



Liu Kai

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March 30, 1991

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Education

- 2018.06-Present** **National University of Defense Technology**
PhD of Management Science and Engineering
- 2015.09-2018.06** **Shandong University**
Master of Mechanical Manufacturing and Automation
- 2010.09-2014.06** **Sichuan University**
Bachelor of Mechanical Design, Manufacturing and Automation
- 2014.05-2015.04** **Hejun Business School**
Commercial Leadership Program

Interests

- (1) Information Extraction of Cybersecurity Data.
- (2) Cybersecurity Knowledge Graph
- (3) Users' Behavior Analysis in Cyberspace
- (4) Deep Transfer Learning
- (5) Few-shot Learning in NLP

Projects

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|---|-----------|---|------|
| 1 | 2019-2021 | Research on the Construction of Knowledge Graph for Cybersecurity | Ph.D |
| 2 | 2019-2021 | Research on Cross-domain Few-shot Problem Based on Deep Transfer Learning
(Graduate Innovation Program of Hunan Province) | Ph.D |
| 3 | 2018-2019 | XSS Vulnerability Classification Detection Technology Based on Deep Learning | Ph.D |
| 4 | 2016-2017 | Participated in the Project of Tool Condition On-line Monitoring in Manufacturing | M.D. |
| 5 | 2016-2017 | Optimization of Hole-making Process for Armored Composites. | M.D. |
| 6 | 2015-2017 | Managed the Project of Design of Integrated Tool for Hole-making in Laminated Metal Structure | M.D. |
| 7 | 2015-2016 | Design of Equipment for Measuring Residual Stresses by Crack Compliance Method | M.D. |
| 8 | 2015-2017 | Research on Intelligent Technology and Equipment for Laser Rigid Material Reinforcement of Key Components of Large Mining Equipment | M.D. |
| 9 | 2012-2013 | Participated in the "2013 National Undergraduate Engineering Training Integration Ability Competition" as team leader. | B.D. |

I、Conference Papers (2)

- 1 **Kai Liu**, Yun Zhou, Qingyong Wang, Xianqiang Zhu. [Vulnerability Severity Prediction with Deep Neural Network](#). 5th International Conference on Big Data and Information Analytics (BigDIA).IEEE, 2019: 114-119. Kunming, China, 8-10 July **2019**. (IEEE)
- 2 Zhaoju Zhu, Shaochun Sui, Jie Sun, Jianfeng Li, **Kai Liu**. [Investigation on drilling performance of titanium alloy Ti6Al4V based on response surface method](#). Proceedings of the ASME 2017 12th International Manufacturing Science and Engineering Conference MSEC2017, June 4-8, **2017**, Los Angeles, CA, USA.

II、Journal Articles (4)

- 3 Sivalingam Vinothkumar, Sun Jie, Yang Bin, **Liu Kai**, & Raju, Ramesh. [Machining performance and tool wear analysis on cryogenic treated insert during end milling of ti-6al-4v alloy](#). Journal of Manufacturing Processes, 36, 188-196. (**2018**) (SCI, JCR Q1, IF=3.462)
- 4 **Kai Liu**, Jianfeng Li, Jie Sun, Zhaoju Zhu, Hualin Meng. [Investigation on chip morphology and properties in drilling aluminum and titanium stack with double cone drill](#). The International Journal of Advanced Manufacturing Technology, 1433-3015 (**2017**). (SCI, JCR Q2, IF=2.496)
- 5 Zhaoju Zhu, **Kai Liu**, Jie Sun, Jianfeng Li [Investigation on performance Characteristics and metallographic transformation on drilling aluminium/titanium sandwich](#). Journal of Sandwich Structures and Materials 0(00) 1 – 17 (**2017**) (SCI, JCR Q1, Top Journal, IF=2.933)
- 6 Chun Liu, Jie Sun(Professor), **Kai Liu**, Yawen Cui, Laixiao Lu, Bin Yang. [Study on Milling Performance of Titanium Alloy Thin-Walled Parts With Polyurethane Foam Reinforcement](#). Journal of Aeronautical Manufacturing Technology 530 (11): 93-98 (Chinese core journal)

III、National Invention Patent of China (3)

- 1 Yun Zhou, Peichao Wang, Xianqiang Zhu, Baodan Sun, **Kai Liu**. [A method and system for evaluating the risk of Web attack on Information System](#). Patent No.: CN201811472325.4
- 2 Kai Guo, Zhaoju Zhu, Jie Sun, **Kai Liu**. [Chip breaking bit with S-shaped blade based on logistic curve](#). Patent No.: z1201610602257.3
- 3 Jie Sun, Zhaoju Zhu, **Kai Liu**, Kai Guo. [An integrated tool for drilling, reaming and spot facer](#). Patent No.: z1201610224852.8

IV、National Utility Model Patent of China (5)

- 4 Jie Sun (tutor), **Kai Liu**, Jianfeng Li, Zhaoju Zhu, Hualin Meng, Wanjun Kang. [A kind of hole making integrated tool with variable spiral groove and double cone angle laminated structure](#). Patent No.: z1201710216075.7
- 5 Jie Sun (tutor), **Kai Liu**, Jianfeng Li, Zhaoju Zhu, Hualin Meng, Wanjun Kang. [A kind of laminated sheet metal drilling tool with cone drill and dimple chip breaking structure](#). Patent No.: z1201720619845.8
- 6 Jie Sun (tutor), **Kai Liu**, Zhaoju Zhu, Kai Guo, Wanjun Kang. [A double cone angle chip breaking bit](#). Patent No.: ZL 2016 2 1079989.0
- 7 Jie Sun (tutor), Zhaoju Zhu, Kai Guo (tutor), **Kai Liu**. [A chip breaking drill with step edge](#). Patent No.: ZL 2016 2 080116. X
- 8 Kai Guo (tutor), Zhaoju Zhu, Jie Sun, **Kai Liu**. [Chip breaking drill with S-shaped blade based on logistic curve](#). Patent No.: ZL 2016 2 080255.1

Internship

2017.07-2017.09	GE Healthcare	Commercial Leadership Program
2017.06-2017.06	China Aerospace Science and Industry Corporation 2 nd Research Institute	Intern
2015.11-2015.12	Chengdu Aircraft Industrial (Group) Co., Ltd	Intern
2013.07-2013.08	Dongfeng Motor Corporation	Intern

Leadership

- 2012-2013** **Student Academic Science and Technology Association of SCU** **Vice-chairman**
- Planned and organized the 12th Challenge Cup National College Student Academic Science and Technology Competition and won 6 national awards
 - Organized 28 teams from Sichuan University to participate in the 8th Challenge Cup National College Student Business Plan Competition and 11 teams won the first prize.

Honors

- 2017 **National Scholarship**
- 2017 First-class Academic Scholarships
- 2017 Shandong University Outstanding Student Leaders Scholarship
- 2018 Shandong University Excellent Graduate
- 2014 **A-level Certificate for All-round Development of University Student in Sichuan Province**
- 2013 **2nd Prize of 2nd National Undergraduate Engineering Training Integration Ability Competition**
- 2012 Sichuan University 2012 Excellent Student Cadres
- 2012 Award for Excellent Students in Rural Areas Social Practice

Skills

- **English** CET-6, fluent in reading, writing and speaking.
- **Programming** Python, Matlab, LaTeX, C++
- **Deep Learning** PyTorch, Tensorflow
- **Other Software** Master Office Software, Origin, AutoCAD, Pro/E, Solidworks, AdvantEdge, Abaqus.
- **Driving License** C1 Class

References

- Prof. Dr. Weiming Zhang** **Phone:** (+86) 13308412766, **Email:** wmzhang@nudt.edu.cn
• Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology, 109 Deya Road, Changsha, Hunan Province, P.R. China. 410072
- Assistant Prof. Dr. Yun Zhou** **Phone:** (+86) 18674389668, **Email:** zhouyun@nudt.edu.cn
• Science and Technology on Information Systems Engineering Laboratory, National University of Defense Technology, 109 Deya Road, Changsha, Hunan Province, P.R. China. 410072