Curriculum vitae

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Yu, Huai-Te
No. 75, Shiyuan Rd., Daxi Dist., Taoyuan City 33551, Taiwan, the Republic of China (R. O. C.)
Telephone (work): 886-3-3809870
Fax (work): 886-3-3895924
Email: ccitb03010@ndu.edu.tw or yuhuaite@gmail.com

EDUCATION

University of Michigan, Ann Arbor, Michigan, U. S. A.
Ph.D. in Aerospace Engineering (2014)
Dissertation: Unsteady Aerodynamics of Pitching Flat Plate Wings
Advisor: Luis P. Bernal

Naval Postgraduate School, Monterey, California, U. S. A.
M. S. in Mechanical Engineering (2006)
Thesis: Experimental Investigation and Numerical Prediction of the Performance of a Cross-Flow Fan
Advisor: Garth V. Hobson

Chung Cheng Institute of Technology, Taoyuan, Taiwan, R. O. C.
B. A. in Mechanical Engineering (2000)

WORK EXPERIENCE

1. Chair, 2024/7 - present, Department of Mechanical and Aerospace Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
2. Associate Professor, 2021/2 - present, Department of Mechanical and Aerospace Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
3. Director of Mechanical Engineering Section, 2020/4 - 2024/6, Department of Mechanical and Aerospace Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
4. Assistant Professor, 2015/7 - 2021/1, Department of Mechanical and Aerospace Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
5. Assistant, 2015/8 - 2021/4, Learning and Counseling Center, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
6. Logistics Officer, 2014/9 - 2015/1, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
7. Research Assistant, 2014/7 - 2014/8, Department of Aerospace Engineering, University of Michigan, Ann Arbor, U. S. A.
8. Graduate Student Instructor, 2013/9 - 2014/4, Department of Aerospace Engineering, University of Michigan, Ann Arbor, U. S. A.
9. Graduate Student Research Assistant, 2011/9 - 2013/8, Department of Aerospace Engineering, University of Michigan, Ann Arbor, U. S. A.
10. Research and Development Officer, 2009/8 - 2010/08, Weapon System Center, National

Defense University, Taiwan, R. O. C.

11. Consoler of Cadet Company, 2008/12 - 2009/08, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
12. Teaching Assistant, 2006/12~2008/12, General Education Center, National Defense University, Taiwan, R. O. C.
13. Teaching Assistant, 2001/9 - 2004/9, Department of Mechanical Engineering, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
14. Platoon leader, 2000/11 - 2001/8, Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.

RESEARCH SKILL

1. Good at Particle Image Velocimetry (PIV) system, direct force measurement, and flow visualization (dye injection in water tunnel)
2. Capable of using MATLAB in acquisition and SolidWorks in designing
3. Familiar with the following computational software: CFX, CFDRC, and ANSYS Fluent

AWARDS/HONORS

1. 2023 Excellent Teacher Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
2. 2023 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
3. Medal of Outstanding Staff, R. O. C., 2022.
4. 2021 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
5. Poster Award (Second Place) at the 2020 MOST Aerospace Engineering Program Research Project Presentation, received from the Ministry of Science and Technology (MOST), R. O. C. (Research project entitled “Investigation of Body-Rotation-Acceleration Effect on Vortex Formation and Hydrodynamic Force,” with the grant number MOST 108-2221-E-606-006)
6. 2020 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
7. Our team won the New Talent Award for the Drone Swarm Exhibition Match (Group B) held by the Southern Taiwan Science Park Bureau, Ministry of Science and Technology, R. O. C., on Nov. 30, 2019, for the successful demonstration of controlling ten drones in swarming.
8. Advisor of Mr. Ting-Yi Li for Outstanding Master’s Thesis Award (Honorable Mention), Chinese Society of Mechanical Engineering, R. O. C., 2019.
9. 2019 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
10. 2018 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
11. 2017 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
12. Order of Loyalty and Diligence, R. O. C, 2017.
13. Medal of Army Achievement, R. O. C., 2017.

14. 2016 Excellent Learning Tutor Award, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
15. The first place in Men's Doubles at the 2015 tennis tournament by the National Defense University
16. Medal of Scholarship, R. O. C., 2014.
17. Medal of Excellent Efficiency, Army, R. O. C., 2009.
18. The fourth place in Men's Doubles at the 2009 tennis tournament by National Defense University, Taiwan, R. O. C.
19. 2003 Excellent Educator and Trainer, received from Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.

GRANTS

1. Scholarship for the doctoral degree from August 2010 to August 2014, sponsored by Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.
2. Rackham Travel Grant at University of Michigan, Ann Arbor, U.S.A., January 2012, and January 2013.
3. Scholarship for master's degree at Naval Postgraduate School from September 2004 to December 2006, sponsored by Chung Cheng Institute of Technology, National Defense University, Taiwan, R. O. C.

SOCIETY MEMBERSHIPS

1. American Institute of Aeronautics and Astronautics (AIAA) Sensor Member (Since 2024/3/21)
2. American Institute of Aeronautics and Astronautics (AIAA) Member (2011/12/9 – 2024/3/20)
3. Aeronautical and Astronautical Society of Republic of China (AASRC) Lifetime member

PUBLICATIONS

Archival Journal Paper

1. **Yu, H.-T.**, "Starting Flow by Pitch Acceleration of Flat Plate Foil," *AIAA Journal*, Vol. 58, No. 10, 2020, pp. 4287-4303. https://doi.org/10.2514/1.J059320
2. **Yu, H.-T.**, and Bernal, L.P., "Effects of Pivot Location and Reduced Pitch Rate on Pitching Rectangular Flat Plates," *AIAA Journal*, Vol. 55, No. 3, 2017, pp. 702-718. https://doi.org/10.2514/1.J055244
3. **Yu, H.-T.**, "Low Reynolds Number Aerodynamics of Finite Wing at Low Reduced Pitch Rates," *Journal of Aeronautics, Astronautics and Aviation*, Vol. 48, No. 2, pp. 83-94, 2016. https://doi.org/10.6125/15-1123-870

National Conference Paper

1. Lin, Y.-H., and **Yu, H.-T.**, "A Study of Acceleration Control of a Stepping Motor for Wing Rotation." Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 10-86, Dec. 2024.
2. **Yu, H.-T.**, "On Selection of Boundary Collocation Point Location of a Discrete Vortex

Method," Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 11-08, Nov. 2023.
3. Chuang, S.-Y., and **Yu, H.-T.**, "An Experimental Investigation of Aerodynamic Performance of Symmetric Airfoils in Rotational Acceleration," Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 01-07, Oct. 2021.
4. Lin, T.-Y and **Yu, H.-T.**, "Numerical Investigation of Flat-Plate Airfoil in Low Reynolds Number Flow: Constant Pitch Acceleration vs. Constant Pitch Rate," Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 01-03, Dec. 2018.
5. Lin, Y.-M. and **Yu, H.-T.**, "Numerical Study of Pitching Flat Plate at Constant Rate in Low Reynolds Number Flow," Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 02-11, Dec. 2018.
6. **Yu, H.-T.**, and Chang, J.-C., "A Follow-up Study on LASSI Performance of Students Enrolled at Military School in 2017," 27th Conference on National Defense Science and Technology, Nov. 2018.
7. **Yu, H.-T.**, "Numerical Study of Initial Acceleration Effects on Pitching Flat-Plate Airfoil at Constant Rate," Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 01-04, Nov. 2017.
8. **Yu, H.-T.**, and Chang, J.-C., "Learning and Study Strategies Inventory on Freshman Learning at Military School in Years of 2015 and 2016," 26th Conference on National Defense Science and Technology, Nov. 2017.
9. **Yu, H.-T.**, and Liu, S.-W., "Pressure Evaluation from PIV Velocity Field over Pitching Flat Plates using Bernoulli Equation," 2016 Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 01-02, Nov. 2016.
10. **Yu, H.-T.**, and Chang, J.-C., "Learning and Study Strategies Inventory for Assessing Freshman Learning at Military School," 25th Conference on National Defense Science and Technology, Nov. 2016.
11. **Yu, H.-T.**, "Aerodynamics of Low-Aspect-Ratio Wing at Low Reduced Pitch Rates," 2015 Aeronautical and Astronautical Society of the Republic of China Conference, AASRC Paper 01-11, Dec. 2015. (Submitted to Journal of Aeronautics, Astronautics and Aviation)

International Conference Paper

1. **Yu, H.-T.**, "Some Considerations for Large Angle Unsteady Thin Airfoil Theoretical Modeling," AIAA SciTech 2023 Forum, National Harbor, MD & Online, Jan. 2023. (eISBN: 978-1-62410-699-6)
   https://doi.org/10.2514/6.2023-0996
2. **Yu, H.-T.**, and Bernal, L.P., "Transient Force Evolution of Swept Flat-Plate Wings Pitching at a Constant Acceleration Amplitude," 2018 AIAA Aerospace Sciences Meeting, AIAA Paper 2018-2055, Jan. 2018. (eISBN: 978-1-62410-524-1)
   https://doi.org/10.2514/6.2018-2055
3. **Yu, H.-T.**, and Bernal, L.P., "Direct Force Measurements during Transient Flow about Pitching Flat Plates," 55th AIAA Aerospace Sciences Meeting, AIAA Paper 2017-0995, Jan. 2017. (eISBN: 978-1-62410-447-3)
   https://doi.org/10.2514/6.2017-0995
4. **Yu, H.-T.,** and Bernal, L. P., "Experimental Investigation of Three-Dimensional Flow Development by Pitching Low-Aspect-Ratio Wing," 54th AIAA Aerospace Sciences Meeting, AIAA Paper 2016-1066, Jan. 2016. (eISBN: 978-1-62410-393-3)

https://doi.org/10.2514/6.2016-1066

5. Bernal, L. P., and **Yu, H.-T.**, "Unsteady Aerodynamics of Low Reynolds Number Flight," 53rd AIAA Aerospace Sciences Meeting, AIAA Paper 2015-0038, Jan. 2015. (eISBN: 978-1-62410-343-8)
   https://doi.org/10.2514/6.2015-0038
6. **Yu, H.-T.**, Bernal, L. P., Granlund, K., and Ol, M. V., "Aerodynamics of Pitching Wings: Theory and Experiments," 32nd AIAA Applied Aerodynamics Conference, AIAA Paper 2014-2881, June 2014. (eISBN: 978-1-62410-288-2)
   https://doi.org/10.2514/6.2014-2881
7. **Yu, H.-T.**, Bernal, L. P., and Ol, M. V., "Effects of Planform Geometry and Pivot Axis Location on the Aerodynamics of Pitching Low Aspect Ratio Wings," 43rd Fluid Dynamics Conference, AIAA Paper 2013-2992, June 2013. (eISBN: 978-1-62410-214-1)
   https://doi.org/10.2514/6.2013-2992
8. **Yu, H.-T.** and Bernal, L. P., "Effect of Pivot Point on Aerodynamic Force and Vortical Structure of Pitching Flat Plate Wings," 51st AIAA Aerospace Sciences Meeting, AIAA Paper 2013-0792, Jan. 2013. (eISBN: 978-1-62410-181-6)
   https://doi.org/10.2514/6.2013-792
9. **Yu, H.-T.**, Bernal, L. P. and Morrison, C., "Experimental Investigation of Pitch Ramp-Hold-Return Motion of Flat Plates at Low Reynolds Number," 50th AIAA Aerospace Sciences Meeting, AIAA Paper 2012-51, Jan. 2012. (eISBN: 978-1-60086-936-5)
   https://doi.org/10.2514/6.2012-51
10. Sun, W.-H., Miao, J.-M., **Yu, H.-T.**, Tai, C.-H., and Hung, C.-C., "Low Reynolds Number Unsteady Aerodynamic Characteristics of Flapping Corrugated Airfoil," 7th International Conference on Computational Fluid Dynamics in the Minerals and Process Industries, 2009.
11. Miao, J.-M., Chen, P.-H., and **Yu, H.-T.**, "Effect of Herringbone Grooves Pattern on the Performance of a Hydrodynamic Journal Bearing," 2nd Asian Symposium on Computational Heat Transfer and Fluid Flow, 2009.
12. **Yu, H.-T.**, Hobson, G. V., Gannon, A., and Platzer, M., "Experimental Investigation and Numerical Prediction of the Performance of a Cross-Flow Fan," 12th International Symposium on Transport Phenomena and Dynamics of Rotating Machinery, 2008.

LICENSES / CERTIFICATION

1. Band 3 in the Teaching Knowledge Test Module 1: Background to Language Learning and Teaching, Cambridge Assessment English, Cambridge, United Kingdom, 2021.
2. Band 3 in the Teaching Knowledge Test Module 2: Lesson Planning and Use of Resources, Cambridge Assessment English, Cambridge, United Kingdom, 2021.
3. Band 3 in the Teaching Knowledge Test Module 3: Managing the Teaching and Learning Process, Cambridge Assessment English, Cambridge, United Kingdom, 2021.
4. Remote Pilot Certificate (General), Civil Aeronautics Administration, Ministry of Transportation and Communications, R. O. C., 2021.
5. Aircraft Maintenance Technician Certificate (Class C), Skill Evaluation Center of Workforce Development Agency, Ministry of Labor, R. O. C., 2019.
6. Project Management Assistant, National Project Management Association, R. O. C., 2008.
7. Computerized Numerical Control Lathe Technician Certificate (Class B), Council of Labor Affairs, Executive Yuan, R.O.C., 2000.
8. Refrigerating and Air-condition Technician Certificate (Class C), Council of Labor Affairs,

Executive Yuan, R. O. C., 2000.

9. Shield Metal Arc Welding Technician Certificate (A1F2), Council of Labor Affairs, Executive Yuan, R. O. C., 1999.

LANGUAGES

Standard Chinese, Taiwanese, and English

INTERESTS

Tennis (Excellent); Basketball (Skills); Badminton (Stable)