



吳宗信教授 (Jong-Shinn Wu, Ph.D.) 簡介



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■ Current Position:

- 2023.1- Director General, Taiwan Space Agency (TASA), Taiwan (www.tasa.org.tw) (on leave from NYCU)
- 2007.1- Head, Aerothermal & Plasma Physics Laboratory (APPL), Department of Mechanical Engineering, National Chiao Tung University, Hsinchu, Taiwan.

■ Current Research Interests:

Space Systems Engineering, Computational and Experimental Low-temperature Plasma Physics and Chemistry, Plasma Medicine, Plasma Agriculture, Hybrid Rocket and Electrical Propulsion System Development, Computational Rarefied Gas Dynamics (DSMC), Computational Fluid Dynamics (CFD), and Parallel Scientific Computing. Details can be found at <https://appl.web.nctu.edu.tw>, and <http://arcc.tw>.

■ Education:

- Ph.D. Department of Aerospace Engineering, The University of Michigan, Ann Arbor, Michigan, U.S.A., 1994.
- M.S. Department of Mechanical Engineering, National Taiwan University, Taiwan, 1988.
- B.S. Department of Mechanical Engineering, National Taiwan University, Taiwan, 1986.

■ Academic Experiences:

- 2021 Co-Chair
32nd International Symposium on Rarefied Gas Dynamics, July, 2020, Seoul, South Korea
- 2020.07 Co-Chair
16th International Conference on Flow Dynamics, November 6-8, 2019, Sendai, Japan
- 2019.11 International Organizing Committee
10th International Conference on Reactive Plasma (ICRP), July 14-19, 2019, Sapporo, Hokkaido, Japan.
- 2018.10- President
Taiwanese Association of Plasma Science & Technology (TAPST)

Guest Editor
 Computers & Mathematics with Applications
 2016.11-2020.10 Guest Editor
 IEEE Transactions on Plasma Science (APSPT-9)
 2015.05-2016.09 International Scientific Committee
 World Congress on Computational Mechanics (WCCM)
 2015.12-2016.12 IACUC Committee
 Institutional Animal Care and Use Committee, NCTU, Taiwan
 2015.03-2017.02 Review Board Member of Aerospace-Space Research Field
 Ministry of Science and Technology (MOST), Taiwan
 2015.03-2016.05 Scientific Program Committee
 Subcommittee: Plasma Applications. The 18th International
 2015.01-2017.12 Congress on Plasma Physics (ICPP 2016), June 17-July 1, 2016,
 Kaohsiung, Taiwan.
 2015.01-2016.07 Co-Chair
 The 18th International Conference on Finite Elements in Flow Problems,
 16-18 March 2015, Taipei, Taiwan (~200 participants)
 2015.03 Core Member (one of the 12 core members from Switzerland, Italy,
 Germany, Taiwan, France, USA and UK, convened by Dr. Marco Fulle -
 INAF Trieste Italy - IDS Rosetta Mission)
 2014.08-2016.07 "Analysis of the circumnuclear gas and dust coma of comet 67P, the
 Rosetta target, on the basis of 3D and 3D+t model fits to data collected
 from part of the orbiter payload" International Teams in Space and Earth
 Sciences (ISSI/ISSI-BJ Joint Call, Europe)
 2014.01-2014.12 Guest Editor
 IEEE Transactions on Plasma Science (APSPT-8)
 2013.12 General Chair
 8th Asia-Pacific International Symposium on the Basics and Applications
 of Plasma Technology (APSPT-8), Dec. 20-22, 2013
 2013.11- International Advisory Committee Member
 International Conference on Fluid Dynamics (ICFD), Sendai, Japan
 ISPlasma, Nagoya, Japan
 2010.05 General Chair
 The 22nd International Parallel Computational Fluid Dynamics (ParCFD
 2010), Kaohsiung, Taiwan, May 17-21, 2010
 2010.01- International Advisory Committee Member
 Asia Computational Fluid Dynamics
 2010- International Advisory Committee Member
 International Conference on Parallel Computational Fluid Dynamics
 2010-2012 Guest Editor
 Computers & Fluids (CAF) (ParCFD 2010, 2011)
 2008-2010 Associate Editor
 International Journal of Plasma Science and Engineering (IJPSE)
 2006- Editorial Board Member
 Int. J. Theoretical & Applied Mechanics

2007.08-2007.08 General Chair
14th National Computational Fluid Dynamics Conference, Nantou, Taiwan, August 16-18, 2007

2006.11-2008.10 Technical Consultant
Industrial Technology Research Institute, Hsinchu, Taiwan

2012.05-2021.07 Director/Founder
Advanced Rocket Research Center (ARRC), NYCU, Taiwan

2006.10-2008.10 Director
Center for Manufacturing & Thermal-fluid Science, NCTU, Taiwan.

2006.08-2009.07 Review Board Member of Thermal-Fluid Research Field
Ministry of Science and Technology (MOST), Taiwan

2016.01-2021.07 Distinguished Professor, Department of Mechanical Engineering, National Yang Ming Chiao Tung University

2005.08-2015.12 Professor
Dept. Mechanical Engineering, National Chiao Tung University

2002.08-2005.07 Associate Professor
Dept. Mechanical Engineering, National Chiao Tung University

1998.02-2002.07 Assistant Professor
Dept. Mechanical Engineering, National Chiao Tung University

1995.11-1998.02 Associate Research Scientist
National Space Program Office

1994.08-1995.10 Postdoctoral Research Fellow
Dept. Aerospace Engineering, University of Michigan, Ann Arbor, Michigan, USA.

■ Industrial/Institutional Experiences:

2021.8-2022.12 Director General, National Space Organization (NSPO), Taiwan (on leave from NYC)

2016.8-2018.5. Chief Executive Officer (CEO), Taiwan Innovative Space, Inc., Miaoli, Taiwan (on leave from NCTU)

2015.8-2016.7 Chief Technology Officer
Rocket Technology Division, GeoSat Aerospace & Technology Inc., Hsinchu, Taiwan (on leave from NCTU)

■ Awards & Honors:

- ISPlasma Special Recognition Award (2023)
- Future Technology Award, 2021 Future Tech Show, MOST (rocket technology)
- Outstanding Research Award, Aerospace Discipline, Ministry of Science & Technology (MOST), Taiwan (2018)
- Annual Best Paper Award, Journal of Mechanics (SCI) (2018)
- Future Technology Award, 2017 Future Tech Show, MOST (rocket technology)
- ASME Fellow (2015-)
- AIAA Associate Fellow (2016-)
- Int. Member of AIAA Hybrid Rocket Technical Committee (HRTC) (2016-)
- Emerging Plasma Nanotechnologies (TC 17), Nanotechnology Council, IEEE (2021-)

- Rackham Pre-doctoral Fellowship, University of Michigan, 1993.
- Distinguished Achievement Award for Graduate Student of Aerospace Engineering, College of Engineering, The University of Michigan, 1993.
- Lam Research Award 2012 (Taiwan) for fluid modeling of CF4 plasma etching process.
- Silver Medal of Young Investigator Award with my student Dr. Y.-M. Chiu, 7th Asia-Pacific International Symposium on the Basics and Applications of Plasma Technology (APSPT-7), Taipei, Taiwan, April 14-16, 2012.
- Gold Prize for Young Scientist Lecture Competition with my student at 8th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT 2013), Granada, Spain, September 22-25, 2013.
- Best Oral Paper Award and Best Poster Paper Award with my students, 8th Asia-Pacific International Symposium on the Basics and Applications of Plasma Technology (APSPT-8), Hsinchu, Taiwan, Dec. 20-22, 2013.
- Several Best Paper and Poster Presentation Awards in domestic CFD and other conferences.
- Best Paper Presentation Award, The 2nd International Conference on Aerospace Engineering, Seoul, Korea, January 21-23, 2018.

■ **Membership:**

American Institute of Aeronautical & Aerospace (AIAA) (Associate Fellow, 2015/9)

American Society of Mechanical Engineers (ASME) (Fellow, 2015/7)

Institute of Electrical and Electronics Engineers (IEEE) (Senior Member, 2022/12)

Taiwan Society for Industrial and Applied Mathematics (TWSIAM) (Lifetime Member)