

論文著作目錄(摘錄 2013-2018)

(A)Journal Publication Refereed Papers (SCI, EI)

1. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Wen-Fei Lin and Boen Houng, "Reliability Design and Optimization Process on Through Mold Via Using Ultrafast Laser," *Polymers & Polymer Composites*, vol. 20, no. 1, pp.1-8, 2018.01. (SCI).
2. Nai-Chieh Wei, **Hsiang-Chen Hsu**, Ai-Ling Yang, "Good Jobs in Industrial Upgrading and Transformation," *The International Journal of Organizational Innovation*, vol. 10, no. 3, pp. 167-188, 2018.01. (EI)
3. Jung-Nan Yen, Hsiang-Chin Hung, **Hsiang-Chen Hsu**(corresponding author), Yu-Chen Lee, "Systematic Design an Intelligent Simulation Training System – from Learn-Memorize Perspective," *Microsystem Technologies Micro-and Nanosystems Information Storage and Processing Systems*, vol. 23, no. 1, pp. 1-11, 2017.12. (SCI)
4. Jung-Nan Yen, Po-Han Lin, Chiao-Pin Bao, **Hsiang-Chen Hsu**(corresponding author), "A Research on Establishing Occupational Competency Curriculum for Key Positions in Electrical and Electronic Industries," *Innovative Computing, Information and Control (ICIC) Express Letter, Part B: Application*, vol. 8, no. 11, pp. 1545-1552, 2017.11. (EI)
5. **Hsiang-Chen Hsu**, Li-Ming Chu, Zong-Kun Wang, Shu-Chi Tsao, "Position Control and Novel Application of SCARA Robot with Vision System," *Advances in Technology Innovation*, vol. 2, no. 2, pp. 40 – 45, 2017.04. (EI)
6. **Hsiang-Chen Hsu**, Li-Ming Chu, Baojun Liu and Chien-Yuan Lai, "Design on MEMS-Based 3D Biochip for Drug-Released Dispenser," *Microsystem Technologies*, Vol. 23, Issue 2, pp 355–360, 2017.02, (SCI).
7. Li-Ming Chu, Jaw-Ren Lin, Yuh-Ping Chang, and **Hsiang-Chen Hsu** (corresponding author), "Squeeze Film Characteristics of Circular Contacts at Impact and Rebound Motion with Micropolar Lubricants," *Microsystem Technologies - Micro-and Nanosystems Information Storage and Processing Systems*, Vol. 23, Issue 2, pp 465–472, 2017.02, (SCI).
8. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author) and Wen-Fei Lin, "Glass Cutting with Elongation Optics in Comparison to Conventional Methods by Laser", *Journal of Transactions of the Canadian Society for Mechanical Engineering*, Vol. 40, Issue 5, pp.923-932, 2016.12, (SCI).
9. Li-Ming Chu, Jaw-Ren Lin, **Hsiang-Chen Hsu**(corresponding author) and Yuh-Ping Chang, "Effects of Surface Forces on Squeeze EHL Motion between Elastic Ball and Elastic Coated Surface," *Journal of Transactions of the Canadian Society for Mechanical Engineering*, Vol. 40, Issue 5, pp.821-833, 2016.12, (SCI).
10. 朱力民、王立偉、**徐祥禎**，"油電混合機車於低速域之動力特性研究"，*臺東大學綠色科學學刊*，vol. 6, no. 1, pp. 145-162, 2016.11.
11. Shih-Jeh Wu, **Hsiang-Chen Hsu**, Wen-Fei Lin, "Reduction of Residual Stresses in Sapphire Cover Glass Induced by Mechanical Polishing and Laser Chamfering Through Etching",

- Advances in Technology Innovation*, vol. 1, no. 2, pp. 29-32, 2016.10. (EI)
12. Li-Ming Chu, **Hsiang-Chen Hsu**(corresponding author) and Chia-Hsiang Su, "Power Law Fluid Model Incorporated into Thin Film Elastohydrodynamic Lubrication of Circular Contacts," *Transactions of the Canadian Society for Mechanical Engineering*, Vol. 39, no.3, 2015.10, (SCI).
 13. Li-Ming Chu and **Hsiang-Chen Hsu**(corresponding author), "A Layered-Rheology Model for Thin Film Elastohydrodynamic Lubrication of Circular Contacts ," *Applied Mechanics and Materials*, Vol. 764, pp.160-164, 2015.3, (EI)
 14. **Hsiang-Chen Hsu**, Li-Ming Chu, Baojun Liu, Chih-Chiang Fu, "An investigation on dicing 28-nm node Cu/low-k wafer with a Picosecond Pulse Laser", *Journal of the Microelectronics and Packaging Society*, Vol. 21, no. 4, pp. 63-68, 2014.12. (EI)
 15. Shih-Jeh Wu, **Hsiang-Chen Hsu** and Wen-Jui Feng, "Novel design and fabrication of a geometrical obstacle-embedded micromixer with notched wall," *Japanese Journal of Applied Physics*, Vol. 53, pp. 097201-1 – 097201-7, 2014.08, (SCI). (Cited 02)
 16. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Shen-Li Fu and Jiam-Nan Yeh, "Numerical Simulation of High Power LED Heat-dissipating System," *Electronic Materials Letters*, Vol. 10, Issue 2, pp.497-502, 2014.03 (SCI). (Cited 07)
 17. Li-Ming Chu, **Hsiang-Chen Hsu**(corresponding author) and Jiann-Lin Chen, "An Analytical Approach for Analysis of Slider Bearings with Non-Newtonian Lubricants," *Advances in Mechanical Engineering*, Vol. 2014, no. 1, pp. 1-7, 2014.01, (SCI). (Cited 01)
 18. **Hsiang-Chen Hsu**, Li-Ming Chu, Wei-Yao Chang, Yi-Feng Chen, Jih-Hsin Chien, Shen-Li Fu, Shin-Pon Ju and Wen-Jui Feng, "Further Characterization of Pd-coated Copper Wire on Wirebonding Process - from a nanoscale perspective," *Journal of Materials Science: Materials in Electronics*, Vol. 24, Issue 9, pp.3594-3602, 2013.09, (SCI). (Cited 04)
 19. Shen-Li Fu, **Hsiang-Chen Hsu**(corresponding author), Yue-Min Wan and Chi-Hau Haung, "Reliability and Bondability Study on Interfacial Behavior between SnAgCu Solder and Cu-Ni-Au OSP Pads," *Key Engineering Materials*, vol. 573, pp. 1-7, 2013.09, (EI).
 20. Li-Ming Chu, **Hsiang-Chen Hsu**(corresponding author), Jaw-Ren Lin and Yuh-Ping Chang, "Effect of Surface Roughness on Pure Squeeze EHL Motion of Circular Contacts," *Industrial Lubrication and Tribology*, vol. 65, issue 4, pp. 259-265, 2013.08, (SCI).
 21. Li-Ming Chu, Jaw-Ren Lin, **Hsiang-Chen Hsu** and Yuh-Ping Chang, "Effects of surface roughness and flow Rheology on the EHL of circular contacts with power-law fluid," *Journal of Marine Science and Technology*, vol. 21, no. 2, pp. 175-181, 2013.04, (SCI).
 22. **Hsiang-Chen Hsu**, Shen-Wen Ju, Shih-Jeh Wu and Miin-Shyan Bair, "Finite Element Modeling of SnAgCu Alloy on 3D Package-on-Package (POP) Subjected to Board Level Drop Test," *International Journal of Material and Mechanical Engineering*, vol. 2, no. 1, pp. 1-8, 2013.02, (EI).

(B)International Conference Refereed Paper, IEEE Xplore (EI)

1. Wen-Fei Lin, Shih-jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Boen Houng, Min-Shuo Chen, "Laser Micro-machining of LPM Compound Material for Panel and IC packaging", 2018

International Conference on Electronics Packaging and iMAPS All Asia Conference (ICEP-IAAC2018), Kuwana, Mie Prefecture, Japan, 2018.04

2. Shih-jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Wen-Fei Lin, Boen Houng, Yeh Chang, "Rapid Laser Drilling on Thick Ceramic Substrates for SiP Applications", *ICEP-IAAC2018*, Kuwana City, Mie Prefecture, Japan, 2018.04
3. Shih-jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Wen-Fei Lin, Shen-Li Fu, "An Investigation on Ultrathin Wafer Dicing by Ultrafast Laser with High Density Plasma Etching", *2017 International Conference on Electronics Packaging (2017 ICEP)*, Tendo, Yamagata, Japan, April 19-21, 2017.
4. **Hsiang-Chen Hsu**, "A Study on Package-on-Package with Through Molding Vias Using Laser Technology," *IEMT-EMAP 2016*, Penang, Malaysia, Sept. 20-22, 2016. **(invited speaker)**
5. **Hsiang-Chen Hsu** and Shih-Jeh Wu, "An Investigation on Micro-via Drilling on Ceramic Substrates by a Picosecond Laser," *IEMT-EMAP 2016*, Penang, Malaysia, Sept. 20-22, 2016.
6. **Hsiang-Chen Hsu**, Pin-Chieh Wang, Jia-Jung Wang, Shen-Li Fu, "Reliability Design on Wearable Device for Initial Osteoarthritis (OA) on Knee Joints", *2016 International Conference on Electronics Packaging (2016 ICEP)*, Sapporo, Japan, April 20-22, 2016.
7. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Wen-Fei Lin, Chi-Shiung Hsi, Hsing-Yi Pao, Pin-Chieh Wang, "Through Mold Via (TMV) by Gas-Aided Laser", *2016 ICEP*, Sapporo, Japan, April 20-22, 2016. **(Poster paper Award)**
8. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Pin-Chieh Wang and Shen-Li Fu, "Internal Patterning of the Glass Backlight Module for LCD Panel by Laser", *2015 International Conference on Electronics Packaging & iMAPS All Asia Conference (2015 ICEP-IAAC)*, Kyoto, Japan, April 14-17, 2015.
9. **Hsiang-Chen Hsu**, Cheng-Jiun Han, Li-Ming Chu, Shih-Jeh Wu, Chih-Chiang Fu, Shen-Li Fu, Baojun Liu, Chen-Yi Wang and Po-Chun Jung, "An experimental study on dicing 28 nm low-k wafer using laser grooving technique", *9th International Microsystems, Packaging, Assembly and Circuits Technology Conference (2014 IMPACT-EMAP)*, Taipei, October 22-24, 2014.
10. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Chih-Chiang Fu, Li-Ming Chu, Shen-Li Fu, and Trong-Tai Nguyen, "Cutting PCB with a 532nm DPSS green laser", *2014 IMPACT-EMAP*, Taipei, October 22-24, 2014.
11. **H.C. Hsu**, J.H. Chien, J.S. Huang, L.M. Chu and S.L. Fu, "Nanoscale Bondability between Cu-Al Intermetallic Compound for Cu Wirebonding", *2014 International Conference on Electronic packaging (2014 ICEP)*, Toyama, Japan, April 23-25, 2014.
12. Pei-Chieh Chin, Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author) and Wen-Fei Lin, "Cutting Thin Glass by a Fiber Picosecond IR Laser", *2014 ICEP*, Toyama, Japan, April 23-25, 2014.
13. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Feng-Jui Hsu, Meng-Chieh Weng and Shen-Li Fu, "Electrochemical Migration Failure on FR-4 PCB by Hygro-Thermo-Vapor Pressure Coupled Analysis", *8th International Microsystems, Packaging, Assembly and Circuits Technology Conference (2013 IMPACT)*, Taipei, October 23-25, 2013.

14. **Hsiang-Chen Hsu**, Jih-Hsin Chien, Chen-Yi Wang, Li-Ming Chu, Shin-Pon Ju, Shen-Li Fu and Miin Shyan Bai, "An Investigation on Nanoscale Bondability between Cu-Al Intermetallic Compound", *2013 IMPACT*, Taipei, October 23-25, 2013.
15. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Jyun-Yi Li, Jing-Wen Su, Jian-Siang Huang and Shen-Li Fu, "Thermal Design for High Power Arrayed LED Heat-Dissipating System", *2013 IMPACT*, Taipei, October 23-25, 2013.
16. **H.C. Hsu**, J.H. Chien, L.M. Chu, S.P. Ju, Y.T. Feng and S.L. Fu, "An Investigation on Nanoscale Tensile Mechanical Properties for Pd-coated Copper Wire", *2013 International Conference on Electronics Packaging (2013 ICEP)*, Osaka, Japan, April 10-12, 2013.
17. **H.C. Hsu**, L.M. Chu, J.H. Chien, C.Y. Wang, S.L. Fu, M.S. Bair, "Nanoscale Interfacial Frictional Behavior on Copper-Aluminum Intermetallic Compound", *2013 ICEP*, Osaka, Japan, April 10-12, 2013.

(C)International Conference Refereed Paper

1. **Hsiang-Chen Hsu**, Chi-Shiung His and Hsing-Yi Pao, "An Investigation on Drilling Mold Component Using Ultrafast Laser," *12th International Microsystems, Packaging, Assembly and Circuits Technology Conference (2017 IMPACT)*, Taipei, Taiwan, 2017.10.
2. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Boen Hounng, Wen-Fei Lin, Min-Shuo Chen, Yeh Chang, "Patterning of Flexible Silver Pasted PE Circuit Board with Ultrafast Laser," *2017 IMPACT*, Taipei, Taiwan, 2017.10
3. **H.C. Hsu**, J. J. Wang, Y.J. Huang and L.S. Chen, "Reliability Design on Wearable Medical Device for Knee-Joint Disease," *The 16th International Symposium on Microelectronics and Packaging (ISMP 2017)*, Seoul, Korea, 2017.10. **(invited speaker)**
4. **Hsiang-Chen Hsu**, "Reliability Design and Structural Analysis on IC Packaging -Wearable Medical Device on Knee-joint Disease," *International Conference on Advanced Technology Innovation 2017 (ICATI2 017)*, Koh Samui, Thailand, June 25-28, 2017. **(plenary speaker)**
5. **Hsiang-Chen Hsu**, Shaw-Yuan Wang and Li-Ming Chu, "A Study on Aluminum Pad Large Deformation during Copper Wirebonding for High Power IC Package," *ICATI 2017*, Koh Samui, Thailand, June 25-28, 2017.
6. **Hsiang-Chen Hsu**, "Innovative Design on Wearable Device for Initial Osteoarthritis (OA) on Knee Joints," *11th International Microsystems, Packaging, Assembly and Circuits Technology Conference (2016 IMPACT)*, Taipei, October 26-28, 2016. **(invited speaker)**
7. **Hsiang-Chen Hsu**, Shih-Jeh Wu and Wen-Fei Lin, "High Performance Thin Wafer Cutting by High Density Plasma Etching and Laser Dicing," *2016 IMPACT*, Taipei, October 26-28, 2016.
8. **Hsiang-Chen Hsu**, Li-Ming Chu, Zong-Kun Wang, Shu-Chi Tsao, "Position Control and Novel Application of SCARA Robot with Vision System," *2016 International Conference on Advanced Technology Innovation (2016 ICATI)*, Bali, Indonesia, June 30-July 3, 2016.
9. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Wen-Fei Lin, "Reduction of Residual Stresses in Sapphire Cover Glass Induced by Mechanical Polishing and Laser Chamfering Through Etching," *2016 ICATI*, Bali, Indonesia, June 30-July 3, 2016.

10. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Wen-Fei Lin, "Glass Cutting with Elongation Optics in Comparison to Conventional Methods by Laser", *The International Multi-Conference on Engineering and Technology Innovation 2015 (IMETI2015)*, Kaohsiung, Taiwan, Oct.29-31, 2015
11. **Hsiang-Chen Hsu**, Zong-Kun Wang and Shu-Chi Tsao, "An Investigation on Enhanced Intelligent Image System with SCARA Robot for Improving the Accuracy of DIP Component Placed on the PCB," *10th International Microsystems, Packaging, Assembly and Circuits Technology Conference (2015 IMPACT)*, Taipei, October 21-23, 2015.
12. **Hsiang-Chen Hsu**, Shih-Jeh Wu, Wen-Fei Lin and Pin-Chieh Wang, " An Investigation on Cutting of IC Packaging Compound by Gas-Aided Laser," *2015 IMPACT*, Taipei, October 21-23, 2015.
13. Hsiang-Chen Hsu, "Experimental and Molecular Dynamics investigation on nanoscale bondability on copper wire bonding", *The 14th International Symposium on Microelectronics and Packaging (ISMP 2015)*, Seoul, Korea, October 13-14, 2015. **(invited speaker)**
14. **Hsiang-Chen Hsu**, Li-Ming Chu, Shin-Pon Ju and Jih-Hsin Chien, "An Investigation on Nanometric Mechanical Property and Nanotribology Behavior of Cu-Al Intermetallic Compound", *2015 Frontier Forums of Science (FFSCI)*, ChengDu, China, July 7-10, 2015. **(invited speaker)**
15. Li-Ming Chu and **Hsiang-Chen Hsu**(corresponding author), "A Layered-Rheology Model for Thin Film Elastohydrodynamic Lubrication of Circular Contacts", *2014 International Conference on Engineering and Technology Innovation*, Kenting, Pingtung, Taiwan, November 1-2, 2014.
16. **Hsiang-Chen Hsu** and Shih-Jeh Wu, "Laser grooving technique for dicing nanoscale low-k wafer", *12th International Symposium on Microelectronics and Packaging Conference (2014 ISMP-IAAC)*, Seoul, Korea, October 15-16, 2014. **(invited speaker)**
17. **Hsiang-Chen Hsu** and Shih-Jeh Wu, "Laser Drilling and Thermal Stress Analysis on TSV in 3D IC Structure," *2014 IEEE International Conference on Electron Devices and Solid-State Circuits (EDSSC 2014)*, Chengdu City, Sichuan Province, China, June 18-20, 2014. **(invited speaker)**
18. Shih-Jeh Wu, **Hsiang-Chen Hsu**(corresponding author), Shen-Li Fu and Jiam-Nan Yeh, "Numerical Simulation of High Power LED Heat-dissipating System," *15th International Conference on Electronic Materials and Packaging (2013 EMAP)*, Seoul, Korea, October 7-8, 2013. **(invited speaker)**

(D)National Conference Refereed Paper

1. 莊孟軒、王家鍾、陳建彰、**徐祥禎**、陳立軒、顏政佑, "以經驗模態分解法來辨別退化性膝關節之研究", *2017 年生物醫學工程科技研討會暨科技部醫學工程學門成果發表會*, 桃園中壢, 2017.11 **(優秀壁報論文)**
2. 朱力民, 王立偉, **徐祥禎**, "並聯式油電混合機車以低功率動馬達行駛之研究", *2017 精密機械與製造科技研討會*, 屏東墾丁, 2017.05 **(優秀論文)**
3. 李俊億, 黃建翔, 蘇敬文, 簡日新, **徐祥禎**(通訊作者), "高亮度 LED 之散熱分析與鰭片最佳化設計", *機械工程學會第三十屆機械工程師年會*, 宜蘭大學 宜蘭市, 2013.12
4. 簡日新, 王辰譯, **徐祥禎**(通訊作者), 朱力民, 王軍皓, 朱訓鵬, "銅鍍線製程銅鋁合金奈米

級介面鍵結強度探，" 機械工程學會第三十屆機械工程師年會， 宜蘭大學 宜蘭市， 2013.12

5. 朱力民, 徐祥禎, "以逆解法計算熱彈液動潤滑問題之壓力、溫度及流變係數，" 2013 年精密機械與製造科技研討會- PMMT 2013， 屏東縣， 2013.10 (論文佳作)
6. 朱力民, 徐祥禎, "表面粗糙度效應對純擠壓彈液動潤滑之研究，" 第一屆台灣磨潤科技研討會 - CTTT 2013， 雲林縣， 2013.10 (論文佳作)

(E)專書論文

- 1.周志榮、林煥章、江育民、朱力民、徐祥禎，"創意性工程設計"，ISBN 978-957-748-579-3，徐祥禎主編，麗文書局出版， 2014 年 9 月。
- 2.Li-Ming Chu, Hsiang-Chen Hsu(corresponding author), Jaw-Ren Lin and Yuh-Ping Chang, "Inverse Approach for Calculating Temperature in Thermal Elasto-Hydrodynamic Lubrication of Line Contacts, " pp.381-402, Chapter 19, *New Tribological Ways*, ISBN 978-953-307-206-7, Edited by Taher Ghrib and published by InTech Open, Europe, April 2011.
- 3.Hsiang-Chen Hsu, Chin-Yuan Hu, Wei-Yao Chang, Chang-Lin Yeh and Yi-Shao Lai, "Dynamic Finite Element Analysis on Underlay Microstructure of Cu/low-k Wafer during Wirebonding," pp.453-478, Chapter 20, *Finite Element Analysis*, ISBN 978-953-307-123-7, Edited by David Moratal and published by Sciyo, Europe, September 2010. (下載超過 11,000 次)