

個人著作

A. Journal Papers

1. **M. Y. Wei***, and Y. P. Chiang, “A DSP-based sensorless dual-axis force-feedback control system for PMSM drives in industrial simulation applications,” *IEEE Journal of Emerging and Selected Topics in Industrial Electronics*, 2026. (ESCI) (Accepted)
2. **M. Y. Wei***, “Modeling and predictive control of electromechanical actuators for all-electric nose landing gear systems,” *IET Electric Power Applications*, vol. 19, no. 1, pp. 1-17, Apr. 2025. (SCI)
3. **M. Y. Wei***, and W. H. Cai, “Design and implementation of multi-axis motion control in flight simulator systems,” *J. CMSE*, vol. 46, no. 1, pp. 1-15, Feb. 2025. (SCI)
4. **M. Y. Wei***, and Y. P. Chiang, “Empirical validation of large-angle and long-distance helicopter training scenarios,” *IEEE Access*, vol. 12, pp. 151876-151892, Oct. 2024. (SCI)
5. **M. Y. Wei***, and H. C. Yuan, “Advanced servo control and AI Integration in 3-DoF platforms for enhanced simulation interactivity,” *Appl. Syst. Innov.*, vol. 7, no. 4, pp. 57, June 2024. (ESCI)
6. **M. Y. Wei***, “Design and implementation of an encoder calibration system for improved resolution and accuracy in IPMSM drive with embedded software,” *Journal of the Chinese Institute of Engineers*, vol. 47, no. 6, pp. 719-731, June 2024. (SCI)
7. **M. Y. Wei***, “Design and control of a three-axis motion servo control system based on a CAN bus,” *Energies*, vol. 16, no. 10, pp. 4408, May 2023. (SCI)
8. **M. Y. Wei***, S. A. Fang, and J. W. Liu, “Design and implementation of a new training flight simulator system,” *Sensors*, vol. 22, pp. 7933,

Oct. 2022. (SCI)

9. **M. Y. Wei***, Y. L. Yeh, J. W. Liu, and H. M. Wu, "Design and control of a multi-axis servo motion chair system based on a microcontroller," *Energies*, vol. 15, pp. 4401, June 2022. (SCI)
10. **M. Y. Wei***, "Design of a DSP-based motion-cueing algorithm using the kinematic solution for the 6-DoF motion platform," *Aerospace*, vol. 9, pp. 203, Oct. 2022. (SCI)
11. **M. Y. Wei***, Y. L. Yeh, S. W. Chen, H. M. Wu, and J. W. Liu, "Design, analysis, and implementation of a four-DoF chair motion mechanism," *IEEE Access*, vol. 9, pp. 124986-124999, Sep. 2021. (SCI)
12. **M. Y. Wei***, "Design and implementation of inverse kinematics and monitoring motion system for 6Dof platform," *Applied Science*, vol. 11, pp. 9330, Oct. 2021. (SCI)
13. **M. Y. Wei**, and T. H. Liu*, "Design and implementation of an on-line tuning adaptive controller for synchronous reluctance motor drives," *IEEE Transactions on Industrial Electronics*, vol. 60, no. 9, pp. 3644-3657, Sep. 2013. (SCI)
14. **M. Y. Wei**, T. H. Liu*, and P. C. Pan, "Rotor position estimator and adaptive controller design for wide-range adjustable speed synchronous reluctance motor drive systems," *International Journal of Electrical Engineering*, vol. 20, no. 1, pp. 1-14, Sep. 2013. (EI)
15. **M. Y. Wei**, and T. H. Liu*, "A novel adaptive controller for a synchronous reluctance motor position control system," *Electronic Monthly*, vol. 11, no. 1, pp. 72-83, Jan. 2013.
16. **M. Y. Wei**, and T. H. Liu*, "A high-performance sensorless position control system of a synchronous reluctance motor using dual current-slope estimating technique," *IEEE Transactions on Industrial*

Electronics, vol. 59, no. 9, pp. 3411-3426, Sep. 2012. (SCI)

17. C. K. Lin, T. H. Liu*, **M. Y. Wei**, L. C. Fu, and C. F. Hsiao, "Design and implementation of a chattering-free non-linear sliding-mode controller for interior permanent synchronous drive systems," *IET Proceedings Electric Power Applications*, vol. 6, no. 6, pp. 332-344, Jun. 2012. (SCI)
18. **M. Y. Wei**, T. H. Liu*, and C. K. Lin, "Design and implementation of a passivity-based controller for sensorless synchronous reluctance motor drive systems," *IET Proceedings Electric Power Applications*, vol. 5, no. 4, pp. 335-349, Apr. 2011. (SCI)
19. **M. Y. Wei**, and T. H. Liu*, "Design and implementation of a passive controller for sensorless synchronous reluctance motor control systems," *Electronic Monthly*, vol. 8, no. 6, pp. 58-68, Nov. 2010.

B. Conference Papers:

1. **M. Y. Wei***, and Y. P. Chiang, "Design and experimental validation of a dual-axis force-feedback system with LoRa-based remote parameter configuration," *2026 International Automatic Control Conference (CACS 2026)*, Taichung, Taiwan, 2026. (Submitted)
2. **M. Y. Wei***, and B. H. Wu, "Application of autonomous mobile robots with visual guidance, energy-saving navigation, and electric lifting devices in the smart industry," in *Proc. IEEE IPEC-2026*, Nagasaki, Japan, pp. 1-5, Jun. 2026.
3. **M. Y. Wei***, and W. X. Chen, "A study on frequency-domain feature diagnosis technology for interior permanent magnet synchronous motor control systems based on PCB design," in *Proc. IEEE 20th International Microsystems, Packaging, Assembly and Circuits*

- Technology Conference (IMPACT 2025)*, Taipei, Taiwan, pp. 467-470, Oct. 2025.
4. **M. Y. Wei***, and Y. P. Chiang, “Implementation of a dual-DoF force feedback joystick control system based on DSP,” in *Proc. IEEE PEDS-2025*, Penang, Malaysia, pp. 1-5, Jul. 2025.
 5. **M. Y. Wei***, Y. Y. Chen, and W. H. Cai, “Design and dynamic response optimization of electromechanical actuator drive system,” in *Proc. IEEE ECICE-2024*, Yunlin, Taiwan, pp. 1-5, Jul. 2024.
 6. **M. Y. Wei***, and S. W. Chen, “Optimal control-based motion cueing algorithm design for 6DoF motion platform,” in *Proc. IEEE ICKII-2021*, Taichung, Taiwan, pp. 216-222, Jul. 2021.
 7. **M. Y. Wei***, “Design and implementation of the inverse kinematics and monitoring module for six-axis crank arm platform,” in *Proc. IEEE ICKII-2021*, Taichung, Taiwan, pp. 210-215, Jul. 2021.
 8. **M. Y. Wei**, and T. H. Liu*, “On-line tuning adaptive controller design for a synchronous reluctance motor drive system,” in *Proc. IEEE IPENC-2012*, Harbin, China, pp. 64-68, Jun. 2012.
 9. **M. Y. Wei**, and T. H. Liu*, “Rotor position and speed estimation for a synchronous reluctance motor using dual current-slope technique,” in *Proc. IEEE ICIT-2011*, Alabama, USA, pp. 176-181, Mar. 2011.

C. Book

1. **M. Y. Wei**, “Chapter 2: Design and Development of Servo Drive Control System Based on DSP,” in *PID Control - New Design Methods and Applications*, London, UK: IntechOpen, Jan. 2025. (ISBN 978-0-85466-477-1)

D. Patents

1. 魏銘彥、蔣彥彬，「雙軸力回饋控制系統及其方法」，台灣發明專利。(第 I925731 號，20260511-20450729)
2. 魏銘彥、陳文傑、謝少涵，「移動模擬艙體及其應用」，台灣新型專利。(第 M567127 號，20180921-20280410)
3. 魏銘彥、陳文傑、謝少涵，「射擊模擬裝置」，台灣設計專利。(第 D194277 號，20181121-20300321)
4. T. H. Liu, and M. Y. Wei, “A Controlling Method of Synchronous Reluctance Motor,” U.S. Invention Patent. (發明第 US9143074 號)
5. 劉添華、魏銘彥，「同步磁阻電動機的控制方法」，台灣發明專利。(發明 I469501 號)