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Curriculum Vitae

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Professor

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Profile

Professor Rong F. Huang was born in 1955 in Taiwan. He received his Ph.D. degree in Aerospace & Mechanical Engineering from the University of Oklahoma, USA in 1987. Subsequently, he worked as the manager of the Thermal Fluid Research Division, D. C. Inc., New Jersey, USA, and became a professor at the National Taiwan University of Science and Technology, Taipei, Taiwan since 1991. His research interests are in the areas of Fluid Mechanics, Aerodynamics, and Combustion Technology. He has been a recipient of several awards, for instance, *National Award for Distinguished Contribution to Industry-Academia Cooperation 2018* (awarded by Ministry of Education, ROC), *Contracted Researcher 2017* (awarded by Ministry of Science and Technology, ROC), *Outstanding Research Award for years 2014*, *2011*, and *1999* (awarded by Ministry of Science and Technology, ROC), *Gold Medal for Invention of National Invention and Innovation Award 2012* (awarded by Ministry of Economic Affairs, ROC), *Gold Medal Award for Taipei Int'l Invention Show 2011*, *The Best Papers for years 2009* and *2005* (awarded by J. of Mechanics), *Distinguished Engineering Professor 2003* (awarded by Chinese Engineers' Association), *The Best Engineering Paper for year 2002* (awarded by J. of American Industrial Hygiene Association, USA), *National Industrial Research Award 2001* (awarded by Ministry of Education, ROC). Except for the fundamental research, he has also been devoted to the advanced R&D for industries for more than 25 years and has completed 24 technology transfers to the industries.

Year of Birth: 1955

Citizenship: Taiwan, ROC.

Educations:

* Ph.D. in Aerospace & Mechanical Engr., University of Oklahoma, U.S.A., 1983 ~ 1987.
* M.S. in Mechanical Engineering, National Tsing Hua University, Taiwan, 1978 ~ 1980.
* B.S. in Mechanical Engineering, National Tsing Hua University, Taiwan, 1974 ~ 1978.

Research Interests:

Topics relevant to fields of *Fluid Mechanics*, *Aerodynamics*, and *Combustion Technology*. For instance, Internal combustion engine, Ventilation, Swirl-flow combustor, Fan design, test, and simulation, Cardiovascular fluid dynamics, Cooling of electronic device, Wing aerodynamics, Bluff-body wake, Combusting jet, Suction flow, Push-pull air curtain technology, Channel flow, Wake, Shear flow, Boundary layer, Vortex shedding, Flow control & conditioning technologies, Laser diagnostic techniques for flow velocity field, Wind tunnel design, Measurement and calibration technologies of pressure, flow rate, flow velocity, and temperature, Flow visualization technology, and Development of instruments and apparatus.

Professional Experiences:

* *Professor*, Taiwan University of Science & Technology, Taipei, ROC, February 1996 - present.
* *Steering Committee Member*, Small Business Innovation Research (SBIR) Program, Industrial Development Bureau, Ministry of Economic Affairs, ROC, January 2014 – December 2015.
* *Convener*, Small Business Innovation Research (SBIR) Program, Industrial Development

Bureau, Ministry of Economic Affairs, ROC, January 2012 - December 2012.

* *Convener*, Mechanical Engineering Section of Small Business Innovation Research (SBIR) Program, Industrial Development Bureau, Ministry of Economic Affairs, ROC, April 2011 - December 2012.
* *Subject Editor of Journal of Chinese Institute of Engineers, Mechanical Engineering Section*, January 2008 - February 2010; January 2011 - December 2015.
* *Managing Editor*, Journal of Mechanics, October 2011- December 2012.
* *Convener*, Aerospace Research Program, National Science Council, ROC, December 2005 - December 2008.
* *Chairman*, Department of Mechanical Engineering, Taiwan University of Science and Technology, Taipei, ROC, March 2005 - July 2007.
* *Associate Professor*, Taiwan University of Science and Technology, Taipei, ROC, August 1991 - January 1996.
* *Manager of Thermal Fluid Research*, DC USA, Harrison, New Jersey, USA, 1989 - 1991.
* *Associate Professor*, Nat'l Central University, Chung-Li, ROC, Aug. 1988 - July 1989.
* *Associate Researcher*, Dept. of Mechanical Engr., ITRI, Hsing-Chu, ROC, 1982 - 1983.
* *Engineer*, Chao-Syi Battery Manufacturing Co., Chao-Syi, ROC, 1980 - 1982.

Honors and Distinctions:

* *Chair Professor*, Taiwan University of Science and Technology, 2008 – present.
* *National Award for Distinguished Contribution to Industry-Academia Cooperation* for year 2018, Ministry of Education, ROC.
* *Specifically Contracted Researcher* 2017–2020, Ministry of Science and Technology, ROC.
* *Distinguished Paper Award*, ICETAS 2017, Kitakyushu, Japan.
* *Best Paper Award*, VENT 2015, Shanghai, China.
* *Outstanding Research Awards* for years 2014, 2011, and 1999, awarded by Ministry of Science and Technology, ROC.
* *Silver Medal for Innovation*, *National Industrial Exhibition Award 2013*, Shianghai, China.
* *Distinguished Industrial Research Award* for Year 2013, National Taiwan University of Science and Technology.
* *Gold Medal Award for Invention 2012*, *National Awards for Invention and Innovation*, awarded by Ministry of Economic Affairs, ROC.
* *Annual Engineering Paper Award 2012*, "Performance and inter-blade flow of axial flow fans with different blade angles of attack," awarded by Journal of Chinese Institute of Engineers.
* *Distinguished Achievement in Technology Transfer* for year 2011, "Inclined Quad-Vortex Technology," awarded by Ministry of Education, ROC.
* *Gold Medal Award* for year 2011, "An Extremely High Efficiency Range Hood - IQV Range Hood," Taipei Int'l Invention Show & Technomart 2011, Word Trade Center, Taipei, ROC.
* *The Best Paper* for Year 2009, "Manipulating tumble and swirl flows in cylinder of a motored four-valve engine by inlet deflection valve," *Journal of Mechanics*.
* *Project for Outstanding Research Scholar* for year 2008-2011, National Science Council, Taiwan.
* *The Best Paper* for Year 2005, "Development and characterization of jet-injected vee-gutter," *Journal of Mechanics*.
* *Distinguished Professor in Engineering* for year 2003, awarded by Chinese Institute of Engineers, ROC.
* *The Best Engineering Paper* for Year 2001, "Capture envelopes of rectangular hoods in cross drafts," *American Industrial Hygiene Association Journal*. Award presented at AICHE 2002 in San Diego, California USA on June 5, 2002.
* *National Industrial Research Award* for year 2001, awarded by Ministry of Education, ROC.
* *Distinguished Engineering Technology Award* for year 2001, awarded by Tai-Chin Foundation, ROC.

* *Jane's Best Engineering Paper Award* for year 2000, "Experimental design of tuning pipe of a two-stroke engine for motorcycles," awarded by Chinese Institute of Engineers, ROC, 2000.
* *Gold Medal of Super Fuel-Saving Car Contest* for year 1997, awarded by SAE Taiwan Chapter, ROC.
* *Distinguished Professor in Education* for year 1995, awarded by Ministry of Education, ROC.

Sponsored Research Projects:

* 91 from Industries.
* 48 from Ministry of Science & Technology (MOST) of ROC.

Technology Transfers:

* 24 Patent Authorizations/Technology Transfers.

Patents:

* 103 Approved; 17 Pending.

Publications:

* 145 Journal Papers; 1 Book; 44 International Conference Papers.

List of Research Performance

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A. Output (產出 -- 研究結果沉澱為可典藏與傳播之文字記錄)：
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- **III. Books/Chapters/Reports** (專書/篇章/報告)
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B. Outcome (績效 -- 研究結果轉化為可實用之產業技術)：
- **V. Patent Authorizations/Technology Transfers** (專利授權/技術移轉)
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A. Output

I. Journal Papers

Published or Accepted

1. Mosiria, D. B., Huang*, R. F., and Hsu, C. M., "Backward-inclined diffusion jet flames in crossflow at low jet-to-crossflow momentum flux ratios," ***Journal of Engineering for Gas Turbines and Power*** **(ASME Transactions)**, Vol. 141, May 2019, pp. 051501-1~10.
2. Zargar, O. A., Huang*, R. F., and Hsu, C. M., "Flames of swirling double-concentric jets subject to acoustic excitation at resonance," ***Journal of Thermal Science and Engineering Applications*** **(ASME Transactions)**, Vol. 11, June 2019, pp. 031004-1~10.
3. Zargar, O. A., Huang*, R. F., and Hsu, C. M., "Effect of acoustic excitation on flames of swirling dual-disk double-concentric jets," ***Experimental Thermal and Fluid Science***, Vol. 100, January 2019, pp. 337-348.
4. Mosiria, D. B., Huang*, R. F., and Hsu, C. M., "Effects of small backward inclination on characteristics of a stack-issued combusting transverse jet in crossflow," accepted for publication by ***Heat and Mass Transfer*** on August 17, 2018. DOI: 10.1007/s00231-018-2486-0.
5. Le, M. D, Hsu, C. M., and Huang*, R. F., "Flow characteristics and velocity fields of swirling double-concentric jets at a high central jet Reynolds numbers," accepted for publication by ***Journal of Marine Science and Technology*** on August 6, 2018.
6. Mosiria, D. B., Huang*, R. F., and Hsu, C. M., "Characteristics of backward-inclined non-premixed jet flames in crossflow," ***Experimental Thermal and Fluid Science***, Vol. 98, Nov. 2018, pp. 429 – 444.

7. Huang*, R. F., Hsu, C. M., and Cheng, T.-H., "Effects of upstream tetrahedron length on flow characteristics around juncture of circular cylinder and flat plate," ***Experimental Thermal and Fluid Science***, Vol. 92, April 2018, pp. 295-305.
8. Huang*, R. F., Kivindu, R. M., and Hsu, C. M., "Flame behavior and thermal structure of combusting plane jets with and without self-excited transverse oscillations," ***Heat and Mass Transfer***, Vol. 54, No. 6, 2018, pp. 1681-1696.
9. Huang*, R. F., Kivindu, R. M., Hsu, C. M., "Combusting jets issued from rectangular nozzles of high and low aspect ratios with co-flowing air," ***Journal of Thermal Science and Engineering Applications*** **(ASME Transactions)**, Vol. 10, August 2018, pp. 041009-1~13.
10. Le, M. D, Hsu*, C. M., and Huang, R. F., "Velocity fields and mixing properties of swirling double-concentric jets using two circular disks in tandem as center body," ***Experimental Thermal and Fluid Science***, Vol. 93, No. 1, January 2018, pp. 73-85.
11. Huang*, R. F., Hsu, C. M., Lin, K. L., "Influences of high heat-load on flow and containment of an inclined air-curtain (IAC) fume hood," ***Journal of Occupational and Environmental Hygiene***, Vol. 15, No. 4, 2018, pp. 322-333.
12. Kivindu, R. M., Huang*, R. F., Hsu, C. M., "Non-premixed Transversely Oscillating Plane Jet Flames in Co-flowing Air Streams," ***Journal of Marine Science and Technology***, Vol. 26, No. 2, 2018, pp. 194-206.
13. Kimilu, R. K., Huang*, R. F., and Hsu, C. M., "Non-premixed burner-attached jet flames in crossflow pulsed at resonance frequency," ***Journal of Propulsion and Power*** (American Institute of Aeronautics and Astronautics), Vol. 33, No. 6, 2017, pp. 1332-1350.
14. Khouygani, M. G., Huang*, R. F., and C. M. Hsu, C. M., "Flow and dispersion characteristics of a stake-issued backward inclined jet in crossflow," ***Journal of Mechanics***, Vol. 33, No. 6, 2017, pp. 841-852.
15. Huang*, R. F., Hsu, C. M., and Chen, Y. Z., "Modulating flow and aerodynamic characteristics of a square cylinder in crossflow using a rear jet injection," ***Physics of Fluids***, Vol. 29, 2017, 015103-1~15.
16. Duc, L. M., Huang*, R. F., Hsu, C. M., "Swirling dual-disk double-concentric jets at low annulus Reynolds numbers," ***European Journal of Mechanics B/Fluids***, Vol. 61, No. 1, 2017, pp. 33-45.
17. Kimilu, R. K., Huang*, R. F., and Hsu, C. M., "High-frequency excited non-premixed jet flame in crossflow," ***Journal of Marine Science and Technology***, Vol. 25, No. 1, 2017, pp. 96-107.
18. Huang*, R. F., Duc, L. M., Hsu, C. M., "Flow and mixing characteristics of swirling double-concentric jets with a control disc at low central jet Reynolds numbers," ***International Journal of Heat and Fluid Flow***, Vol. 62, No. 2, 2016, pp. 233-246.
19. Huang*, R. F., Kimilu, R. K., and Hsu, C. M., "Effects of jet pulsation intensity on a wake-stabilized non-premixed jet flame in crossflow," ***Experimental Thermal and Fluid Science***, Vol. 78, 2016, pp. 153 - 166.
20. Huang*, R. F., Chen, J.-K., Hsu, C. M., and Hung, S.-F., "Effects of boundary-layer separation controllers on a desk-top fume hood," ***Journal of Occupational and Environmental Hygiene***, Vol. 13, No. 10, 2016, pp. 802 - 815.
21. Hsu*, C. M., Huang, R. F., and Chuang, H. C., "Flow characteristics and drag force of a square cylinder in crossflow modulated by a slot jet injected from upstream surface," ***Experimental Thermal and Fluid Science***, Vol. 75, 2016, pp. 235-248.
22. Huang*, R. F., Hsu, C. M., Chen, C., "Effects of an upstream tetrahedron on the circular cylinder-flat plate juncture flow," ***Experiments in Fluids***, Vol. 56, No. 7, Article 146, 2015, pp. 1-15.

23. Huang*, R. F., Duc, L. M., and Hsu, C. M., "Effects of swirling strength on flow characteristics of swirling double-concentric jets with a dual-disk flow controller," ***Experimental Thermal and Fluid Science***, Vol. 68, No. 7, 2015, pp. 612-624.
24. Huang*, R. F., Chen, J.-K., and Tang, K.-C., "Development and characterization of an inclined air-curtain (IAC) fume hood," ***Ann. Occupational Hygiene***, Vol. 59, No. 5, 2015, pp. 655-667.
25. Huang*, R. F., Chen, J.-K., and Lin, J.-H., "Flow Characteristics and spillage mechanisms of an inclined quad-vortex range hood subject to influence from cross draft," ***Journal of Occupational and Environmental Hygiene***, Vol. 12, No. 4, 2015, pp. 235-244.
26. Hsu, C. M., Chen, J.-K., Hsieh, M. K., and Huang*, R. F., "Oval flow structure between two corotating disks with stationary shroud," ***Journal of Fluids Engineering*** (ASME Transactions), Vol. 137, March 2015, pp. 031104-1~12.
27. Khouygani, M. G., Huang*, R. F., and Hsu, C. M., "Flow characteristics in median plane of a backward-inclined elevated jet," ***Experimental Thermal and Fluid Science***, Vol. 62, No. 1, 2015, pp. 164-174.
28. Huang*, R. F., Hsu, C. M., and Chiu, P. C., "Flow behavior around a square cylinder subject to modulation of a planar jet issued from upstream surface," ***Journal of Fluids and Structures***, Vol. 51, No. 12, 2014, pp. 362-383.
29. Huang*, R. F., Hsu, C. M., and Lin, W. C., "Flow characteristics around juncture of a circular cylinder mounted normal to a flat plate," ***Experimental Thermal and Fluid Science***, Vol. 55, No. 1, 2014, pp. 187-199.
30. Huang*, R. F., Chen, J.-K., Han, M.-J., and Priyambodo, Y., "Improving flow patterns and spillage characteristics of a box-type commercial kitchen hood," ***Journal of Occupational and Environmental Hygiene***, Vol. 11, No. 4, 2014, pp. 238-248.
31. Hsu*, C. M., Huang, R. F., and Loretero, M. E., "Unsteady flow motions of an oscillating jet in crossflow," ***Experimental Thermal and Fluid Science***, Vol. 55, No. 1, 2014, pp. 77-85.
32. Chen*, J.-K. and Huang, R. F., "Flow characteristics and robustness of an inclined quad-vortex range hood," ***Industrial Health***, Vol. 52, No. 3, 2014, pp. 248-255.
33. Yang, H. F., Hsu, C. M., and Huang*, R. F., "Controlling plane-jet flame by fluidic oscillation technique," ***Journal of Engineering for Gas Turbines and Power*** (ASME Transactions), Vol. 136, No. 4, 2014, pp. 041502-1~10.
34. Hsu, C. M. and Huang*, R. F., "Comparisons of flow and mixing characteristics between unforced and excited elevated transverse jets," ***Journal of Mechanics***, Vol. 30, No. 1, 2014, pp. 87-96.
35. Yang, H.-F., Hsu, C. M., and Huang*, R. F., "Flame behavior of bifurcated jets in a V-shaped bluff-body burner," ***J. Marine Science and Technology***, Vol. 22, No. 5, 2014, pp. 606-611.
36. Huang*, R. F., Chen, J.-K., and Lee, J.-H., "Development and characterization of an inclined quad-vortex range hood," ***Ann. Occupational Hygiene***, Vol. 57, No. 9, 2013, pp. 1189-1100.
37. Loretero, M. E. and Huang*, R. F., "Effects of acoustic excitation and annular swirl strength on a non-premixed and swirl stabilized flame," ***Journal of Energy Engineering*** (ASCE Transactions), Vol. 139, No. 4, 2013, pp. 329-337.
38. Jufar, S. R., Huang*, R. F., and Hsu, C. M., "Effects of pulsation intensity on flow and mixing of swirling double-concentric jets," ***AIAA Journal*** (American Institute of Aeronautics and Astronautics), Vol. 51, No. 8, 2013, pp. 1932-1945.

39. Hsu, C. M. and Huang*, R. F., "Phase-resolved and time-averaged puff motions of excited stack-issued transverse jet," ***Journal of Fluids and Structures***, Vol. 40, No. 2, 2013, pp. 302-316.
40. Huang*, R. F., Chen, J.-K., and Hung, W.-L., "Flow and containment characteristics of a sash-less, variable-height inclined air-curtain fume hood," ***Ann. Occupational Hygiene***, Vol. 57, No. 7, 2013, pp. 934-952.
41. Chen*, J.-K., Huang, R. F., Hung, W.-L., "Flow and leakage characteristics of a sash-less inclined air-curtain (sIAC) fume hood containing tall pollutant-generation tanks," ***Journal of Occupational and Environmental Hygiene***, Vol. 10, No. 12, 2013, pp. 694-704, 2013.
42. Huang*, R. F., Yang, H. F., and Hsu, C. M., "Flame behavior and thermal structure of combusting non-pulsating and pulsating plane jets," ***Journal of Propulsion and Power*** (American Institute of Aeronautics and Astronautics), Vol. 29, No. 1, 2013, pp. 114-124.
43. Jufar, S. R., Huang*, R. F., and Hsu, C. M., "Effects of swirl on flow and mixing of acoustically excited swirling double-concentric jets," ***Experimental Thermal and Fluid Sciences***, Vol. 49, No. 1, 2013, pp. 40-50.
44. Huang*, R. F., Jufar, S. R., and Hsu, C. M., "Flow and mixing characteristics of swirling double-concentric jets subject to acoustic excitation," ***Experiments in Fluids***, Vol. 54, No. 1, 2013, pp. 1421-1444.
45. Jufar, S. R., Huang*, R. F., and Hsu, C. M., "Spreading of swirling double-concentric jets at low and high pulsation intensities," ***International Journal of Mechanical and Mechatronics Engineering***, Vol. 7, No. 6, 2013, pp. 1121-1126.
46. Huang*, R. F. and Hsu, C. M., "Turbulent flows of an acoustically excited elevated transverse Jet," ***AIAA Journal*** (American Institute of Aeronautics and Astronautics) Vol. 50, No. 9, 2012, pp. 1964 - 1978.
47. Chen, J.-K., Huang*, R. F., and Hsin, P.-Y., "Dynamic effects on containment of air-curtain fume hood operated with heat source," ***Journal of Occupational and Environmental Hygiene***, Vol. 9, No. 11, 2012, pp. 640-652.
48. Chen, J. K., Huang*, R. F., Hsin, P.-Y., Hsu, C. M., and Chen, C.-W., "Flow and containment characteristics of an air-curtain fume hood operated at high temperatures," ***Industrial Health***, Vol. 50, No. 1, 2012, pp. 103-114.
49. Huang*, R. F. and Hsu, C. M., "Flow and mixing characteristics of an elevated pulsating transverse jet," ***Physics of Fluids***, Vol. 24, No. 1, 2012, pp. 015104-1~21.
50. Hsu, C. M. and Huang*, R. F., "Effects of crossflow on puff and oscillation modes of a pulsed elevated transverse jet," ***European Journal of Mechanics B/Fluids*** (EJMFLU), Vol. 31, No. 1, 2012, pp. 140-148.
51. Chen, J.-K., Huang*, R. F., and Peng, K.-L., "Flow characteristics and spillage mechanisms of wall-mounted and jet-isolated range hoods subject to influence of cross draft," ***Journal of Occupational and Environmental Hygiene***, Vol. 9, No. 1, 2012, pp. 36-45.
52. Huang*, R. F., Cheng, J. C., Chen, J.-K., and Hsu, C. M., "Manipulating flow to reduce drag of a square cylinder by using a self-sustained vibrating rod," ***Journal of Fluids Engineering*** (ASME Transactions), Vol. 133, May 2011, pp. 051202-1~14.
53. Toh, H. T., Huang*, R. F., Lin, K. H., Chern, M.-J., "Computational study on the effect of inlet port configuration on in-cylinder flow of a motored four-valve internal combustion engine," ***Journal of Energy Engineering*** (ASCE), Vol. 137, No. 4, 2011, pp. 198-206.

54. Huang*, R. F. and Hsieh, M. K., "Phase-resolved flow characteristics between two shrouded corotating disks," ***Experiments in Fluids***, Vol. 51, No. 6, 2011, pp. 1529-1547.
55. Hsu, C. M. and Huang*, R. F., "Effects of acoustic excitation at resonance Strouhal numbers on flow characteristics of an elevated transverse jet," ***Experimental Thermal and Fluid Sciences***, Vol. 35, No. 7, 2011, pp. 1370-1382.
56. Huang*, R. F. and Hsieh, M. K., "Turbulent flow of quadrangle mode in interdisk midplane between two shrouded corotating disks," ***Experimental Thermal and Fluid Sciences***, Vol. 35, No. 8, 2011, pp. 1608-1620.
57. Huang*, R. F. and Lin, B. H., "Effects of flow patterns on aerodynamic forces of a square cylinder at incidence," ***Journal of Mechanics***, Vol. 27, No. 3, 2011, pp. 347-355.
58. Huang*, R. F., Nian, Y.-C., Chen, J.-K., and Pen, K. L., "Improving flow and spillage characteristics of range hood by using inclined air-curtain technique," ***Ann. Occupational Hygiene***, Vol. 55, No. 2, 2011, pp. 164-179.
59. Huang*, R. F., Ho, C. Y., and Chen, J.-K., "Pulsatile flow patterns and wall shear stresses in arch of a turn-around tube with/without stenosis," ***Journal of Mechanics***, Vol. 27, No. 1, 2011, pp. 79-94.
60. Liu, S. H., Huang*, R. F., and Chen, L. J., "Performance and inter-blade flow of axial flow fans with different blade angles of attack," ***JCIE***, Vol. 34, No. 1, 2011, pp.141-153.
61. Huang*, R. F., Yang, T.-F., and Lan, Y.-K, "Pulsatile flows and wall shear stresses in models simulating normal and stenosed aortic arches," ***Experiments in Fluids***, Vol. 48, No. 3, 2010, pp. 497-508.
62. Huang*, R. F., Lin, B. H., and Yen, S. C., "Time-averaged topological flow patterns and their influences on vortex shedding of a square cylinder in crossflow at incidence," ***Journal of Fluids and Structures***, Vol. 26, No. 3, 2010, pp. 406-429.
63. Liu, S. H., Huang*, R. F., and Lin, C. A., "Computational and experimental investigations of axial flow fan using downstream flow resistance method," ***Experimental Thermal and Fluid Science***, Vol. 34, No. 7, 2010, pp. 827-837.
64. Tsai, S. J.*, Huang, R. F., and Ellenbecker, M. J., "Airborne nanoparticle exposures while using constant-flow, constant-velocity, and air-curtain isolated fume hoods," ***Ann. Occupational Hygiene***, Vol. 54, No. 1, 2010, pp. 78-87.
65. Laretero, M. E. and Huang*, R. F., "Behaviors of flame and flow of swirling wake during fuel jet oscillation due to acoustic excitations," ***Journal of Mechanics***, Vol. 26, No. 3, 2010, pp. 279-286.
66. Loretero, M. and Huang*, R. F., "Effects of acoustic excitation on flame and flow behaviors of axisymmetric swirling wakes," ***Journal of Engineering for Gas Turbines and Power*** (ASME Transcations), Vol. 132, No. 12, 2010, pp. 121501-1~9.
67. Huang*, R. F., Nian, Y.-C., and Chen, J.-K., "Static conditions differences in conventional and inclined air-curtain range hood flow and spillage characteristics," ***Environmental Engineering Science***, Vol. 27, No. 6, 2010, pp. 513-522.
68. Huang*, R. F., Dai, G.-Z., and Chen, J.-K., "Effects of mannequin and walk-by motion on flow and spillage characteristics of wall-mounted and jet-isolated range hoods," ***Ann. Occupational Hygiene***, Vol. 54, No. 6, 2010, pp. 625-639.
69. Tseng, L. C., Huang*, R. F., and Chen, C.-C., "Significance of face velocity fluctuation in relation to laboratory fume hood performance," ***Industrial Health***, Vol. 48, No. 1, 2010, pp. 43-51.

70. Chen, J.-K.**,** Huang*, R. F., and Dai, G.-Z., "Flow characteristics and spillage mechanisms of wall-mounted and jet-isolated range hoods," ***Journal of Occupational and Environmental Hygiene***, Vol. 7, No. 11, 2010, pp. 651-661.
71. Huang*, R. F., Lin, K. H., Yeh, C.-N**.**, and Lan, J., "In-cylinder tumble flows and performance of a motorcycle engine with circular and elliptic intake ports," ***Experiments in Fluids***, Vol. 46, No. 1, 2009, pp. 165-179.
72. Huang*, R. F. and Chou, C. I., "Flow and performance of biological safety cabinet," ***Ann. Occupational Hygiene***, Vol. 53, No. 4, 2009, pp. 425-440.
73. Huang*, R. F., Chou, C. I., and Hung, C. H., "Improving aerodynamics and operator protection performance of biological safety cabinet subject to dynamic influences," ***Environmental Engineering Science***, Vol. 26, No. 7, 2009, pp. 1217-1226.
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76. Huang*, R. F. and Yen, S. C., "Aerodynamic characteristics and thermal structure of non-premixed reacting swirling-wake," ***Combustion and Flame***, Vol. 155, No. 4, 2008, pp. 539-556.
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II. Conference/Workshop Papers

International:

1. Huang R. F. and Hsu, C. M., "Flow Motions of a Pulsed Elevated Jet in Crossflow," 2018 Annual Conference on Engineering and Applied Science (ACEAT), Osaka, Japan, Nov. 27-29, 2018.
2. Huang R. F. and Hsu, C. M., "Controlling horseshoe vortices of a juncture flow controlling," The 12th International Symposium on Advanced Science and Technology in Experimental Mechanics (ISEM-12), Kanazawa, Japan, Nov. 1-4, 2017.
3. Huang R. F. and Hsu, C. M., "Effects of upstream jet injection on flow of a square cylinder in crossflow," The 27th International Symposium on Transport Phenomena (ISTP-27), Honolulu, USA, Sep. 20-23, 2016. Session Chair.
4. Huang R. F., Chen, J.-K., and Hsu, C. M., "Comparison of conventional and IQV range hoods," The 11th International Conference on Industrial Ventilation (VENT 2015), Tongji University, Shanghai, China, October 26-28, 2015. Session Chair.
5. Huang R. F. and Hsu, C. M., "Flow characteristics of an acoustically excited elevated transverse jet," The 25th International Symposium on Transport Phenomina (ISTP-25), Krabi, Thailand, Nov. 5-7, 2014.
6. Huang R. F. and Jufar, S. R., "Flow characteristics of acoustically excited swirling jets," The Ninth Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-9), Busan, Korea, Aug. 25-28, 2013. Session Chair.
7. Huang R. F., Chen, J.-K., and Hsu, C. M., "Flow and containment characteristics of an air-curtain fume hood," The 10th International Conference on Industrial Ventilation (VENT 2012), Maison De La Mutualité, Paris, France, September 17-19, 2012. Scientific Committee Member; Session Chair.
8. Huang, R. F., "Air-curtain biological safety cabinety and chemical fume hood," Interior Workshop, ESCO Inc., Singapore, April 1-4, 2012. Invited Speaker.
9. Huang, R. F. and Chang, K. T., "Flow characteristics of a self-sustained transversely oscillating jet," The Eigth Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-8), Moscow, Russia, Aug. 20-23, 2011.
10. Huang, R. F. and Hsu, C. M., "In-cylinder tumble flows and performance of a motorcycle engine with circular and elliptic intake ports," The Fourth Mechanical Engineering International Research Conference (MEIRC-4), Cebu, Philippines, January 12-14, 2011. Invited Speaker.
11. Huang, R. F., "Aerodynamics and containment performances of conventional and air-curtain Fume Hoods," The Fourth Mechanical Engineering International Research Conference (MEIRC-4), Cebu, Philippines, January 12-14, 2011. Invited Speaker.
12. Huang, R. F. and Chen, J. K., "Enhancing engine performance by manipulating in-cylinder tumble and swirl flow," The 8th Asia-Pacific Conference on Combustion (ASPACC-10), Hyderabad, India, December 10-13, 2010.
13. Huang, R. F. and Chou, C. Y., "Improving performance of biological safety cabinet," The 9th International Conference on Industrial Ventilation (Vent 2009), ETH Zurich, Switzerland, October 18-21, 2009.
14. Huang, R. F., "Temperature distributions and combustion efficiency of non-premixed reacting swirling-wake," The Seventh Asia-Pacific Conference on Combustion (ASPACC-09), Taipei, Taiwan, May 24-27, 2009.
15. Huang, R. F. and Lin, K. H., "In-cylinder tumble flows of a motorcycle engine with circular and elliptic intake ports," The 3rd International Symposium on Advanced Fluid/Solid Science and Technology in Experimental Mechanics (ISEM 2008), Tainan, Taiwan, Dec. 8-10, 2008.
16. Huang, R. F. and Chen, H. D., "Aerodynamics and containment performance of the air-curtain fume hood," The 29th Advanced Building Ventilation and Environmental Technology Conference (AIVC 2008), Kyoto, Japan, Oct. 14-16, 2008.
17. Huang, R. F. and Yen, S. C., "Aerodynamics and thermal structure of non-premixed reacting swirling-wake," The 19th International Symposium on Transport Phenomena (ISTP-19), Reykjavik, Iceland, August 17-20, 2008.
18. Huang, R. F., Chen, C.-C., and Chen, C. W., "Aerodynamics and containment evaluation of air curtain fume cabinet," The 2008 International Occupation Health Association (IOHA 2008), Taipei, Taiwan, Feb. 18-22, 2008.
19. Huang, R. F., Yen, S. C., and Chang, K. T., "On some passive flow control methods with/without self-sustained oscillating mechanism," The 18th International Symposium on Transport Phenomena (ISTP-18), KAIST, Daejeon, Korea, August 26-30, 2007. Keynote speaker.
20. Huang, R. F. and Chang, K. T., "Cavity-driven transversely oscillating planar jets," The 17th International Symposium on Transport Phenomena (ISTP-17), Toyama International Conference Center, Toyama, Japan, September 4-8, 2006.
21. Huang, R. F., Chen, C. W., Chang C. P., and Shih, T. S., "Development of an air curtain-isolated chemical fume hood with considerations of aerodynamics," The 8th International Conference on Practical Applications of Ventilation for Emission and Exposure Control (VENT 2006), Chicago, U.S.A., May 13-18, 2006.

22. Huang, R. F. and Lan, J., "Shear layer vortices in a crossflow-deflected jet," The 6th World Conference on Experimental Heart Transfer, Fluid Mechanics, and Thermodynamics (ExHFT-6), Matsushima, Miyagi, Japan, April 17-21, 2005.
23. Huang, R. F. and Lin, S. Y., "Aerodynamics and design guidelines of push-pull ventilation systems," The USC Engineering Conference 2005, University of San Carlos, Cebu City, Philippines, March 4-6, 2005.
24. Huang, R. F. and Chang, K. T., "Manipulating a vee-shaped bluff-body wake with a fluidic oscillator," The 21st International Congress of Theoretical and Applied Mechanics (21 ICTAM 2004, established by IUTAM), Warsaw University of Technology, Warsaw, Poland, Oct. 15-21, 2004.
25. Huang, R. F., Huang, C. W, and Chang, S. B., "Toplogical flow evolutions in cylinder of a motored engine during intake and compression strokes," The 15th International Symposium on Transport Phenomena (ISTP-15), Bangkok, Thailand, May 9-13, 2004.
26. Huang, R. F. and Hsieh, R. H., "Flow visualization and LDV measurement on near-wake of elevated jets in a crossflow," The 4th Pacific Symposim on Flow Visualization and Image Processing (PSFVIP 4), Chamonix, France, June 3-5, 2003.
27. Huang, R. F., Wu, C. S., and Jeng, J. H., "Modulaing surface flows of a wing started from rest using a near-leading edge control rod," The 10th International Symposim on Flow Visualization (ISFV 10), Kyoto, Japan, Aug. 26-29, 2002.
28. Huang, R. F. and Chung, D. L., "Thermal design of a disk-array system," The 2002 International Conference on Thermal, Mechanics, Thermomechanical Phenomena in Electronics (Itherm 2002), San Diego, USA, May 29-June 1, 2002.
29. Huang, R. F. and Hsieh, R. H., "Near-wake flow structures of elevated jets in a crossflow," The First Taiwan-Japan Workshop on Mechanical and Aerospace Engineering, Tainan, Taiwan, Dec. 19, 2001.
30. Huang, R. F. and Tsai, F. C., "Flow structures of swirling wakes behind circular discs," The Fifth World Conference on Experimental Heat Transfer, Fluid Mechanics, and Thermodynamics (ExHFT-5), Thessaloniki, Greece, September 24-28, 2001.
31. Huang, R. F. and Mao, S. W., "Separation control on an cantilever wing with a self-excited vibrating rod," The Taiwan-Japan Joint Workshop on Aerospace Mechanics, Hokkaido University, Hokkaido, Japan, Sep. 10-11, 2001.
32. Huang, R. F. and Wu, J. P., "Fuel processing capability of a jet flame in crossflow at incidences," The Sixth International Conference on Technologies and Combustion for a Clean Environment (CleanAir 2001), Oporto, Portugal, July 9-12, 2001.
33. Huang, R. F. and Lin, C. L., "Velocity Measurements in Disc Stabilized Flames," Paper presented at Eight International Conference on Laser Anemometry-Advances and Applications (EALA'99), Rome, Italy, September 6-9, 1999.
34. Huang, R. F., Yen, S. C., Huang, C. Y., Wu, J. Y., and Chen, R.-C., "Vortex evolution on an impulsively started wing," The Second Pacific Symposium on Flow Visualization and Image Processing (PSFVIP-2), Honolulu, Hawaii, U.S.A., May 16-19, 1999.
35. Huang, R. F., Lin, C. L., and Lee, W.-B., "Flowfields of circular disc stabilized flame," The Second Asia-Pacific Conference on Combustion (ASPACC-99), Tainan, Taiwan, May 9-12, 1999.
36. Huang, R. F. and Lee, H. W., "Characteristics of frequency selection in wake of a NACA 0012 wing model," The Second Ankara International Aerospace Conference (AIA'98), Ankara, Turkey, September 9-11, 1998.
37. Lai, C. Y., Chih, C. C., and Huang, R. F., "Size characteristics of particulate matter by a two-stroke engine," The Sixteenth Annual Conference of the American Association for Aerosol Research, Denver, Colorado, U.S.A., October 13-17, 1997.
38. Huang, R. F. and Lin, C. L., "Shear-layer vortex shedding of recirculation wake flushed by a central jet," The Seventh International Conference on Laser Anemometry-Advances and Applications, Karlsruhe, Germany, September 8-11, 1997.
39. Huang, R. F. and Lin, C. L., "Flow structure and vortex shedding of a cantilever wing," The International Aerospace Congress 1995 (IAC'95), Melbourne, Australia, March 20-23, 1995.
40. Huang, R. F. and Lin, C. L., "Vortex shedding and shear-layer instability of a cantilever wing at low Reynolds numbers," AIAA Paper 95-0589, The 33rd Aerospace Sciences Meeting and Exhibit, Reno, U.S.A., January 1995.
41. Huang, R. F., Savaş, Ô , and Gollahalli, S. R., "Turbulence characteristics in the flow field of a nonpremixed gas jet flame in cross-flow," The Energy and Environmental Expo '95 - The Energy-Sources Technology Conference and Exhibition, Houston, Texas, U. S. A,, January 1995, Sponsored by The Petroleum Division, ASME. Also in *Emerging Energy Technology*, ASME PD-Vol. 66, ASME, 1995, pp. 11-19.
42. Huang, R. F. and Chang, J. M., "The coherent structure in the combusting jet flushed by cross-flow," AIAA Paper 94-2314, 25th AIAA Fluid Dynamics Conference, Colorado Springs, Colorado, U. S. A., June 1994.
43. Huang, R. F. and Lin, C. L., "Flow patterns of near-wake region behind a circular disc with central flushing jet," Proceeding of The Third Asian Symposium on Visualization, Chiba, Japan, May 1994.
44. Huang, R. F. and Chang, J. M., "The stability and visualized flame and flow structures of a combusting jet in cross flow," Proceedings of the Sixth International Conference on Flow Measurement (FLOMEKO '93), pp. 604-611, Korea Research Institute of Standards and Science, 1993. Conference held at Seoul, Korea on October 1993.
45. Huang, R. F., Savaş, Ö, and Gollahalli, S. R., "Flow field in the near burner region of a partially lifted turbulent gas jet flame in cross flow," ASME Winter Annual Meeting, Anaheim, CA, U.S.A., November 1992. Also in *Heat and Mass Transfer in Fire and Combustion Systems*, ASME HDT-223, ASME, 1992, pp. 105-113.
46. Huang, R. F., Savaş, Ô , and Gollahalli, S. R., "Lift-off characteristics of diffusion flames," The Seventh Annual Symposium of AIAA/ASME joint meeting, Norman, Oklahoma, 1985.

Domestic:

1. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, October 24 -25, 2018. Invited Speaker.
2. Huang, R. F., "Aerodynamic Problems and Testing of Ventilation Systems," Workshop for Taiwan Province Industrial and Mine Safety & Health Engineers Association (台灣省工礦安全衛生技師公會), Taipei, September 29, 2018. Invited Speaker.
3. Huang, R. F., "Aerodynamic Problems and Testing of Ventilation Systems," Workshop for Industrial Safety and Health of ROC, (中華民國工業安全衛生協會), Taipei, August 24, 2018. Invited Speaker.
4. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, September 3 - 6, 2018. Invited Speaker.
5. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, July 16 - 19, 2018. Invited Speaker.
6. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), TaiChung, July 9 - 12, 2018. Invited Speaker.
7. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), KaoShung, July 2 - 5, 2018. Invited Speaker.
8. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Yilan, June 25 - 28, 2018. Invited Speaker.
9. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, November 15 - 16, 2017. Invited Speaker.
10. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, August 29-September 1, 2017. Invited Speaker.
11. Huang, R. F., "Industrial Ventilation – Principles and Practices," Training Workshop for Pou Chen Industrial (寶成工業), ChungHua, August 23-24, 2017. Invited Speaker.
12. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), TaiChung, July 3-6, 2017. Invited Speaker.
13. Huang, R. F., "Industrial Ventilation – Principles and Practices," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), KaoShung, June 27-30, 2017. Invited Speaker.
14. Huang, R. F., "Technologies of Ventilation Devices and Performance Improvement," Workshop for NUSHA, ROC (中華民國工礦安全衛生技師公會全國聯合會), Taipei, September 1-4, 2016. Invited Speaker.
15. Huang, R. F., "Design and Methods for Ventilation Systems," Workshop for ITRI (ROC), HsingChu, August 9, 2016. Invited Speaker.
16. Huang, R. F., "Technologies of Ventilation Devices and Performance Improvement," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, August 2-5, 2016. Invited Speaker.
17. Huang, R. F., "Technologies of Ventilation Devices and Performance Improvement," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), TaiChung, July 26-29, 2016. Invited Speaker.
18. Huang, R. F., "Technologies of Ventilation Devices and Performance Improvement," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), KaoShung, July 19-22, 2016. Invited Speaker.
19. Huang, R. F., "Aerodynamic Problems in Ventilation," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, July 8, 2016. Invited Speaker.
20. Huang, R. F., "Technologies of Ventilation Devices and Performance Improvement," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), TaiChung, July 19-22, 2015. Invited Speaker.
21. Huang, R. F., "Innoveltive Ventilation Technologies," Invited Speaker, Interior Workshop, Euro-Asia Electrostatic Precipitator Technology, Taipei, Taiwan, August 21, 2015. Invited Speaker.
22. Huang, R. F., "Conventional and Innoveltive Ventilation Technologies," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), KaoShung, August 12-14, 2015. Invited Speaker.
23. Huang, R. F., "Conventional and Innoveltive Ventilation Technologies," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, July 15-17, 2015. Invited Speaker.

24. Huang, R. F., "Conventional and Innoveltive Ventilation Technologies," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), Taipei, June 17, 2015. Invited Speaker.
25. Huang, R. F., "Conventional and Innoveltive Ventilation Technologies," Workshop for Safety and Hygiene, OSHA, Ministry of Labors (ROC), TaiChung, June 10-12, 2015. Invited Speaker.
26. Huang, R. F., "Conventional and Innoveltive Ventilation Technologies," ITRI, HsinChu, Taiwan, June 5, 2015. Invited Speaker.
27. Huang, R. F., "Technologies of ventilation devices and performance improvement," Workshop for Ventilation, Industrial Technology Research Institute (ITRI, ROC), Hsing Chu, Taiwan, June 24, 2014. Invited Speaker.
28. Huang, R. F., "Improvent of ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Taipei, Taiwan, May 7, 2014. Invited Speaker.
29. Huang, R. F., "Improvent of ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Kaoshung, Taiwan, May 14, 2014. Invited Speaker.
30. Huang, R. F., "Improvent of ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Taichung, Taiwan, May 16, 2014. Invited Speaker.
31. Huang, R. F., "Performance and improvement of industrial ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Kaoshung, Taiwan, Nov. 8, 2013. Invited Speaker.
32. Huang, R. F., "Performance and improvement of industrial ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Hualian, Taiwan, Nov. 1, 2013. Invited Speaker.
33. Huang, R. F., "Performance and improvement of industrial ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Lugan, Taiwan, Oct. 25, 2013. Invited Speaker.
34. Huang, R. F., "Performance and improvement of industrial ventilation devices," Workshop for Safety and Hygiene, Ministry of Labor Affairs (ROC), Taipei, Taiwan, Oct. 18. Invited Speaker.
35. Huang, R. F., "Flow and containment characteristics of conventional and modern chemical fume hoods/biological safety cabinet," Workshop for Ventilation Technologies, Ministry of Labor Affairs (ROC), Taipei, Taiwan, Oct. 28 - Nov. 3, 2011. Invited speaker.
36. Huang, R. F., "Flow and containment characteristics of conventional and modern chemical fume hoods/biological safety cabinet," Workshop for Environmental Protection Techniques, Ministry of Labor Affairs (ROC), Taipei, Taiwan, Oct. 25, 2011. Invited speaker.
37. Huang, R. F., "Local Ventilation -- Principle and Practice," Workshop for Ventilation Technologies, Ministry of Labor Affairs(ROC), Taipei, Taiwan, July 5, 2011. Invited speaker.
38. Huang, R. F., "Local ventilation – principle and practice," Workshap on Testing and Verification of Biological Safety Cabinet and Chemical Fume, Ministry of Labor Affairs(ROC), Taipei, Taiwan, Dec. 30, 2011. Invited speaker.
39. Huang, R. F. and Hsu, C. M., "Flow and mixing characteristics of an elevated pulsating transverse jet," paper presented at AASRC/CSCA Joint Conference, Dec. 4, 2010.
40. Huang, R. F., Chang, J. C., and Chen, J. K., "Flow and mixing characteristics of an elevated pulsating transverse jet," paper presented at AASRC/CSCA Joint Conference, Dec. 4, 2010.
41. Huang, R. F., Cheng, J. C., and Chen, J. K., "Manipulating flow characteristics around a square cylinderat incidence by using a galloping rod," paper presented at AASRC/CSCA Joint Conference, Dec. 12, 2010.
42. Huang, R. F., "Local ventilation – principle and practice," Invited speaker, Workshop for Environmental Protection Techniques, Tainan, Taiwan, July 9, 2010.
43. Huang, R. F., "A new technology for chemical fume hood," Invited Speaker, Testing and Verification of Biological Safety Cabinet and Chemical Fume Hood Conference, Taipei, Taiwan, Nov. 10, 2009.
44. Huang, R. F. and Kuo, K. T., "Bluff-body wake subject to modification of cavity-driven oscillation plannar jet," Workshop for ThermoFluid Division, NSC, November 22, 2008. Invited speaker.
45. Liou, S. S. and Huang, R. F., "Design of an axial fan," paper presented at CFD Conference, Nan Tou, Taiwan, Aug. 23-24, 2007. (in Chinese)
46. Huang, R. F., Yen, S. C., and Huang, L. C., "Flow and aerodynamic performance of a back-swept wing," paper presented at Aeronautical and Aerospace Conference 2006, National Central University, Chung Li, Taiwan, December 9-10, 2006. (in Chinese)
47. Hunag, R. F. and Chang, K.T., "Cavity-driven transversely oscillating plannar jets," paper presented at 23th CSME Conference, Kun-Shang Technical University, Taiwan, Taiwan, November 24-25, 2006.
48. Chang, K. T. and Huang, R. F., "Vortex shedding and shear-layer instability oscillation frequence of vee-gutter," paper presented at the 29th National Conference on Theoretical and Applied Mechanics, National Tsing Hua University, Hsinchu, Taiwan, December 16-17, 2005.
49. Huang, C. W. and Huang, R. F., "PIV measurements on in-cylinder flows of a four-stroke cycle motorcycle engine," paper presented at the 11th Combustion Conference of ROC, National Central University, Chung-Li, Taiwan, March 27, 2004.
50. Huang, J. W. and Huang, R. F., "Engine flows at intake and compression strokes," paper presented at the 10th Combustion Conference of ROC, National Taiwan University od Science & Technology, Taipei, Taiwan, Taiwan, March 29, 2003.
51. Hsieh, R. H. and Huang, R. F., "Sectional flow structures of a rounf jet in crossflow," paper presented at Aeronautical and Aerospace Conference 2002, National Kaohsiung Hospitality College, Kaohsiung, Taiwan, March 23, 2002.
52. Mao, S. W., and Huang, R. F., "Control of surface flows on a wing," paper presented at Aeronautical and Aerospace Conference 2002, National Kaohsiung Hospitality College, Kaohsiung, Taiwan, March 23, 2002.
53. Wu, J. Y., Huang, R. F., and R.-C. Chen, "Surface and vortex shedding of animpulsively-started wing," paper presented at 16th CSME Conference, National Tsing Hua University, Hsin Chu, Taiwan, Dec. 3-4, 1999.
54. Chen, J. L., Huang, R. F., and Chen, Y. K., "Effect of the cross draft on capture zone of an flanged circular hood," paper presented at 16th CSME Conference, National Tsing Hua University, Hsin Chu, Taiwan, Dec. 3-4, 1999.
55. Hseih, M. K., Huang, R. F., Lee, K. J., and Hsu, J. M., "Flow and fly ash diagnostics in ducts entering EP of a power plant," paper presented at 16th CSME Conference, National Tsing Hua University, Hsin Chu, Taiwan, Dec. 3-4, 1999.
56. Lee, H. W., Sheih, M. K., and Huang, R. F., "Effects of free-stream turbulence on the aerodynamic performance of a cantilever wing," paper presented at 40th AASRC Conference, Fong-Chah University, Taichung, Taiwan, December 12, 1998.
57. Lee, H. W. and Huang, R. F., "Frequency selection of instabilities in the wake of a wing," paper presented at the 22th National Conference on Theoretical and Applied Mechanics, Taipei, Taiwan, December 19-20, 1998.
58. Yen, S. C., Huang, C. Y., Huang, R. F., and Chen, R. C., "Evolution of surface vortices on a impulsively started wing," paper presented at 15th CSME Conference, National Cheng Kung University, Tainan, Tiawan, November 27-28, 1998. (in Chinese)
59. Liang, W. Y., Shu, L. H., and Huang, R. F., "Effect of exit diameter on performance of an air-assisted swirling atomizer," paper presented at 15th CSME Conference, National Cheng Kung University, Tainan, Tiawan, November 27-28, 1998. (in Chinese)
60. Huang, R. F. and Lin, C. L., "Vortices shed in shear layer evolving from edge of a circular disk," paper presented at the 20th National Conference on Theoretical and Applied Mechanics, Taipei, Taiwan, December 1996.
61. Huang, R. F. and Lin, C. L., "Shear-layer vortex shedding of double concentric jets," paper presented at the 13th CSME Conference, Taipei, Taiwan, November 1996.
62. Huang, R. F., Bear, G. M., and Lin, C. L., "Flow visualization of double concentric jets," paper presented at the 11th CSME Conference, Taichung, Taiwan, November 1994.
63. Huang, R. F. and Shy, W. W., "Flow patterns and separation characteristics of a cantilever airfoil," paper presented at the 11th CSME Conference, Taichung, Taiwan, November 1994.
64. Huang, R. F. and Lin, C. L., "Interaction of vortex shedding and a cantilever wing," paper presented at the 11th CSME Conference, Taichung, Taiwan, November 1994.
65. Huang, R. F., Chen, C. F., Lin, C. L., and Bear, G. M., "Low speed flow patterns behind a circular disc," paper presented at the 10th CSME Conference, Hsing Chu, Taiwan, December 1993.
66. Huang, R. F. and Chang, J. M., "The flame behavior of a combusting jet in cross-flow," paper presented at the 10th CSME Conference, Hsing Chu, Taiwan, December 1993.
67. Sheen, H. J., Lin, C. M., and Huang, R. F., "A feasibility study of diode laser LDA," paper presented at 33rd Chinese Aerospace and Aeronautics Society Conference, Taipei, Taiwan, Dec. 1991. (in Chinese).
68. Huang, R. F. and Lin, S. C., "The characteristics and interaction of turbulent and thermal fields in a 3-D reacting flow," paper presented at 6th CSME Conference, Tainan, Taiwan, Dec. 1989.
69. Huang, R. F. and Chen, L. T., "A simulative investigation of the R-22/DMF absorptive refrigeration systems," paper presented at 8th Annual Meeting of Chinese Solar Energy Society, Kaohsiung, Taiwan, November 1988.

III. Books/Chapters/Reports

Books:

1. Huang, R. F., Lin, K. L., and Hsu, C. M., *Industrial Ventilation – Principles and Practices* (工業通風—原理與實務), Taipei, Taiwan, May 2018. (in Chinese) Word count ≈ 200,000; Number of Figures ≈ 400; Number of Tables ≈ 40, Number of Examples ≈ 150.

Reports:

1. Huang, R. F., *Improving performance of ventilation devices for industries generating highly toxious pollutants* (V). Annual project report submitted to Ministry of Labor Affairs, December 2014. (in Chinese)
2. Huang, R. F., *Develpoment of a dual-spark-plug engine* (II). Annual project report submitted to Kwang Yang Industries, KaoHsiung, Taiwan, June 22, 2014. (in Chinese)
3. Huang, R. F., *GDI technology investigation on a four-stroke engine* (III), Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Taiwan, December 2013. (in Chinese)
4. Huang, R. F., *Improving performance of ventilation devices for industries generating highly noxious pollutants* (IV). Annual project report submitted to Ministry of Labor Affairs, December 2013. (in Chinese)
5. Huang, R. F., *GDI technology investigation on a four-stroke engine* (II), Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Taiwan, December 2012. (in Chinese)
6. Huang, R. F., *Improving performance of ventilation devices for industries generating highly noxious pollutants* (III). Annual project report submitted to Ministry of Labor Affairs, December 2012. (in Chinese)
7. Huang, R. F., *Improvement of exhausted air pollution* (IV). Project report submitted to the Ministry of Labor Affair, Taipei, Taiwan, December 2012. (in Chinese)
8. Huang, R. F., *Develpoment of a dual-spark-plug engine* (I). Annual project report submitted to Kwang Yang Industries, KaoHsiung, Taiwan, June 22, 2011. (in Chinese)
9. Huang, R. F., *GDI technology investigation for a four-stroke engine* (I), Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Taiwan, December 2011. (in Chinese)
10. Huang, R. F., *Improving performance of ventilation devices for industries generating highly noxious pollutants* (III). Annual project report submitted to Ministry of Labor Affairs, December 2011. (in Chinese)
11. Huang, R. F., *Improvement of exhausted air pollution* (III). Project report submitted to the Ministry of Labor Affair, Taipei, Taiwan, December 2010. (in Chinese)
12. Huang, R. F., *Development of inlet port angle design methodology by optimizing in-cylinder flow*, Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Taiwan, June 2010. (in Chinese)
13. Huang, R. F., *I Improving performance of ventilation devices for industries generating highly noxious pollutants* (II). Annual project report submitted to Ministry of Labor Affairs, December 2010. (in Chinese)
14. Huang, R. F., *Performance of air-curtain fume hood under high-temperature operation*. Project report submitted to IOSH, Taipei, Taiwan, December 2009. (in Chinese)
15. Huang, R. F., *Improving performance of ventilation devices for industries generating highly noxious pollutants* (I). Annual project report submitted to Ministry of Labor Affairs, December 2009. (in Chinese)
16. Huang, R. F., *Development of GDI technology in motorcycle engine*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, January 2009. (in Chinese)
17. Huang, R. F., *Parametric study of biological safety cabinet*. Project report submitted to IOSH, Taipei, Taiwan, Dec. 2009. (in Chinese).
18. Huang, R. F., *Improvement of exhausted air pollution* (II). Project report submitted to the Ministry of Labor Affair, Taipei, Taiwan, December 2008. (in Chinese)
19. Huang, R. F., *Development of GDI technology in motorcycle engine*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, June 2008. (in Chinese)
20. Huang, R. F., *Parametric study of biological safety cabinet*. Project report submitted to IOSH, Taipei, Taiwan, Dec. 2007. (in Chinese).
21. Huang, R. F., *Reduction of temperature magnitude and uniformity of a four-stroke-cycle, water-cooled gasoline engine*. Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Taiwan, July 2007. (in Chinese)
22. Huang, R. F., *Diagnostics of conventional capture efficiency of chemical hood* (III). Project report submitted to Environmental Protection Group, Taipei, Taiwan, May, 2007. (in Chinese)
23. Huang, R. F., *Improvement of exhausted air pollution* (I). Project report submitted to the Ministry of Labor Affair, Taipei, Taiwan, August 2007. (in Chinese)
24. Huang, R. F., *Diagnostics of conventional capture efficiency of chemical hood* (II). Project report submitted to Environmental Protection Group, Taipei, Taiwan, May 2006. (in Chinese)
25. Huang, R. F., *Optimized Simulation of a dynamic gas flow*. Project report submitted to Metal Center, Taipei, Taiwan, June 2006. (in Chinese)
26. Huang, R. F., *Improvement of temperature distributions and cooling fan performance of a four-stroke-cycle gasoline engine*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, June 2005. (in Chinese)
27. Huang, R. F., *Diagnostics of conventional capture efficiency of chemical hood* (I). Project report submitted to Environmental Protection Group, Taipei, Taiwan, May, 2005. (in Chinese)
28. Huang, R. F., *Air curtain-isolated chemical hume hood*. Project report submitted to IOSH, Taipei, Taiwan, Dec. 2004. (in Chinese).
29. Huang, R. F., *Development of flow conditioner for linking fan and CPU cooler*. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2004. (in Chinese)
30. Huang, R. F., *Effects of deflection valve on the in-cylinder flows of a V-2 engine*. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2004. (in Chinese)
31. Huang, R. F., *Slicing the tumble and swirl flow motions in a four valve, four cylinder engine*. Project report submitted to Sang Yang Industries, Hsing Fong, Hsing Chu, Dec. 2004. (in Chinese)
32. Huang, R. F., *Development of push-pull ventilation hood for pollutant removing from the large-scale chemical tank*. Project report submitted to IOSH, Taipei, Taiwan, Dec. 2003. (in Chinese).
33. Huang, R. F., *In-cylinder flow detection using optical method*. Project report submitted to Sang Yang Industry, Taipei, Taiwan, Dec. 2003. (in Chinese)
34. Huang, R. F., *PIV measurements of fan flows*. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2003. (in Chinese)
35. Huang, R. F., *PIV development for small-scale flow field*. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2003. (in Chinese)
36. Huang, R. F., Flows in a V-type motor cycle engine. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2003. (in Chinese)
37. Huang, R. F., *Development of flat-plate heat transmitter*, Project report submitted to Glacier Technology, Taipei, Taiwan, June 2003. (in Chinese)
38. Huang, R. F., *PIV diagnostics of in-cylinder flows*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, June 2003. (in Chinese)
39. Huang, R. F., *Design model of a dispersion hood*. Project report submitted to IOSH, Taipei, Taiwan, December 2002. (in Chinese)
40. Huang, R. F., *Development of diagnostics method for a micro-flow field*, Project report submitted to ITRI, Hsing Chu, Taiwan, December 2002. (in Chinese)
41. Chern, M. J. and Huang, R. F., *Control of a ball valve*. Project report submitted to Metal Center, Taipei, Taiwan, December, 2002. (in Chinese)
42. Huang, R. F., *Aerodynamics performance of a micro-airplane*. Project report submitted to ITRI, Hsing Chu, Taiwan, December 2002. (in Chinese)
43. Huang, R. F., *Development of in-cylinder flow diagnostics techniques*. Project report submitted to Sang Yang Industries, Taipei, Taiwan, April 2002. (in Chinese)
44. Huang, R. F., *Development of cooling system of the disk arrays*. Project report submitted to Delta Electronics, Chung Li, Taiwan, March 2002. (in Chinese)
45. Huang, R. F., *Application of CFD on electronic cooling*, Project report submitted to Delta Electronics, Chung Li, Taiwan, March 2001. (in Chinese)
46. Huang, R. F., *A cooling design of an electronic package*. Project report submitted to Ten-Ming Electronics, Taipei, Taiwan, April 2001. (in Chinese)
47. Huang, R. F., *Application of laser techniques to measurements of swirl motions*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, December 2001. (in Chinese)
48. Huang, R. F., *Effect of flange on the capture efficiency of a suction hood*. Project report submitted to IOSH, Taipei, Taiwan, December 2001.
49. Chern, M. J. and Huang, R. F., *Visualization of inside flows in a ball valve*. Project report submitted to Metal Center, Taipei, Taiwan, December 2001. (in Chinese)
50. Huang, R. F., *Lase-light sheet flow visualization in branching pipes*. Project report submitted to IOSH, Taipei, Taiwan, November 2001. (in Chinese)
51. Huang, R. F., *Wind tunnel tests of a micro-airplane*. Project report submitted to ITRI, December 2001. (in Chinese)
52. Huang, R. F. and Yang, J. T., *Bluff-body effect on a swirl jet* (II). Project report submitted to National Science Council, NSC 89-TPC-7-011-001, Taipei, Taiwan, August 2000. (in Chinese)
53. Huang, R. F., *Vortex and wake of an impulsively started wing*. Project report submitted to National Science Council, NSC 89-2212-E-011-017, Taipei, Taiwan, August 2000. (in Chinese)
54. Huang, R. F., *Adjustment of the TOP BOY 50 two-stroke cycle engine*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, June 2000. (in Chinese)
55. Huang, R. F., *Capture envelopes of rectangular hoods*. Project report submitted to IOSH, Taipei, Taiwan, Feb. 2000. (in Chinese)
56. Huang, R. F., *No. 2 duct flow of Hsing-Der Power plant*. Project report submitted to Taiwan Power Company, Taipei, Taiwan, Feb. 2000. (in Chinese)
57. Huang, R. F., *Surface flows and control of a wing for micro airplane*. Project report submitted to ITRI, Taipei, Taiwan, May 2000. (in Chinese)
58. Huang, R. F. and Yang, J. T., *Bluff-body effect on a swirl jet* (I). Project report submitted to National Science Council, NSC 88-TPC-7-011-001, Taipei, Taiwan, July 1999. (in Chinese)
59. Huang, R. F., *Interaction between tip vortex and deflected jet*. Project report submitted to National Science Council, NSC 88-2212-E-011-011, July 1999. (in Chinese).
60. Huang, R. F., *Pollution reduction of a two-stroke-cycle engine by stragetified-charge technique*. Project report submitted to Kwang Yang Industries, Kaohsiung, Taiwan, June 1999. (in Chinese)
61. Huang, R. F., *Velocity, temperature, and particle measurements of Hsing Dar Thermal Power Station*. Project report submitted to Taiwan Power Company, Taipei, Taiwan, February 1999. (in Chinese)
62. Huang, R. F., *Effect of cross draft on the capture zone of a flanged circular hood*. Project report submitted to IOSH, Taipei, Taiwan, May 1999. (in Chinese)
63. Huang, R. F., *Performance improvement of EPs of Hsiehho Thermal Power Station*. Project report submitted to Taiwan Power Company, Taipei, Taiwan, March 1999. (in Chinese)
64. Huang, R. F., *Development of a fuel-saving device for a two-stroke cycle engine*, Project report submitted to Kwang Yang Industry Co., Ltd., Kaohsiung, Taiwan, May 1998. (in Chinese)
65. Huang, R. F., *Flow and combustion of a double concentric bluff-body combuster*. Project report submitted to National Science Council, NSC 87-2212-E-011-021, July 1998. (in Chinese)
66. Chih, C. C., and Huang, R. F., *Size characteristics of particulate matter by a two-stroke engine*. Project report submitted to EPA, Taipei, Taiwan, June 1997. (in Chinese)
67. Huang, R. F. and Shy, M. P., *Design of exhaust system of a two-stroke cycle engine*. Project report submitted to Kwang Yang Industry Co., Ltd., Kaohsiung, Taiwan, August 1996. (in Chinese)
68. Huang, R. F., *Nonpremixed bluff-body stabilized flames*. Project report submitted to National Science Council, NSC-84-2212-E011-003, July 1995, Taipei, Taiwan. (in Chinese)
69. Huang, R. F., *Interaction of flow structure and finite wings*, Project report submitted to National Science Council, NSC-84-2212-E011-040, July 1995, Taipei, Taiwan. (in Chinese)

70. Huang, R. F., *Performance improvement of a two-stroke cycle engine*. Project report submitted to Kwang Yang Industry Co., Ltd., June 1995, Kaohsiung, Taiwan. (in Chinese)
71. Huang, R. F., *Calibration of wind tunnel and hot-wire anemometers*. Project report submitted to National Institute for Occupational Safety and Health Council of Labor Affairs, June 1995, Taipei, Taiwan. (in Chinese)
72. Huang, R. F., *Flow and flame characteristics behind a circular-disc flame stabilizer*. Project report submitted to National Science Council, NSC-83-0401-E011-004, August 1994, Taipei, Taiwan. (in Chinese)
73. Huang, R. F., *Three dimensionally stretched unsteady structure in a combusting jet in cross-flow (II)*. Project report submitted to National Science Council, NSC-82-0401-E011-193, February 1994, Taipei, Taiwan. (in Chinese)
74. Huang, R. F., *Study of effects of fluid/solid interaction on finite wings in low speed subsonic air stream (I)*. Project report submitted to National Science Council, NSC-82-0401-E011-1211, February 1994, Taipei, Taiwan. (in Chinese)
75. Huang, R. F., *Calibration of wind tunnel and hot-wire anemometers*. Project report submitted to National Institute for Occupational Safety and Health Council of Labor Affairs, June 1993, Taipei, Taiwan. (in Chinese)
76. Huang, R. F., *Three dimensionally stretched unsteady structure in a combusting jet in cross-flow*. Project report submitted to National Science Council, NSC-81-0401-E011-572, February 1993, Taipei, Taiwan. (in Chinese)
77. Huang, R. F., *Lift-off stability of round gas jet flames*. Project report submitted to National Science Council, NSC-78-0401-E008-13, August 1990, Taipei, Taiwan. (in Chinese)
78. Huang, R. F., *The structure and stability of nonpremixed gas jet flames*. Ph.D. dissertation, The University of Oklahoma, Norman, OK, U.S.A., 1987.
79. Huang, R. F., *The simulation of a single-cylinder, two-stroke Diesel engine*. Interior report submitted to MIRL, ITRI, Hsing Chu, Taiwan, 1982. (in Chinese)
80. Huang, R. F., *The absorptive refrigeration system with application of solar energy*. M.S. thesis, National Tsing Hua University, Hsing Chu, Taiwan, 1980. (in Chinese)

IV. Patents

Approved:

	Title 專利名稱	Type 專利型態	Number 專利號碼	Patent Owner 專利權人	Effective Period 專利權期間
1	油煙排除裝置 **(已「非專屬授權」給工業界)**	發明	ZL 201410053081.1	台灣科技大學	06/19/2018 ~ 02/16/2034
2	雙背吸式排油煙機	發明	I 618894	台灣科技大學	03/21/2018 ~ 02/16/2037
3	油煙排除裝置 **(已「非專屬授權」給工業界)**	發明	US9541296B2	台灣科技大學	12/14/2017 ~ 02/17/2035 P146799US
4	雙背吸式排油煙機	新型	ZL 201720155583.4	台灣科技大學	09/26/2017 ~ 02/20/2027
5	廢油導引結構 **(已「非專屬授權」給工業界)**	新型	ZL 201720043550.0	台灣科技大學	09/15/2017 ~ 01/12/2027 P177407CN
6	排油煙機 **(已「非專屬授權」給工業界)**	發明	ZL 201310644120.0 P136750CN	台灣科技大學	06/03/2017 ~ 12/02/2033
7	廢油導引結構 **(已「非專屬授權」給工業界)**	新型	M540864	台灣科技大學	05/01/2017 ~ 01/12/2027 P177407
8	具阻隔板之排氣裝置 **(已「非專屬授權」給工業界)**	新型	ZL 201621062421.8	台灣科技大學	06/06/2017 ~ 09/18/2026
9	排油煙機 **(已「非專屬授權」給工業界)**	發明	I 591295	台灣科技大學	07/11/2017 ~ 11/26/2033
10	具阻隔板之排氣裝置 **(已「非專屬授權」給工業界)**	新型	M 535298	台灣科技大學	01/11/2017 ~ 09/18/2026
11	具有導流風道之排油煙機 **(已「非專屬授權」給工業界)**	新型	ZL 201620570657.6	台灣科技大學	11/28/2016 ~ 06/14/2026
12	具導流風道之排油煙機 **(已「非專屬授權」給工業界)**	新型	M 535297	台灣科技大學	01/11/2017 ~ 06/07/2026
13	排油煙機	新型	ZL 201620626481.1	台灣科技大學	11/28/2016 ~ 06/21/2026
14	渦流消除結構 **(已「非專屬授權」給工業界)**	發明	I 550161	台灣科技大學	09/21/2016 ~ 07/13/2034
15	油煙排除裝置 **(已「非專屬授權」給工業界)**	發明	I 550236	台灣科技大學	09/21/2016 ~ 02/13/2034
16	排油煙機	新型	M 529122	台灣科技大學	09/21/2016 ~ 6/21/2026

17	含吹氣風道的抽油煙機 **(已「非專屬授權」給工業界)**	新型	ZL 201620274106.5	台灣科技大學	09/07/2016 ~ 04/04/2026
18	含吹氣風道的抽油煙機 **(已「非專屬授權」給工業界)**	新型	M 527938	台灣科技大學	09/01/2016 ~ 03/31/2026
19	集油結構 **(已「非專屬授權」給工業界)**	新型	ZL 201520833296.5	台灣科技大學	05/11/2016 ~ 10/25/2025
20	集油結構 **(已「非專屬授權」給工業界)**	新型	M 515627	台灣科技大學	01/11/2016 ~ 10/18/2025
21	出風口風雨罩 **(已「非專屬授權」給工業界)**	新型	M 515633	台灣科技大學	01/11/2016 ~ 07/21/2025
22	出風口風雨罩 **(已「非專屬授權」給工業界)**	實用新型	ZL 201520542078.6	台灣科技大學	12/30/2015 ~ 07/23/2025
23	排油煙機 **(已「非專屬授權」給工業界)**	新型	M 503535	台灣科技大學	06/21/2015 ~ 11/30/2024
24	排氣裝置 **(已「非專屬授權」給工業界)**	實用新型	ZL 201420590306.2	台灣科技大學	04/08/2015 ~ 10/12/2024
25	排氣裝置 **(已「非專屬授權」給工業界)**	新型	M 498292	台灣科技大學	04/01/2015 ~ 10/07/2024
26	油煙阻隔板組 **(已「非專屬授權」給工業界)**	新型	M 483393	台灣科技大學	08/01/2014 ~ 01/23/2024
27	Range Hood Capable of Resisting Draft **(已「非專屬授權」給工業界)**	發明	CA 2743409	台灣科技大學	07/22/2014 ~ 06/15/2031
28	具有偏折板的排氣裝置 **(已「非專屬授權」給工業界)**	發明	ZL 201110089455.1	台灣科技大學	11/26/2014 ~ 04/10/2031
29	排氣櫃 **(已「非專屬授權」給工業界)**	新型	M 484679	台灣科技大學	08/21/2014 ~ 02/20/2024
30	排氣櫃 **(已「非專屬授權」給工業界)**	實用新型	ZL 201420080039.4	台灣科技大學	09/10/2014 ~ 02/23/2024
31	油煙阻隔板組 **(已「非專屬授權」給工業界)**	實用新型	ZL 201420054710.8	台灣科技大學	08/20/2014 ~ 01/26/2014
32	具有抗擾動氣流能力的排油煙機 **(已「非專屬授權」給工業界)**	發明	ZL 201110033572.6	台灣科技大學	08/06/2014 ~ 01/31/2031
33	排氣櫃 **(已「非專屬授權」給工業界)**	新型	ZL 201320749287.9	台灣科技大學	07/02/2014 ~ 11/25/2023
34	排油煙機殼之部分 **(已「非專屬授權」給工業界)**	設計	D 161310	台灣科技大學	06/21/2014 ~ 01/31/2025
35	排氣櫃 **(已「非專屬授權」給工業界)**	新型	M 476827	台灣科技大學	04/21/2014 ~ 11/19/2023
36	側吸式排氣裝置	新型	M 476897	台灣科技大學	04/21/2014 ~ 10/06/2023
37	排油煙櫃 **(已「非專屬授權」給工業界)**	新型	ZL 201320511622.1	台灣科技大學	03/05/2014 ~ 08/21/2023
38	具有偏折板的排氣裝置 **(已「非專屬授權」給工業界)**	發明	I 426220	台灣 科技大學	02/11/2014 ~ 03/21/2031
39	排油煙機 **(已「非專屬授權」給工業界)**	新型	M 472167	台灣科技大學	02/11/2014 ~ 10/03/2023
40	排油煙櫃 **(已「非專屬授權」給工業界)**	新型	M 472166	台灣科技大學	02/11/2014 ~ 08/15/2023
41	Range Hood Capable of Resisting Draft **(已「非專屬授權」給工業界)**	實用新案	JP 3188116	台灣科技大學	12/11/2013 ~ 06/14/2021
42	Reverse Oblique Air Curtain Exhaust Cabinet	發明	US 8,469,780	台灣科技大學	06/25/2013 ~ 04/25/2032
43	排油煙機殼之部分 **(已「非專屬授權」給工業界)**	設計	D 156958	台灣科技大學	11/01/2013 ~ 12/04/2025

44	Exhaust device having deflection plates **(已「非專屬授權」給工業界)**	發明	特許第5362783號	台灣科技大學	09/13/2013 ~ 07/20/2031
45	Range Hood Capable of Resisting Draft **(已「非專屬授權」給工業界)**	發明	10-1306756	台灣科技大學	09/04/2013 ~ 06/14/2031
46	分離式排油煙機 **(已「非專屬授權」給工業界)**	新型	ZL 201320061620.7	台灣科技大學	09/11/2013 ~ 02/04/2023
47	具有抗擾動氣流能力的排油煙機 **(已「非專屬授權」給工業界)**	發明	I 408317	台灣科技大學	09/11/2013 ~ 12/14/2030
48	分離式排油煙機 **(已「非專屬授權」給工業界)**	新型	M 461764	台灣科技大學	09/11/2013 ~ 01/29/2023
49	置換式通風系統 **(已「非專屬授權」給工業界)**	發明	I 397659	台灣科技大學	06/01/2013 ~ 11/12/2029
50	具有可活動側板之排油煙機 **(已「非專屬授權」給工業界)**	新型	M 449922	台灣科技大學	04/01/2013 ~ 09/09/2022
51	排油煙機 **(已「非專屬授權」給工業界)**	新型	ZL 201220177244.3	台灣科技大學	12/19/2012 ~ 04/24/2022
52	排油煙機 **(已「非專屬授權」給工業界)**	新型	M 440418	台灣科技大學	11/01/2012 ~ 04/19/2022
53	逆向傾斜氣簾式排氣櫃 **(已「非專屬授權」給工業界)**	發明	I 365768	台灣科技大學	06/11/2012 ~ 10/13/2029
54	污染物排放裝置及使用該裝置之雙氣簾式排油煙機 **(已「非專屬授權」給工業界)**	發明	ZL 200810067646.6	台灣科技大學	04/11/2012 ~ 06/06/2028
55	汙染物排放裝置及使用該裝置之斜向單氣簾式排油煙機 **(已「非專屬授權」給工業界)**	發明	I 361263	台灣 科技大學	04/01/2012 ~ 09/16/2028
56	Reverse Oblique Air Curtain Exhaust Cabinet **(已「非專屬授權」給工業界)**	發明	EP 2327484	台灣 科技大學	02/08/2012 ~ 11/26/2029
57	具有兩側立板的排油煙機 **(已「非專屬授權」給工業界)**	新型	M 423213	台灣 科技大學	02/21/2012 ~ 06/14/2021
58	氣簾式生物櫃	新型	ZL 201020694397.6	台灣 科技大學	02/08/2012 ~ 12/24/2021
59	具有抵抗氣流擾動能力的排油煙機 **(已「非專屬授權」給工業界)**	新型	ZL 201120051239.3	台灣 科技大學	12/14/2011 ~ 03/01/2021
60	Air Curtain-Isolated Biosafety Cabinet	發明	特許4775595	勞委會勞工安全衛生研究所	07/08/2011 ~ 12/21/2027
61	具有傾斜氣簾的排氣裝置 **(已「非專屬授權」給工業界)**	新型	M 407362	台灣科技大學	07/11/2011 ~ 09/16/2020
62	具有斜向噴流之框架 **(已「非專屬授權」給工業界)**	新型	ZL 201020240770.0	台灣科技大學	06/15/2011 ~ 06/21/2021
63	汙染物排放裝置及使用該裝置之斜向單氣簾式排油煙機 **(已「非專屬授權」給工業界)**	發明	ZL 200810169506.X	台灣科技大學	09/14/2011 ~ 10/06/2028
64	可導引氣流之排油煙機 **(已「非專屬授權」給工業界)**	新型	M 413825	台灣 科技大學	10/11/2011 ~ 03/09/2021
65	具有抗擾動氣流能力的吸氣罩 **(已「非專屬授權」給工業界)**	新型	M 415759	台灣 科技大學	11/11/2011 ~ 01/11/2021
66	引擎冷卻水道結構	發明	I 331644	三陽工業股份有限公司	10/11/2011 ~ 11/22/2027
67	全面包圍式排油煙機 **(已「非專屬授權」給工業界)**	新型	M 413826	台灣 科技大學	10/11/2011 ~ 03/29/2021
68	具有抵抗氣流擾動能力的排油煙機 **(已「非專屬授權」給工業界)**	新型	M 413824	台灣科技大學	10/11/2011 ~ 02/24/2021
69	Air-Isolator Fume Hood **(已「非專屬授權」給工業界)**	發明	特許第4704284號	勞委會勞工安全衛生研究所	03/18/2011 ~ 07/05/2026
70	具有氣流穩定裝置的排氣櫃 **(已「非專屬授權」給工業界)**	新型	M 399959	台灣 科技大學	03/11/2011 ~

					09/16/2020
71	具有傾斜氣簾的排氣裝置 **(已「非專屬授權」給工業界)**	新型	M 407362	台灣 科技大學	07/11/2011 ~ 09/16/2020
72	污染物排放裝置及使用該裝置之雙氣簾式排油煙機 **(已「非專屬授權」給工業界)**	發明	I 341916	台灣 科技大學	05/11/2011 ~ 05/27/2028
73	具有排氣系統之解剖檯	新型	M 404006	台灣科技大學	05/21/2011 ~ 10/18/2020
74	具有長形吸氣槽的排油煙機 **(已「非專屬授權」給工業界)**	新型	M 397496	台灣 科技大學	02/01/2011 ~ 07/08/2020
75	Pollutant Removing Device and Dual-Air Curtain Range Hood Using The Device	發明	EP 2138771	台灣 科技大學	07/28/2010 ~ 06/26/2028
76	具有斜向噴流之框架 **(已「非專屬授權」給工業界)**	新型	M 392930	台灣 科技大學	06/22/2010 ~ 06/26/2020
77	水冷式引擎改良結構	發明	I 319792	三陽工業股份有限公司	11/21/2010 ~ 06/21/2020
78	相對傾斜雙氣簾式排氣櫃 **(已「非專屬授權」給工業界)**	新型	M 375855	台灣科技大學	03/11/2010 ~ 11/08/2019
79	防止有害氣體洩漏的裝置	新型	ZL 200920170176.6	台灣科技大學	06/16/2010 ~ 08/25/2019
80	污染物排放裝置及使用該裝置之排油煙機 **(已「非專屬授權」給工業界)**	新型	M 358949	台灣科技大學	06/11/2009 ~ 02/24/2019
81	防洩漏之污染物排放裝置及使用該裝置之排油煙機 **(已「非專屬授權」給工業界)**	新型	M 358273	台灣科技大學	06/01/2009 ~ 01/11/2019
82	汙染物排放裝置及使用該裝置之斜向單氣簾式排油煙機 **(已「非專屬授權」給工業界)**	新型	M 356084	台灣科技大學	05/01/2009 ~ 12/21/2018
83	半遮蔽型推挽式排油煙櫃 **(已「非專屬授權」給工業界)**	新型	M 348209	台灣科技大學	01/01/2009 ~ 06/03/2018
84	雙氣簾式排氣櫃 **(已「非專屬授權」給工業界)**	新型	M 353258	台灣科技大學	03/21/2009 ~ 11/11/2018
85	氣簾式生物安全櫃 **(已「非專屬授權」給工業界)**	新型	M 326441	勞委會勞工安全衛生研究所	04/26/2008 ~ 05/31/2017
86	Air-Isolator Fume Hood	發明	US 73118771 B2	勞工委員會勞工安全衛生研究所	01/05/2007 ~ 07/18/2025
87	Air Curtain-Isolated Biosafety Cabinet	發明	EP 2014365	勞工委員會勞工安全衛生研究所	12/19/2007 ~ 12/19/2027
88	環境汙染物移除方法及裝置	發明	I 281533	勞委會勞工安全衛生研究所	05/21/2007 ~ 11/28/2016
89	Air-Isolator Fume Hood	發明	EP 1745866 A1	勞委會勞工安全衛生研究所	07/07/2006 ~ 07/06/2026
90	氣冷引擎之風扇外罩結構	新型	M 298645	光陽工業股份有限公司	10/01/2006 ~ 03/30/2016
91	Push-Pull Type Ventilation Hood	發明	US 7,819,727 B2	勞委會勞工安全衛生研究所	01/16/2006 ~ 01/08/2024
92	前下吸式氣櫃 **(已「非專屬授權」給工業界)**	新型	M 281062	勞委會勞工安全衛生研究所	11/21/2005 ~ 07/07/2015
93	氣簾式氣櫃 **(已「非專屬授權」給工業界)**	新型	M 279718	勞委會勞工安全衛生研究所	11/01/2005 ~ 07/07/2015

94	吹吸式氣罩結構改良	新型	M 262204	勞委會勞工安全衛生研究所	04/21/2005 ~ 06/17/2014
95	Airflow Capture Booth with Single-Plate Windbreak	發明	US 6,705,937 B2	勞委會勞工安全衛生研究所	03/16/2004 ~ 03/08/2022
96	局部非遮蔽式氣流亭	新型	201565	勞委會勞工安全衛生研究所	03/21/2003 ~ 06/13/2014
97	機車二行程引擎的進氣系統之改良結構	新型	190859	光陽工業股份有限公司	06/01/2002 ~ 08/02/2012
98	一種具有中央鈍體效應的旋風式液體霧化器 **(已「非專屬授權」給工業界)**	發明	134255	台灣科技大學	05/16/2001 ~ 08/12/2018
99	一種安裝小型省油引擎與六連桿無段變速器的動力輔助腳踏車	新型	173899	台灣科技大學	05/01/2001 ~ 08/12/2010
100	一種可以使管道彎角下游流速均勻的高效率薄板型導葉片 **(已「非專屬授權」給工業界)**	新型	168623	台灣科技大學	12/21/2000 ~ 04/07/2011
101	汽機車排氣管結構改良裝置	新型	160087	光陽工業股份有限公司	06/01/2000 ~ 01/18/2011
102	能分層掃氣的摩托車二行程引擎	新型	ZL 98 2 41040.9	光陽工業股份有限公司	09/04/1999 ~ 9/3/2009
103	具有分層掃氣設計的機車二行程引擎	新型	150578	光陽工業股份有限公司	08/11/1999 ~ 09/01/2010

Pending: 17

B. Outcome

V. Patent Authorizations/Technology Transfers

（下表僅包含『產業界與學校簽訂正式技轉合約』之案件，而不包括『研究計畫的一部份經費登錄為先期技轉金或技轉金』之案件）

	Title 專利授權/ 技術移轉名稱	Country/ Region 專利核發國家	Type 專利型態	Number 專利號碼	Owner 專利權人	Contractor 對象	Effective Period 合約有效期間	Attribution 屬性
1	傾斜四渦流排油煙機	Taiwan	發明 新型		台灣科技大學		06/15/2018 ~	Non-exclusive
2	傾斜四渦流排油煙機	Taiwan	發明 新型		台灣科技大學		02/07/2018 ~	Non-exclusive
3	家用廚房排油煙機	Taiwan	發明 新型		台灣科技大學		06/12/2017 ~	Non-exclusive
4	斜氣簾式排氣櫃及桌上型吸氣罩	China	發明 新型		台灣科技大學		10/31/2015 ~	Non-exclusive
5	家用與商用廚房排油煙機	China Taiwan Korea Canada USA Japan EU	發明 新型		台灣科技大學		08/27/2015 ~	Non-exclusive
6	家用廚房排油煙機	Taiwan	發明 新型		台灣科技大學		06/12/2015 ~ 06/11/2017	Non-exclusive
7	家用及商用廚房排油煙機	China Taiwan	發明 新型		台灣科技大學		01/20/2015 ~ 01/19/2016	Non-exclusive

8	家用排油煙機及工作站型排氣櫃	China Taiwan	發明新型		台灣科技大學		01/23/2014 ~ 03/22/2015	Non-exclusive
9	家用及商用廚房排油煙機	China	發明新型		台灣科技大學		01/01/2014 ~ 04/30/2016	Non-exclusive
10	家用排油煙機及工作站型排氣櫃	China Taiwan	發明新型		台灣科技大學		02/15/2013 ~ 03/05/2014	Non-exclusive
11	逆向傾斜氣簾式排氣櫃及工作站型排氣櫃	Taiwan	發明新型		台灣科技大學		07/15/2011 ~	Non-exclusive
12	家用排油煙機及工作站型排氣櫃	Taiwan	發明新型		台灣科技大學		03/29/2011 ~ 03/28/2013	Non-exclusive
13	家用排油煙機及工作站型排氣櫃	Taiwan	發明新型		台灣科技大學		04/02/2011 ~ 04/01/2017	Non-exclusive
14	家用排油煙機及工作站型排氣櫃	Taiwan	發明新型		台灣科技大學		12/23/2010 ~ 01/15/2013	Non-exclusive
15	一種可以使管道彎角下游流速均勻的高效率薄板型導葉片	Taiwan	新型		台灣科技大學		09/15/2010 ~	Non-exclusive
16	推挽式氣簾設計與參數規劃			技術移轉	台灣科技大學		10/01/2009 ~	Non-exclusive
17	氣簾式氣櫃、前下吸式氣櫃	Taiwan	新型		勞委會勞工安全衛生研究所		10/01/2009 ~	Non-exclusive
18	建築物複合置換式通風技術			技術移轉	台灣科技大學		08/01/2009 ~ 08/01/2012	Non-exclusive
19	一種具有中央鈍體效應的旋風式液體霧化器	Taiwan	發明		台灣科技大學		06/20/2009 ~	Non-exclusive
20	Air-Isolator Fume Hood	Japan	發明	特許第4704284號	勞委會勞工安全衛生研究所		05/01/2009 ~ 04/30/2014	Exclusive
21	Physical and geometric design parameters for reducing mass exchange across opening of cabinet			技術移轉	台灣科技大學		05/01/2009 ~ 04/30/2014	Non-exclusive
22	半隔離腔質傳操控技術			技術移轉	台灣科技大學		09/01/2008 ~ 02/28/2017	Non-exclusive
23	氣簾式生物安全櫃	Taiwan	新型		勞委會勞工安全衛生研究所		08/01/2008 ~ 05/31/2017	Non-exclusive
24	氣簾式氣櫃、前下吸式氣櫃	Taiwan	新型		勞委會勞工安全衛生研究所		06/26/2006 ~	Non-exclusive

VI. Sponsored Research Projects

產業界計畫

No. 編號	Title 計 畫 名 稱	Duty 擔任工作	Period 起迄年月	Amount 金 額	Source 計畫來源
001	噴油嘴噴霧觀測計畫	主持人	107.10~108.02		
002	107年度高危害事業單位設置工業通風設施效能改善工作計畫(IX)	主持人	107.03~108.02		
003	流場可視化及質點影像速度儀教學設備開發研究	主持人	106.11~107.10		
004	單缸四閥四行程引擎燃燒室最適化研究	主持人	106.07~107.06		
005	FY106節能方案之研究	主持人	106.07~107.06		

006	106年度高危害事業單位設置工業通風設施效能改善工作計畫(VIII)	主持人	106.03~107.02		
007	4V引擎球型燃燒室最適化設計之研究	主持人	105.08~106.07		
008	105年度高危害事業單位設置工業通風設施效能改善工作計畫(VII)	主持人	105.04~105.12		
009	FY-104-2V引擎球型燃燒室最適化之研究	主持人	104.08~105.07		
010	單缸二閥四行程低油耗引擎之發展	主持人	104.06~105.05		
011	104年度高危害事業單位設置工業通風設施效能改善工作計畫(VI)	主持人	104.04~104.12		
012	排放管道內空氣污染物流速量測技術評析與調查	主持人	104.03~104.12		
013	增強2V引擎缸內氣流滾轉運動	主持人	103.07~104.06		
014	103年度高危害事業單位設置工業通風設施效能改善工作計畫(V)	主持人	103.01~103.12		
015	FY102分析軟體StarCD esice-PFI噴油模擬分析技術移轉	主持人	102.05~103.04		
016	FY102四行程引擎缸內直噴技術研究(III)	主持人	102.05~103.04		
017	102年度高危害事業單位設置工業通風設施效能改善工作計畫(IV)	主持人	102.01~102.12		
018	FY101分析軟體StarCD esice引擎缸內動態模擬及噴油模擬分析技術轉移	主持人	101.01~101.12		
019	雙火星塞引擎之發展：缸內流場調整與燃燒模擬(II)	主持人	101.10~102.09		
020	101年度高危害事業單位設置工業通風設施效能改善工作計畫(III)	主持人	101.01~101.12		
021	FY101四行程引擎缸內直噴技術研究(II)	主持人	101.01~101.12		
022	風洞與風速校準技術	主持人	100.09~101.08		
023	中小企業局部排氣空污輔導改善(IV)	主持人	100.08~101.07		
024	100年度高危害業別工業通風設施效能測試及驗證計畫(II)	主持人	100.01~100.12		
025	雙火星塞引擎之發展：缸內流場調整與燃燒模擬(I)	主持人	100.01~100.12		
026	FY100四行程缸內直噴技術研究(I)	主持人	100.01~100.12		
027	中小企業局部排氣空污輔導改善(III)	主持人	99.03~100.02		
028	99 年度高危害業別工業通風設施效能測試及驗證計畫(I)	主持人	98.09~99.12		
029	氣簾式生物安全櫃氣膠噴霧洩漏檢測	主持人	98.05~99.04		
030	四行程引擎研究(II)	主持人	98.06~99.05		
031	氣簾式氣櫃內流場與外部氣流影響測試	主持人	98.04~98.12		
032	四行程引擎研究(I)	主持人	97.06~98.05		
033	中小企業局部排氣空污輔導改善(II)	主持人	97.01~97.12		
034	生物安全櫃操作條件影響因素測試	主持人	96.04~96.11		
035	四行程引擎缸內直噴技術研究	主持人	95.12~97.11		
036	中小企業局部排氣空污輔導改善(I)	主持人	95.09~96.08		
037	學校實驗室通風櫃測試規範、標準操作方法建立及教育推廣計畫(III)	主持人	95.07~96.06		
038	學校實驗室通風櫃測試規範、標準操作方法建立及教育推廣計畫(II)	主持人	94.07~95.06		
039	崗亭式氣櫃之最佳化設計	主持人	94.03~94.11		
040	引擎水冷系統之設計與改善	主持人	94.06~96.05		
041	動態氣體穩流最佳化模擬分析	主持人	94.02~95.06		

042	學校實驗室通風櫃測試規範、標準操作方法建立及教育推廣計畫(I)	主持人	93.07~94.06		
043	機車引擎散熱風扇與導氣罩的調整與設計改良	主持人	93.06~94.05		
044	風扇流場於模擬水槽中的可視化與量化之PIV技術發展	主持人	93.03~93.11		
045	PIV技術應用於稀薄燃燒引擎缸內流場觀測研究	共同主持人	93.03~93.11		
046	崗亭式氣罩設計規範研究	主持人	93.02~93.11		
047	TF-1蒸發室與熱管的發展	主持人	92.08~93.07		
048	散熱模組流場PIV量測方法研究	共同主持人	92.03~92.11		
049	V2-機車引擎缸內動態流場量測技術研究	共同主持人	92.03~92.11		
050	微細流場測試觀察及技術研究	主持人	92.03~92.11		
051	吹吸式氣罩設計與操作指引研究	主持人	92.02~92.11		
052	風扇流場觀測系統	主持人	91.10~92.09		
053	CPU冷卻器流場可視化系統研發	主持人	91.10~92.02		
054	使用PIV於引擎的氣流調整	主持人	91.11~92.10		
055	機車引擎的進氣調整	主持人	91.09~92.08		
056	筆記型電腦CPU扁平式高效率熱傳輸器的技術發展	主持人	91.06~92.05		
057	微飛機自動飛行關鍵技術-微飛機氣動力資料拮取	共同主持人	91.05~91.12		
058	逸散性洩漏流量控制閥模型控制	共同主持人	91.07~91.12		
059	微細氣流場診測設備發展	主持人	91.03~91.11		
060	發散式危害源氣罩設計模式研究	主持人	91.02~91.11		
061	微飛機翼形與流場控制機構風洞測試分析	主持人	90.06~90.12		
062	雷射光頁照片拍攝	主持人	90.06~90.10		
063	質點影像測速發展	主持人	90.06~91.05		
064	引擎相關雷射煙霧流場觀察	主持人	90.06~90.08		
065	伺服系統煙霧流場可視化	主持人	90.04~90.06		
066	閥體內流場觀察與量測	共同主持人	90.01~90.12		
067	磁碟陣列設計方法與流程之發展	主持人	90.03~91.02		
068	氣罩凸緣對捕集效果相關性探討	主持人	90.02~90.12		
069	PIV應用於機車引擎氣流旋轉與滾轉運動	主持人	90.01~90.12		
070	引擎缸內流場雷射診測技術之發展與應用	主持人	89.10~91.03		
071	電子構裝的散熱與冷卻 - 設計、量測與分析	主持人	89.04~90.03		
072	CFD在電子構裝散熱與冷卻設計的應用	主持人	89.03~90.02		
073	微飛機空氣動力流場觀察	主持人	89.03~89.10		
074	鈍體效應補強的旋流燃燒器之流場混合與設計參數研究(II)	主持人	88.08~89.07		
075	外裝型氣罩控制風速與捕集能力之探討	主持人	88.10~89.09		
076	TOP BOY 50 引擎排氣系統之研發	主持人	88.06~89.05		
077	興達電廠二號機組煙氣道流場量測	主持人	88.02~89.03		
078	風洞與風速計校正	主持人	88.03~88.06		
079	鈍體效應補強的旋流燃燒器之流場混合與設計參數研究(I)	主持人	88.02~88.07		
080	作業場所空氣有害物預估與控制研究：側風對外裝型氣罩捕集效果之探討	主持人	87.07~88.06		
081	二行程機車引擎排氣污染之改善：化油器分層掃氣裝置之研發	主持人	87.08~88.07		
082	協和電廠靜電集塵器性能研究	主持人	87.04~88.03		
083	風洞與風速計校正	主持人	87.03~87.06		
084	雙噴流鈍體燃燒器之燃燒性能與尺寸效應	主持人	86.07~87.06		
085	風洞與風速計校正	主持人	86.03~86.06		

086	二行程機車引擎進氣系統省油裝置之研發	主持人	86.02~87.01		
087	風洞與風速計校正	主持人	85.03~85.06		
088	GAK引擎排氣系統之設計與改良	主持人	84.09~85.08		
089	風洞與風速計校正	主持人	84.03~84.06		
090	GAK引擎之馬力提昇	主持人	83.04~84.03		
091	風洞與風速計校正	主持人	82.03~82.06		

科技部(國科會)計畫

No. 編號	Title 計 畫 名 稱	Duty 擔任工作	Period 起迄年月	Amount 金 額	Source 計畫來源
001	圓柱與平板交接區域上游馬蹄狀渦流與下游振盪尾流的流動與控制(2/3)	主持人	106.08~107.07		科技部
002	受側向氣流衝擊之燃燒噴流在聲波激擾時的火焰與流場特性(1/3) (特約計畫)	主持人	106.08~107.07		科技部
003	受平面噴流控制之方柱流場 (3/3)	主持人	105.08~106.07		科技部
004	圓柱與平板交接區域上游馬蹄狀渦流與下游振盪尾流的流動與控制(1/3)	主持人	105.08~106.07		科技部
005	受平面噴流控制之方柱流場 (2/3)	主持人	104.08~105.07		科技部
006	聲波激擾對旋轉雙重噴流之流場與混合特性的調制(3/3)	主持人	104.08~105.07		科技部
007	受平面噴流控制之方柱流場 (1/3)	主持人	103.08~104.07		科技部
008	聲波激擾對旋轉雙重噴流之流場與混合特性的調制(2/3)	主持人	103.08~104.07		科技部
009	自我激勵振動燃燒噴流之流場與火焰特性(3/3)	主持人	102.08~103.07		國科會
010	聲波激擾對旋轉雙重噴流之流場與混合特性的調制(1/3)	主持人	102.08~103.07		國科會
011	自我激勵振動燃燒噴流之流場與火焰特性(2/3)	主持人	101.08~102.07		國科會
012	聲波激擾對旋轉雙重燃燒噴流動態特性之效應與控制(3/3)	主持人	101.08~102.07		國科會
013	自我激勵振動燃燒噴流之流場與火焰特性(1/3)	主持人	100.08~101.07		國科會
014	聲波激擾對旋轉雙重燃燒噴流動態特性之效應與控制(2/3)	主持人	100.08~101.07		國科會
015	受聲波激擾之燃燒噴流在側風衝擊下的動態特性與控制(3/3)	主持人	99.08~100.07		國科會
016	聲波激擾對旋轉雙重燃燒噴流動態特性之效應與控制(1/3)	主持人	99.08~100.07		國科會
017	受聲波激擾之燃燒噴流在側風衝擊下的動態特性與控制(2/3)	主持人	98.08~99.07		國科會
018	發展自激振動桿技術以調制方柱之表面流場、渦漩逸放及氣動力性能(3/3)	主持人	98.08~99.07		國科會
019	受聲波激擾之燃燒噴流在側風衝擊下的動態特性與控制(1/3)	主持人	97.08~98.07		國科會
020	發展自激振動桿技術以調制方柱之表面流場、渦漩逸放及氣動力性能(2/3)	主持人	97.08~98.07		國科會
021	發展自激振動桿技術以調制方柱之表面流場、渦漩逸放及氣動力性能(1/3)	主持人	96.08~97.07		國科會
022	受強制孔穴激勵橫向震盪平面噴流調制之鈍體尾流(2/2)	主持人	96.08~97.07		國科會
023	受強制孔穴激勵橫向震盪平面噴流調制之鈍體尾流(1/2)	主持人	95.08~96.07		國科會
024	受側風衝擊之噴流的剪流層動態結構與控制(2/2)	主持人	95.08~96.07		國科會

025	受側風衝擊之噴流的剪流層動態結構與控制(1/2)	主持人	94.08~95.07		國科會
026	鈍體型流體自激振盪器的發展機制與尾流調制(2/2)	主持人	94.08~95.07		國科會
027	鈍體型流體自激振盪器的發展機制與尾流調制(1/2)	主持人	93.08~94.07		國科會
028	自激振動桿技術於圓柱流場的發展與調制(2/2)	主持人	93.08~94.07		國科會
029	自激振動桿技術於圓柱流場的發展與調制(1/2)	主持人	92.08~93.07		國科會
030	旋噴流受雙圓盤機構調制時的流場與混合效應	主持人	92.08~93.07		國科會
031	側風衝擊角度對噴流流場、混合與燃燒特性的影響(3/3)	主持人	91.08~92.07		國科會
032	小直徑圓棒對瞬間起動機翼表面流場及渦旋流逸之機制與控制	主持人	91.08~92.07		國科會
033	機翼表面流場及氣動力性能之自我激勵振動圓桿技術之發展	主持人	90.08~91.07		國科會
034	側風衝擊角度對噴流流場、混合與燃燒特性的影響(2/3)	主持人	90.08~91.07		國科會
035	瞬間起動機翼表面流場及渦旋流逸之機制與控制	主持人	89.08~90.07		國科會
036	側風衝擊角度對噴流流場、混合與燃燒特性的影響(1/3)	主持人	89.08~90.07		國科會
037	瞬間起動機翼之動態渦旋與尾流非穩定性	主持人	88.08~89.07		國科會
038	端渦旋與燃燒偏折噴流之交互作用	主持人	87.08~88.07		國科會
039	雙重噴流鈍體燃燒器之流場與燃燒特性研究	主持人	86.08~87.07		國科會
040	流體結構與機翼之交互作用(III)	主持人	85.08~86.07		國科會
041	剪流層動態結構對圓盤鈍體雙同心噴流特性之影響	主持人	85.08~86.07		國科會
042	流體結構與機翼之交互作用(II)	主持人	84.08~85.07		國科會
043	非預混迴流穩定火焰之特性模式與結構	主持人	83.08~84.07		國科會
044	流體結構與機翼之交互作用(I)	主持人	83.08~84.07		國科會
045	圓盤鈍體燃燒器之流場與火焰特性	主持人	83.02~83.07		國科會
046	燃燒噴流在橫風中之非穩態結構(II)	主持人	82.02~83.01		國科會
047	具一自由端之有限長度翼形物在氣流中之流體/固體交互作用	主持人	82.08~84.07		國科會
48	燃燒噴流在橫風中之非穩態結構(I)	主持人	81.02~82.01		國科會

VII. Industrial Services

輔導多種高危害行業之中小企業進行通風改善

對超過 400 家會產生高危害氣態污染物之中小企業，進行**無收費**之通風工程改善輔導。步驟為：瞭解高危害製程區作業環境、瞭解在輔導前之勞工危害物質暴露量、現場訪視評估、提供該廠各製程區之局部排氣工程改善對策。以下為其中一部分例子：