)
24. Materials (*MDPI*)
25. Materials Sciences and Applications (*Scientific Research Publishing*)
26. Mathematical Problems in Engineering (*Hindawi*)
27. Mechanics of Materials (*Elsevier*)
28. Mechanics Research Communications (*Elsevier*)
29. Membranes (*MDPI*)
30. Micromachines (*MDPI*)
31. Nanomaterials (*MDPI*)
32. Open Journal of Composite Materials (*Scientific Research Publishing*)
33. Photonics (*MDPI*)
34. Polymers (*MDPI*)
35. Sensors (*MDPI*)
36. Sustainability (*MDPI*)
37. Universal Journal of Materials Science (*Horizon Research Publishing*)
and many others

H. Conference Proceeding Reviewer

1. 40th National Conference on Mechanical Engineering of CSME, Dec. 01-02, 2023, Changhua City, Taiwan.
2. 39th National Conference on Mechanical Engineering of CSME, Dec. 02-03, 2022, Maioli, Taiwan.

REFERENCES

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