林哲宇 助理教授
國立臺灣大學應用力學研究所
辦公室：應用力學館四樓 419 室
電子郵件信箱：cheyu@ntu.edu.tw

實驗室名稱：
生物力學與超音波影像實驗室

研究興趣和領域：
材料機械性質
黏彈性力學
生物力學
超音波影像
運動醫學

期刊論文發表：

1. Wei-Ting Wu, Che-Yu Lin, Yi-Chung Shu, Lan-Rong Chen, Levent Özçakar, Ke-Vin Chang (2022). Subacromial motion metrics in painful shoulder impingement: a dynamic quantitative ultrasound analysis. *Archives of Physical Medicine and Rehabilitation*. In press.
2. Che-Yu Lin* (2022). Treatment effect of platelet gel on reconstructing bone defects and nonunions: a review of in vivo human studies. *International Journal of Molecular Sciences*, 23(19), 11377.
3. Che-Yu Lin*, Chin Pok Pang, Tung-Han Yang (2022). Measurement accuracy of ultrasound viscoelastic creep imaging on measuring the viscoelastic properties of heterogeneous materials. *Advances in Technology Innovation*, 7(4), 229-241. (This paper is awarded one of the best papers, as one of the honorable mentions winners, in the 10th International Multi-Conference on Engineering and Technology Innovation 2021)
4. Che-Yu Lin*, Chen-Hsin Lin, Ke-Vin Chang (2022). Constitutive equations for analyzing stress relaxation and creep of viscoelastic materials based on standard linear solid model derived with finite loading rate. *Polymers*, 14(10), 2124.
5. Che-Yu Lin, Pei-Yu Chen, Shin-Han Wu, Yio-Wha Shau, Chung-Li Wang (2022). Biomechanical effects of plastic heel cup on plantar fasciitis patients evaluated by ultrasound shear wave elastography. *Journal of Clinical Medicine*, 11(8), 2150.
6. Che-Yu Lin*, Wei-Chun Chen (2022). How complex viscoelastic behaviors within a viscoelastic three-layer structure affect the measurement accuracy of ultrasound viscoelastic creep imaging. *Mechanics of Advanced Materials and Structures*. In press.
7. Che-Yu Lin, Chia-Ching Chou, Lan-Rong Chen, Wei-Ting Wu, Po-Cheng Hsu, Tung-Han Yang, Ke-Vin Chang (2022). Quantitative analysis of dynamic subacromial ultrasonography: reliability and influencing factors. *Frontiers in Bioengineering and Biotechnology*, 10, 830508.
8. Fang-Jung Chen, Yu-Sheng Hsiao, I-Hsiang Liao, Chun-Ting Liu, Po-I Wu, Che-Yu Lin, Nai-Chen Cheng, Jiashing Yu (2021). Rational design of a highly porous electronic scaffold with concurrent enhancement in cell behaviors and differentiation under electrical stimulation. *Journal of Materials Chemistry B*, 9(37), 7674-7685.
9. Che-Yu Lin*, Jiunn-Horng Kang (2021). Mechanical properties of compact bone defined by the stress-strain curve measured using uniaxial tensile test: a concise review and practical guide. *Materials*, 14(15), 4224.
10. Che-Yu Lin*, Siang-Rong Lin (2021). Investigating the accuracy of ultrasound viscoelastic creep imaging for measuring

the viscoelastic properties of a single-inclusion phantom. *International Journal of Mechanical Sciences*, 199, 106409.

11. Che-Yu Lin*, Ke-Vin Chang (2021). Effects of loading and boundary conditions on the performance of ultrasound compressional viscoelastography: a computational simulation study to guide experimental design. *Materials*, 14(10), 2590.
12. Ke-Vin Chang, Wei-Ting Wu, Yi-Hsiang Chiu, Che-Yu Lin (2021). Letter to editor: comment on reliability of real-time sonoelastography in the diagnosis of supraspinatus tendinopathy. *Ultrasound Quarterly*, 37(1), 75-76.
13. Che-Yu Lin* (2020). Ramp-creep ultrasound viscoelastography for measuring viscoelastic parameters of materials. *Materials*, 13(16), 3593.
14. Ke-Vin Chang, Wei-Ting Wu, Jeng Chen, Che-Yu Lin (2020). Strain ratio of ultrasound elastography for the evaluation of tendon elasticity. *Korean Journal of Radiology*, 21(3), 384-385.
15. Che-Yu Lin* (2020). Alternative form of standard linear solid model for characterizing stress relaxation and creep: including a novel parameter for quantifying the ratio of fluids to solids of a viscoelastic solid. *Frontiers in Materials*, 7, 11.
16. Seyedali Sadeghi, Che-Yu Lin, Daniel H Cortes (2018). Narrowband shear wave generation using sinusoidally modulated acoustic radiation force. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 66(2), 264-272.
17. Seyedali Sadeghi, Che-Yu Lin, Dov A Bader, Daniel H Cortes (2018). Evaluating changes in shear modulus of elbow ulnar collateral ligament in overhead throwing athletes over the course of a competitive season. *Journal of Engineering and Science in Medical Diagnostics and Therapy*, 1(4).
18. Chueh-Hung Wu, Che-Yu Lin, Ming-Yen Hsiao, Yu-Hsuan Cheng, Wen-Shiang Chen, Tyng-Guey Wang (2018). Altered stiffness of microchamber and macrochamber layers in the aged heel pad: shear wave ultrasound elastography evaluation. *Journal of the Formosan Medical Association*, 117(5), 434-439.
19. Che-Yu Lin, Seyedali Sadeghi, Dov A Bader, Daniel H Cortes (2018). Ultrasound shear wave elastography of the elbow ulnar collateral ligament: reliability test and a preliminary case study in a baseball pitcher. *Journal of Engineering and Science in Medical Diagnostics and Therapy*, 1(1).
20. Che-Yu Lin*, Hung-Jui Chuang, Daniel H Cortes (2017). Investigation of the optimum heel pad stiffness: a modeling study. *Australasian Physical & Engineering Sciences in Medicine*, 40(3), 585-593.
21. Che-Yu Lin, Chueh-Hung Wu, Levent Özçakar (2017). Restoration of heel pad elasticity in heel pad syndrome evaluated by shear wave elastography. *American Journal of Physical Medicine & Rehabilitation*, 96(5), e96.
22. Che-Yu Lin, Pei-Yu Chen, Yio-Wha Shau, Hao-Chih Tai, Chung-Li Wang (2017). Spatial-dependent mechanical properties of the heel pad by shear wave elastography. *Journal of Biomechanics*, 53, 191-195.
23. Che-Yu Lin, Pei-Yu Chen, Yio-Wha Shau, Chung-Li Wang (2017). An artifact in supersonic shear wave elastography. *Ultrasound in Medicine & Biology*, 43(2), 517-530.
24. Che-Yu Lin, Chen-Chiang Lin, Yang-Chen Chou, Pei-Yu Chen, Chung-Li Wang (2015). Heel pad stiffness in plantar heel pain by shear wave elastography. *Ultrasound in Medicine & Biology*, 41(11), 2890-2898.
25. Ming-Yen Hsiao, Yi-Ching Chen, Che-Yu Lin, Wen-Shian Chen, Tyng-Guey Wang (2015). Reduced patellar tendon elasticity with aging: in vivo assessment by shear wave elastography. *Ultrasound in Medicine & Biology*, 41(11), 2899-2905.
26. Che-Yu Lin, Yio-Wha Shau, Chung-Li Wang, Jiunn-Horng Kang (2015). Modeling and analysis of the viscoelastic response of the ankle ligament complex in inversion ankle sprain. *Annals of Biomedical Engineering*, 43(9), 2047-2055.
27. Che-Yu Lin, Jiunn-Horng Kang, Chung-Li Wang, Yio-Wha Shau (2015). Relationship between viscosity of the ankle joint complex and functional ankle instability for inversion ankle sprain patients. *Journal of Science and Medicine in Sport*, 18(2), 128-132.
28. Che-Yu Lin, Yio-Wha Shau, Chung-Li Wang, Huei-Ming Chai, Jiunn-Horng Kang (2013). Quantitative evaluation of the viscoelastic properties of the ankle joint complex in patients suffering from ankle sprain by the anterior drawer test. *Knee Surgery, Sports Traumatology, Arthroscopy*, 21(6), 1396-1403.
29. Gin-Shin Chen, Che-Yu Lin, Jong Seob Jeong, Jonathan M Cannata, Win-Li Lin, Hsu Chang, K Kirk Shung (2012). Design and characterization of dual-curvature 1.5-dimensional high-intensity focused ultrasound phased-array transducer. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, 59(1), 150-155.