Yiding Cao

1. Name and academic rank:

Yiding Cao, Professor and Fellow of ASME

2. Education – degree, discipline, institution, year

Ph.D. Mechanical Engineering, University of Dayton, Ohio, December 1991
M.S. Thermal Engineering, Chongqing University, PRC, July 1984
B.S. Power Engineering, Harbin Engineering University, PRC, February 1982

3. Academic experience – institution, rank, title

22 Years
Professor, Florida International University, 2008-present
Associate Professor, Florida International University, 1998-2007
Assistant Professor, Florida International University, 1993-1998
Research Scientist/Research Associate, Wright State University, Dayton, Ohio, 1989-1993.
Instructor, Dept. of Chemical Engineering, Chengdu University of Science and Technology, Chengdu, PRC, 1984-1986

4. Non-Academic experience: N/A

5. Certifications or professional registrations: N/A

6. Current membership in professional organizations

American Society of Mechanical Engineers (ASME)
Fellow of American Society of Mechanical Engineers (ASME)

7. Honors and awards

Excellence in Research, FIU, 1997
World's Top 2% Most Cited Scientists, 2020

8. Service activities (within and outside of the institution)
Graduate Program Director of FIU MME Department
Committees: College Curriculum Committee, College Faculty Council, College T&P Committee, College Award Committee, College Library Committee, Chair of Department T&P Committee, Chair of Department NTTP Committee, Member and Chair of Faculty Search & Screen Committee, NSF Reviewer, DOE Reviewer. Editorial board member of Journal of Frontiers in Heat Pipe Science and Technology. Reviewer for more than 12 Journals.

9. Briefly list the most important publications and presentations from the past five years

- Alam, M. and Cao, Y., 2021, "Static and Modal Analysis of a Crankshaft Reciprocating Driver for Reciprocating-Airfoil (RA) Driven VTOL Aircraft," *Journal of Mechanics Based Design of Structures and Machines*, accepted for publication (in press).

- Imumbhon, J., Alam, M., and Cao, Y., 2021, "Design and Structural Analyses of a Reciprocating S1223 High-Lift Wing for an RA-Driven VTOL UAV," *Journal of Aerospace,* 8(8), 214; https://doi.org/10.3390/aerospace8080214.
- Alam, M., Almas, M., and Cao, Y., 2021, "Experimental and Analytical Studies of Reciprocating-Flow Heat Transfer in a Reciprocating Loop Device for Electronics Cooling," submitted to Journal of Case Studies in Thermal Engineering.
- Cao, Y., 2019, Wear Management Device for Electromagnetic Launchers, US patent, under review.
- Cao, Y., 2019, Back-Chamber Internal Combustion Engines, US patent, under review.
- Alam, M., Popoola, O., Cao, Y., 2019, MECHANICALLY DRIVEN OSCILLATING FLOW COOLING LOOPS – A REVIEW, Frontiers in Heat and Mass Transfer (FHMT) 13 - 17 (2019), DOI: http://dx.doi.org/10.5098/hmt.13.17.
- Cao, Y., 2018, Dry-Cooing System**,** US patent No. 10,030,913.
- Popoola O. and Cao Y., 2017, "Investigation of a reciprocatory driven heat loop to high heat single-phase liquid cooling for temperature uniformity." *Global J Res Eng.,*" vol 17, no 4-A, 2017.
- Soleimanikutanaei, S., Almas, M., Popoola, O. T., & Cao, Y., 2019, "Reciprocating liquid-assisted system for electronic cooling applications." *Heat Transfer—Asian Research*,vol. 48, no. 1, pp. 286-299, 2019. https://doi.org/10.1002/htj.21384.
- Popoola, O.T., Bamgbade, A., and Cao, Y., 2016, "A Numerical Model of a Reciprocating-Mechanism Driven Heat Loop (RMDHL) for Two-Phase High Heat Flux Cooling," *ASME Journal of Thermal Science and Engineering Applications,* 8(4), 041006, doi: 10.1115/1.4034059.
- Reding, B. and Cao, Y., 2016, "Sector Rotating Heat Pipe with Interconnected Branches and Reservoir for Turbomachinery Cooling," *J. Heat Transfer* 139 (1), 014503, doi: 10.1115/1.4034487.
- Hu, L., Chen, D., Li, L., Cao, Y., Yuan, D., Wang, J., and Pan, L., 2015, "Investigation on the performance of the supercritical Brayton cycle with CO_2-based binary mixture as working fluid for an energy transportation system of a nuclear reactor," *Energy*, Vol. 89, pp. 874–886.
- Wang, F., Cao, Y. and Zhou, J., 2015, "Thermodynamic analysis of high-temperature helium heated fuel reforming for hydrogen production," *International Journal of Energy Research*, Vol. 39, pp. 418–432.
- Wang, F., Cao, Y., and Wang, G., 2015, "Thermoelectric generation coupling methanol steam reforming characteristic in microreactor", *Energy*, Vol. 80, pp. 642-653.
- Chen, D., Ye, X., and Cao, Y., 2015, "FULL-CYCLE SIMULATION OF DIESEL ENGINE PERFORMANCE WITH THE EFFECT OF HEAT TRANSFER TO THE ENVIRONMENT," *Journal of Heat Transfer Research*, Vol. 47, Issue 1.

10. Briefly list the most recent professional development activities

Attended five sessions of Provost's Hybrid Program professional development, 2020.