CURRICULUM VITAE

Shung-Wen Kang
Professor
Department of Mechanical and Electro-Mechanical Engineering
Tamkang University
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EDUCATION:

PhD, Mechanical, Louisiana Tech University, Ruston, LA (1992)
MS, Mechanical Engineering, Tamkang University, Tamsui, Taiwan (1985)
BS, Mechanical Engineering, Tamkang University, Tamsui, Taiwan (1980)

PROFESSIONAL EXPERIENCE:

Dean, The Office of Research and Development(ORD), *Tamkang University (2006-2013)*

Primary Responsibilities:

1. Strategic Planning & Policy Development

Formulate and execute university-wide research development policies.

Oversee major decisions related to research direction, resource allocation, and long-term planning.

2. Administrative Leadership

Manage and supervise all divisions under the Office of Research & Development.Ensure smooth operation of research administration, funding management, and project approval processes.

3. Research Project Support

Assist faculty in applying for national research grants, government-funded projects, and competitive research programs.

Promote interdisciplinary and international academic collaboration.

4. Industry–Academia Collaboration

Lead the university's efforts in industry partnerships, cooperative projects, and technology transfer.

Strengthen TKU's connection with industry, government agencies, and research institutes.

5. Intellectual Property & Technology Transfer

Oversee patent applications, licensing, IP management, and commercialization of research outputs.

Promote startup incubation and innovation development within the university.

6. Research Resource Integration

Coordinate university-wide research centers, laboratories, and shared equipment platforms (e.g., the Precious Instrument Center).

Support establishment and operation of new research centers and special projects.

7. External Representation & Collaboration

Represent TKU in national research meetings, international collaborations, and government committees.

Maintain relationships with Taiwan's NSTC, enterprises, and academic partners.

Chair of Department , *Mechanical and Electro-Mechanical Engineering, Tamkang University (2002-2006)*

During his tenure as Department Chair, he emphasized the equal importance of academic research and industry–academia applications. He actively encouraged faculty members to apply for research grants, engage in inter-university and international collaborations, and strengthen the department's external research networks. He recognized that under the national trend of declining birth rates and the

resulting decrease in student enrollment, research development and industry collaboration would be the key driving forces for the department's long-term growth.

Additionally, he focused on integrating resources and supporting both faculty and student research development. He promoted the concept of "integrated research projects," aiming to foster collaborative research across the entire department and within the university rather than relying on isolated individual efforts. He emphasized that a strong research environment ultimately depends on "people"—talented, motivated, and cooperative faculty members and students who form the core of effective and sustainable academic development.

Professor, *Mechanical and and Electro-Mechanical Engineering, Tamkang University (2003-present)*
Associate Professor, *Mechanical and and Electro-Mechanical Engineering, Tamkang University (1993-2003)*
Associate Professor, *Mechanical Engineering, Sihai Institute of Technology (1992-1993)*
Instructor, *Mechanical Engineering, Tamkang University (1985-1987)*

RESEARCH INTERESTS:

- **Additive manufacturing for two-phase thermal management (heat pipes, vapor chambers, oscillating/pulsating heat pipes)**
  Design, fabrication (e.g., SLM/3D printing), and performance characterization of advanced heat spreaders and heat pipes for electronics and energy systems.
- **TPMS and lattice porous structures for capillary/flow transport: permeability, pressure drop, and flow physics**
  Experimental and CFD-based investigation of porous architectures (TPMS/lattices) focusing on permeability prediction, flow regimes, and validation under varied boundary/flow conditions.
- **AI-assisted thermal design for heat pipes, vapor chambers, and microchannel cooling**
  Machine learning / physics-informed models for rapid performance prediction, inverse design, multi-objective optimization (thermal resistance, capillary limit, pressure drop), and digital-twin–based monitoring/fault diagnosis of two-phase thermal devices.
- **Micro-/meso-scale thermal-fluid systems and functional devices (micro heat exchangers, microfabrication, nano/magnetic nanofluid thermal performance)**
  Development and analysis of micro-scale thermal devices and

components, including micro heat exchangers and microfabricated structures, and enhancement of thermal performance using nanofluids/magnetic nanofluids.

HONORS:

Chief Editor, 2005-2009, Journal of Applied Science and Engineering
Journal of Applied Science and Engineering (JASE) is included in Emerging Sources Citation Index (ESCI), COMPENDEX PLUS (EI) and SCOPUS. The Journal aims to become an international forum for the research and development community to publish articles of highest quality in all disciplines of science and engineering.

Keynote speaker, October, 2010, 12th National Heat Pipe Conference of China, Shenzhen, China.

Member, 2010-present, Heat Pipe Committee, Chinese Society of Engineering Thermophysics.

Keynote speaker, April, 2011, Taiwan Thermal Management Association Annual Meeting & Technical Results Presentation, Taipei, Taiwan.

Keynote speaker, December, 2011, CSME Annual Meeting and the National Conference on Mechanical Engineering, Taipei, Taiwan.

Editor, 2011-present,Journal of Electronics Cooling and Thermal Control
The Journal of Electronics Cooling and Thermal Control (JECTC) is a quarterly, peer-reviewed, academic journal. It aims to provide a vehicle for the exchange and dissemination of original research results, technical notes, and state-of-the-art reviews pertaining to the electronic cooling and thermal system control technology in the computer and electronics industries.

Editor, 2012-2016, Frontiers Heat Pipes (FHP), Frontiers Heat Pipes (FHP) is an international journal devoted mainly to the field of heat pipe science and technology. In order to broaden the impact of research in heat pipe science and technology, FHP is merged into its sister journal – Frontiers in Heat and Mass Transfer (FHMT) effective 2017.

National Science and Technology Council Subsidies for Short-Term

Overseas Research by Science and Technology Personnel, 2012, sabbatical leave, Harvard University Medical School.(The major object of the project is to investigate the design parameters and fabrication of the vapor chambers to meet the requirement of heating rate and temperature uniformity for the polymerase chain reaction application.)

Keynote speaker, June, 2013, (11th International Heat Pipe Symposium, 11th IHPS, Beijing, China).

Member, Joint Committee on IHPC & IHPS (International Heat Pipe Conference & International Heat Pipe Symposium) 2016-present, jointly responsible, with 15 internationally recognized experts worldwide, for academic review and decision-making in the global heat pipe research community.

Keynote speaker, The Heat Pipe Committee of KSME (Korean Society of Mechanical Engineers) hold heat pipe workshop in Korea on October, 2017, in Daejeon city.

Invited Special Lecture, " 3D-Printed Heat Pipe Technology, " Electronics Thermal Management Expert Seminar, organized by the Taiwan Thermal Management Association (TTMA) and co-organized by ITRI (Materials and Chemical Research Laboratories; Electronics and Optoelectronics System Research Laboratories), Oct. 8, 2024, Chang Yung-Fa Foundation International Convention Center, Taipei, Taiwan.

Keynote speaker, The 17th International Conference on Science, Technology and Innovation for Sustainable Well-Being, STISWB2025. July, 2025 in Taoyuan, Taiwan.

AWARDS:

- Best Paper Award, 2013 (as supervisor of graduate student), 11th International Heat Pipe Symposium (IHPS 2013), Beijing, China.

- May 24, 2015 — Supervised two undergraduate students, Jin-Yi Lin and Wei-Yan Chen, whose project "Laser Photoelectric Panel Sensor Lighting System" won 1st Place (National Champion) in the 2015 Motech Cup—Solar Photovoltaic Application Design & Creativity Competition.

- Excellence Award, Ministry of Science and Technology(MOST) 2021 Online

Results Presentation & Performance Evaluation Meeting for Industry–Academia Collaboration Projects.

- Best Paper Award, 2021 (as supervisor of graduate student), Annual Meeting of the Taiwan Thermal Management Association & Technical Results Presentation Conference.

- Best Paper Award, 2023 (as supervisor of graduate student), Annual Meeting of the Taiwan Thermal Management Association & Technical Results Presentation Conference.

- Best Paper Award, 2025 (as supervisor of graduate student), Annual Meeting of the Taiwan Thermal Management Association & Technical Results Presentation Conference.

Ph.D. STUDENTS ADVISED TO COMPLETION AS SOLO ADVISOR:

Dr. Yu-Tang Chen, (Summer 2003), currently employed as a chairman and associate professor at Department of Mechanical Engineering, Hungkuo Delin University of Technology, New Taipei City, Taiwan.

Thesis topic**:** Fabrication and Analysis on Micro Channel Structures.

Dr. Sheng-Hung Tsai, (Summer 2004), currently employed as a consultant,at Easy Field Corporation, Taoyuan City, Taiwan.

Thesis topic: Fabrication and analysis on heat spreaders.

Dr. Wei-Chiang Wei, (Summer 2007), currently employed as a senior manage at Battery Pack Dept. , Mintron Energy Corporation, Taoyuan City, Taiwan.

Thesis topic**:** Investigation of silver nano-fluid heat pipe thermal performance.

Dr. Shin-Chau Tseng, (Summer 2007),

Thesis topic**:** Investigation of Micro Staggered Counter-Flow Heat Exchanger.

Dr. Yu-Hsing Lin, (Summer 2007), Retired from Department of Mechanical Engineering, Hungkuo Delin University of Technology, New Taipei City, Taiwan.

Thesis topic**:** Fabrication and Analysis of Pulsating Heat Pipes (PHPs).

Dr. Chin-Chun Hsu, (Summer 2007), currently employed as a Senior Hardware Reliability Engineer, Google Cloud, New Taipei City, Taiwan.

Thesis topic**:** Investigation of Micronozzles Flow.

Dr. Yu-Hsun Hung, (Summer 2008) currently employed as an engineer at NAVSEA.

Thesis topic**:** Fabrication and Analysis of Aluminum Vapor Chamber Heat Spreaders.

Dr. Yen-Chih Chou, (Summer 2008) currently employed as a Director, Sensing Product Marketing Div.,Ennostar Corperation.

Thesis topic**:** Fabrication and Simulation of Stirling Cycle Engine Employing the Rotary Wankel Mechanism.

Dr. Chun-Sheng Yu, (Spring 2010) currently employed as a Senior System Developer, Fsas Technologies Taiwan Inc.

Thesis topic: Thermal Performance Analysis of Vapor Chamber Applying on Multiple Heat Sources.

Dr. Meng-Chang Tsa, (Summer 2011) currently employed as an deputy team leader, Technology Project Development Section, Dual-Use Technology Center, National Chung-Shan Institute of Science and Technology.

Thesis topic: Fabrication and test of vapor chamber heat spreader.

Dr. Chun-Hsien Huang, (Summer 2014) currently employed as a CAE Chief Engineer, Flotrend Corporation.

Thesis topic: Experimental Investigations of Boiling Heat Transfer in an Evaporator Using Silica Nanoparticle Coatings.

Dr. Pratik Prakash Gupta, (Summer 2023) currently employed as a Lead CAE engineer, Tonbo Imaging Pvt Ltd..

Thesis topic**:** Numerical and Experimental Study of 3D Printed Porous Structures.

CURRENTLY ADVISING:

Kuan-Lin Chen, (PhD Autumn 2022)
Thesis topic: Fabrication and Test of Additively Manufactured Vapor Chambers with TPMS Gyroid Structures

Guru Varun Penubarthi, (PhD Autumn 2024)
Thesis topic:Coupled Experimental and Numerical Study of Heat Transfer Characteristics in TPMS Structures

REFERENCED PUBLICATIONS:

Journals: *Corresponding author

1. Guru Varun Penubarthi, Kishore Bhaskar Suresh Babu, Senthilkumar Sundararaj, **Shung Wen Kang*** (2025, Jul). Investigating Experimental and Computational Fluid Dynamics of 3D-Printed TPMS and Lattice Porous Structures. Micromachines, 16, 883.https://doi.org/10.3390/mi16080883. . (SCI). NSTC 112-2221-E-032-026. (first author is Dr. Kang's student).

2. Goyal Parth , S Senthilkumar , **Shung-Wen Kang*** (2025, Apr). Numerical Simulation of Permeability for Novel Lattice Structures Under Various Flow Conditions. Journal of the Chinese Society of Mechanical Engineers, 46(2),131~140. (SCI). NSTC 112-2221-E-032-026. (first author is Dr. Kang's visiting student).

3. Kuan-Lin Chen, Shao-Chi Hsu, **Shung-Wen Kang*** (2025, Feb). Additive Manufacturing of Vapor Chambers. Materials, 2025, 18, 979. https://doi.org/10.3390/ ma18050979. (first & second authors are Dr. Kang's students).

4. Pratik Prakash Gupta, Sundararaj Senthilkumar, and **Shung-Wen Kang*** (2024, Sep). Numerical Analysis to Find Permeability of Lattice Structures. Journal of Chinese Society of Mechanical Engineers, 45(4), 355~364.. (SCI). NSTC 112-2221-E-032-026. (first author is Dr. Kang's student).

5. K.J. Sanjay , Sundararaj Senthilkumar, and **Shung-Wen Kang***. (2024, Aug). A study to predict the hydrodynamic and thermal characteristics of hybrid mesh regenerator. . Thermal Science and Engineering Progress, 53, August 2024, 102767. . (SCI). NSTC 109-2622-E-006-011-CC2. (first author is Dr. Kang's visiting student). https://doi.org/10.1016/j.tsep.2024.102767.

6. Kuan-Lin Chen, Kuan-Yu Luo, Pratik Prakash Gupta and **Shung-Wen Kang*** (2023, May). SLM Additive Manufacturing of Oscillating Heat Pipe. Sustainability, 15(9), 7538. (first, second & third authors are Dr. Kang's students).

7. Kuttum Pavan Kumar, Pratik Prakash Gupta, Sundararaj Senthilkumar, and **Shung-Wen Kang*** (2022, Dec). Numerical Flow Investigation of Hybrid Regenerator. Journal of the Chinese Society of Mechanical Engineers, 43(6). (first & second authors are Dr. Kang's students).

8. K.J. Bharanitharan, **Shung-Wen Kang**, K.J. Sanjay, S. Senthilkumar* (2022, Sep). A combined technique using phase change material and jet impingement heat transfer for the exhaust heat recovery applications – A numerical approach . Journal of Energy Storage , Volume 55, Part B, p1-24.

9. Kuruchanvalasu Jambulingam Bharanitharan, Sundararaj Senthilkumar,

KuanLin Chen, Kuan-Yu Luo and **Shung-Wen Kang*** (2022, Jul). Correlations Based on Numerical Validation of Oscillating Flow Regenerator. Processes, 2022, 10, 1400 . (SCI). MOST 107-2622-E-006-005-CC2. (first author is Dr. Kang's visiting student).

10. Pratik Prakash Gupta, Sundararaj Senthilkumar and **Shung-Wen Kang*** (2022, Apr). Study of Gas-to-Liquid Heat Pipe Heat Exchanger. Processes, 10(5), 808. (SCI, 74/143, ENGINEERING,CHEMICAL). MOST 108-2221-E-032-026. (first author is Dr. Kang's student).

11. **Shung-Wen Kang***, Chien-Hsuan Chan, Pai-Chun Hsiao (2022, Mar). Study on Circulation Flow in Closed Loop Pulsating Heat Pipe. Journal of Chinese society of Mechanical Engineers, 43(2),79~86. (SCI, 133/135,ENGINEERING, MECHANICAL). MOST 109-2221-E-032-014-MY2.

12. **Shung-Wen Kang***, Huan-Ming Yeh, Meng-Chang Tsai, His-Hsiang Wu (2019, Sep). Manufacture and Test of a High Temperature Heat Pipe. Journal of Applied Science and Engineering, 22(3), 493-499. MOST 105-2622-E-006-006-CC2.

13. **Shung-Wen Kang***, Yao-Chun Wang, Ying-Chang Liu, Hsin-Min Lo (2017, Feb). Visualization and thermal resistance measurements for a magnetic nanofluid pulsating heat pipe. Applied Thermal Engineering, 126, 1044–1050. DOI: 10.1016/j.applthermaleng.2017.02.051

14. Meng-Chang Tsai, **Shung-Wen Kang***, Heng-Yi Li and Wen-Fa Tsai (2015, July). Operation of a Two-Phase Reverse Loop Thermosyphon. Journal of Applied Science and Engineering, 18(3), 259-264. DOI: 10.6180/jase.2015.18.3.06(first author is Dr. Kang's student).

15. **Shung-Wen Kang***, Chun-Hsien Huang, and Yu-Tang Chen (2014). Visualization and thermal resistance of a sintered wicks structure evaporator in a two phase loop thermosyphon. Journal of Thermal Science and Technology. 9(2) DOI: 10.1299/jtst.2014jtst0007

16. Chien-Ping Wang, **Shung-Wen Kang**, Kuan-Min Lin, Tzung-Te Chen, Han-Kuei Fu, and Pei-Ting Chou (2014, Jan). Analysis of Thermal Resistance Characteristics of Power LED Module. IEEE Transactions on electron devices, 61(1), 105-109.

17. Meng-Chang Tsai , **Shung-Wen Kang***, Kleber Vieira de Paiva (2013). Experimental studies of thermal resistance in a vapor chamber heat spreader. Applied Thermal Engineering, 56, 38–44. (first author is Dr. Kang's student).

18. Yu-Tang Chen, **Shung-Wen Kang***, Yu-Hsun Hung , Chun-Hsien Huang, Kun-Cheng Chien (2013).Feasibility study of an aluminum vapor chamber with radial grooved and sintered powders wick structures. Applied Thermal

Engineering, 51, 864–870. (first author is Dr. Kang's student).

19. Sheng-Hong Tsai , Yu-Tang Chen*, and **Shung-Wen Kang** (2012). Journal of Marine Science and Technology, 20(2), 158-162. (first & second authors are Dr. Kang's students).

20. **Shung-Wen Kang***, Kun-Cheng Chien and Wei-Chung Lin (2012). Multiple-Layer Heat Dissipation Module for LED Streetlamps, Journal of Thermal Science and Technology. 15(2), 98-104.

21. **Shung-Wen Kang***, Meng-Chang Tsai, Chih-Sheng Hsieh and Jian-You Chen (2010). Thermal Performance of a Loop Thermosyphon, Tamkang Journal of Science and Engineering, 13(3)281-288.

22. Chun-Sheng Yu*****;**Shung-Wen Kang**;Hong-Bin Chan (2010). Fabricating a Heat Pipe Structure within a Radiating Plate for Electronics Fan-Less Cooling. Journal of Marine Science and Technology, 18(3), 419-423. (first author is Dr. Kang's student).

23. Yu-Hsun Hung, **Shung-Wen Kang***, and Wan-Chun Tsai (2010). Strain analysis of vapor chamber heat Spreaders, Journal of Marine Science and Technology, 18(2), 277-283. (first author is Dr. Kang's student).

24. Yu-Tang Chen*, Chin-Chun Hsu, Chieh-Hsiu Tsai, and **Shung-Wen Kang** (2010). Fabrication of microneedles. Journal of Marine Science and Technology, 18(2), 243-248. (first author is Dr. Kang's student).

25. Yu-Hsing Lin , **Shung-Wen Kang***, Tsung-Yu Wu (2009). Fabrication of polydimethylsiloxane (PDMS) pulsating heat pipe. Applied Thermal Engineering, 29, 573–580. (first author is Dr. Kang's student).

26. Yu-Hsing Lin , **Shung-Wen Kang***, Hui-Lun Chen (2008). Effect of silver nano-fluid on pulsating heat pipe thermal performance. Applied Thermal Engineering, 28, 1312–1317.

27. Yu-Tang Chen*****, **Shung-Wen Kang**, Hui-Lun Chen (2008). Fabrication and investigation of PDMS micro-diffuser/nozzle. Journal of Materials Processing Technology, 198, 478-784. (first author is Dr. Kang's student).

28. Yu-Tang Chen, **Shung-Wen Kang***, Chin-Chun Hsu, Jun-Wei Lin (2007). Micro fuse fabrication and testing, Tamkang Journal of Science and Engineering, 10(2)173-176. (first author is Dr. Kang's student).

29. **Shung-Wen Kang***, Shin-Chau Tseng (2007). Analysis of effectiveness and pressure drop in micro cross-flow heat exchanger. Applied Thermal Engineering, 27, 877–885.

30. **Shung-Wen Kang***, Wei-Chiang Wei , Sheng-Hong Tsai , Shih-Yu Yang (2006). Experimental investigation of silver nano-fluid on heat pipe thermal

performance. Applied Thermal Engineering, 26, 2377–2382.

31. Yu-Tang Chen；**Shung-Wen Kang***；Wei-De Wang；Yan-Jr Jou (2006). Fanno-Line Flow in Microtubes, Journal of Aeronautics, Astronautics and Aviation. Series A, 38(1), 21-26. (first author is Dr. Kang's student).

32. **Shung-Wen Kang***, Yu-Hsing Lin (2006). Manufacturing of film-type heat pipe, Journal of the Chinese Society of Mechanical Engineering 27(1), 13-17.

33. **Shung-Wen Kang***, Yu-Tang Chen, Liu, Hsung-Pen (2005). Brazing diffusion bonding of micro-nickel cylinders and SUS-316 stainless steel. Journal of Materials Processing Technology, 168(2), 286-290.

34. Chin-Chun Hsu, **Shung-Wen Kang***, Tung-Fu Hou (2005). Performance Testing of Micro Loop Heat Pipes, Tamkang Journal of Science and Engineering, 8(2)123-132. (first author is Dr. Kang's student).

35. Meng-Chang Tsai*, Shin-hsing Chang, **Shung-Wen Kang** (2005). Axial heat conduction model to predict maximum heat remove of miniature heat pipe based on grey model theory, Chinese Journal of Mechanical Engineering 18(4), 477-481.

(first author is Dr. Kang's student).

36. Lung-Jieh Yang, Yu-Tang Chen, **Shung-Wen Kang***, Yi-Chung Wang (2004). Fabrication of SU-8 embedded microchannels with circular cross-section, International Journal of Machine Tools & Manufacture, 44, 1109–1114.

37. Yu-Tang Chen, **Shung-Wen Kang***, Wen-Chian Tuh and Tsung-Hsin Hsiao (2004). Experimental Investigation of Fluid Flow and Heat Transfer in Microchannels, Tamkang Journal of Science and Engineering, 7(1)11-16. (first author is Dr. Kang's student).

38. **Shung-Wen Kang***, Sheng-Hong Tsai , Ming-Han Ko (2004). Metallic micro heat pipe heat spreader fabrication, Applied Thermal Engineering, 24, 299–309.

39. Yu-Tang Chen, **Shung-Wen Kang***, P.-F. Chang (2003). A manufacturing technique for 3D polymer micro-venturi tube, International Journal of Machine Tools & Manufacture, 43, 421–424. (first author is Dr. Kang's student).

40. **Shung-Wen Kang***, Sheng-Hong Tsai , Hong-Chih Chen (2002). Fabrication and test of radial grooved micro heat pipes, Applied Thermal Engineering, 22, 1559–1568.

41. **Shung-Wen Kang***, Derlin Huang (2002), Fabrication of star grooves and rhombus grooves micro heat pipe, Journal of Micromechanics and Microengineering, 12 ,525–531.

42. Lung-Jieh Yang*, **Shung-Wen Kang (2002),** The microsensor technology using to identify the initiation time of impact induced elastic waves, Tamkang Journal of Science and Engineering, 5(3), 121-127.

43. **Shung-Wen Kang***, Yu-Tang Chen, Guang-Shang Chang (2002), The

manufacture and test of (110) orientated silicon based micro heat exchanger, Tamkang Journal of Science and Engineering, 5(3), 129-136.

44. Lung-Jieh Yang*, **Shung-Wen Kang** (2002), The SOI-like method of reducing the die size of bulk-micromachined sensors, Sensors and Materials, 14(1), 23–34.

45. C.B Lin*, Y.W Hung, Woe-Chun Liu, **Shung-Wen Kang** (2001), Machining and fluidity of 356Al/SiC(p) composites, Journal of Materials Processing Technology, 110(2), 152-159.

46. Ching-Shung Chen*, **Shung-Wen Kang,** Wei-Jen, Kuo(2001), The friction characteristics of gaseous slip flow in microtubes, Journal of the Chinese institute of engineers ,24(5), 641-647.

47. Hsiharng Yang, **Shung-Wen Kang*** (2000),Improvement of thickness uniformity in nickel electroforming for the LIGA process, International Journal of Machine Tools & Manufacture, 40(7), 1065–1072.

48. **Shung-Wen Kang***, Jong-Shun Chen, Jong-Yun Hung (1998), Surface roughness of (110) orientation silicon based micro heat exchanger channel, International Journal of Machine Tools & Manufacture, 38(5-6), 663–668.

49. C.R. Friedrich, **S.D. Kang**, Micro heat exchangers fabricated by diamond machining(1994), Precision Engineering, 16(1), 56–59.

50. W.C Du*, **Shung-Wen Kang (1986),** MULTIPLE BUBBLE COLLAPSE IN ORGANIC LIQUID.Journal of the Chinese Society of Mechanical EngineersOpen source preview, 7(2), 87–98.

51. Lung-Jieh Yang*, P.-C Liu, **Shung-Wen Kang**, W.-C. Du (1999), Binary deposition method using standard CMOS structural layers to fabricate optical gratings and microlens,

SYNERGISTIC ACTIVITIES:

- Over the past three decades, Dr. Kang has pioneered additive-manufacturing – enabled two-phase thermal management technologies—including heat pipes, vapor chambers, and oscillating/pulsating heat pipes—supported by tightly integrated experiments and CFD validation of TPMS and lattice porous wick architectures for high-performance electronic cooling. His contributions have been widely recognized by the thermal management community, particularly for bridging advanced 3D printing with heat-pipe science and engineering applications. Dr. Kang has authored more than 150 journal and conference papers, along with book chapters and technical reports, and holds patents in the United States, Taiwan, Japan, and China.

- Dr. Kang has received 45 research grants with total over 40 million NT dollars from NSC, MOST, NSTC, Marketech International Corp., Mastek Tech Inc., Taiye Technology Co., Ltd., Weiyang Superconducting Co., Ltd. etc.

- Chairman, 2011, 10th International Heat Pipe Symposium, 10th IHPS, Taipei, Taiwan).

- Session Chair, Joint IHPS and IHPC 2016, 2018, 2023, 2024, 2026 Conferences

COURSES TAUGHT:

- *Thermodynamics*
- *Heat Transfer*
- *Viscous Flow*
- *Advanced Energy Conversions*
- *Heat Pipe Science and Technology*