

Xiaoliang Zhu

Department of Information and Electronic Engineering & Department of Sussex Artificial Intelligence
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Associate professor and researcher at a Chinese university with expertise in fiber sensors, optical performance/field analysis of optical fiber, IOT etc. My academi accomplishments include publishing more than 20 SCI/EI-indexed papers, authoring 2 books, and registering 4 inventions.

EDUCATION

- B.Sc. in Electronic Science and Technology Sep. 2000-June2004
University of Heilongjiang, Heilongjiang, P.R. China
- Ma.Sc. in Physical Electronics Sep. 2004-June2007
University of Heilongjiang, Heilongjiang, P.R. China
- Doctor in Mechanical Design and Theory Sep. 2007-June 2010
University of Harbin Engineering, Heilongjiang, P.R. China GPA: 3.45/4.0

RESEARCH INTERESTS

Distributed microstructure fiber sensor, optical performance/optical field analysis of microstructure fiber, etc.

WORK EXPERIENCE

- Associate Professor June 2010-Present
School of Information&Electronic Engineering and Sussex Artificial Intelligence
Zhejiang Gongshang University, Hangzhou, Zhejiang,China
- Postdoctor June 2012-June 2015
Harbin Engineering University, Harbin, Heilongjiang, China

- Visitor Scholar June 2017-Sep. 2018
Zhejiang University, Hangzhou, Zhejiang, China
- Visitor Scholar Aug. 2019-Aug. 2020
School of Engineering and Informatics, University of Sussex, Brighton, UK
- Postdoctor July 2021.7-July 2023
Futong Group Limited Company&Zhejiang University, Hangzhou, Zhejiang, China

TEACHING

For the past 13 years, I taught 4 different courses at Zhejiang Gongshang U. as follows:

- College Physics
- Experiments of College Physics
- Optoelectronics and Optical Communications
- Time Management and Wealth Freedom
- Electricity and Magnetism (in English)

ADMINISTRATIVE DUTIES

2020.9-present: Leader of Physics Course in Zhejiang Gongshang University (ZJGSU)

2020.9-present: Leader of Electricity and Magnetism Course in ZJGSU

MONOGRAPH

1. **Xiaoliang Zhu**, “Theory and Technology of Microstructure Fiber Coupling”, Northeastern University Press, published in 2016. Note that in Chinese version it is 朱晓亮 著,《微结构光纤耦合理论及技术》, 东北大学出版社, 2016.
2. **Xiaoliang Zhu**, Zhang Xiaodong, “Guidance and Planning for College Students”, Northeastern University Press, published in 2017. Note that in Chinese version it is 朱晓亮 著,《大学生指导与规划》, 东北大学出版社, 2017.

INVENTION PATENTS

1. Y., Y. Jun, **X. Zhu**. “Distributed fiber optic white light interference sensor array based on Adjustable Fabry-Perot resonator”, Patent number: CN 101324445A, 2008. Note that in Chinese version it is 苑立波, 杨军, 朱晓亮, “基于可调 Fabry-Perot 谐振腔的分布式光纤白光干涉传感器阵列”, 专利号: CN 101324445A, 2008.
2. Yuan Libo, Yang Jun, **Xiaoliang Zhu**, “Connection method of capillary fiber and standard fiber”, Patent number: CN 101339275A, 2009. Note that in Chinese version it is 苑立波, 杨军, 朱晓亮, “毛细管光纤与标准光纤的连接方法”, 专利号: CN 101339275A, 2009.
3. **X. Zhu**, “An integrated performance test system based on optical fiber sensors”, Application number: 2023103500499, 2023. Note that in Chinese version it is 朱晓亮, “一种光纤传感器的性能集成式测试系统”, 申请号: 2023103500499, 2023.
4. **Xiaoliang Zhu**, “A continuous processing device and method for optical sensors”, Application number: 2023103496794, 2023. Note that in Chinese version it is 朱晓亮, “一种光纤传感器连续加工装置及方法”, 申请号: 2023103496794, 2023.

SCIENTIFIC JOURNAL PAPERS

1. P. Teng, J. Zhu, Z. Li, K. Li, N. Copner, S. Gao, E. Zhao, **X. Zhu**, etc., “Flexible PAN-Bi₂O₂CO₃-BiOI heterojunction nanofiber and the photocatalytic degradation property”, *Optical Materials*, vol. 134, pp. 112935.1-9, 2022. (SCI, IF 3.754)
2. **Xiaoliang Zhu**, Yao Yu, Xiaodong Zhang, et al., “Bending Sensor Based on Tapered Multi-core Fiber”, *Laser&Optoelectronics Progress*, vol. 60, no. 7, pp. 0728002-1-4, 2023. Note that in Chinese version it is 朱晓亮, 虞瑶, 张晓东, 等, “融锥多芯光纤弯曲传感器”, 激光与光电子学进展, 60(7), pp. 0728002-1-4, 2023.
3. Zhang Xiaodong, **Zhu Xiaoliang**, Yu Yao, Chen Jiayi, Sun Zecheng, “Capillary Optical Fiber Sensor for Real-Time Monitoring of High-Voltage Transmission Lines Sag”, *Laser & Optoelectronics Progress*, vol. 59, no. 7, pp. 0728001-1-5, 2022. Note that in Chinese version it is 张晓东, 朱晓亮, 虞瑶, 等. “实时监测高压电线弧垂的毛细管光纤传感器”, 激光与光电子学进展, 59(7), pp. 0728001-1-5, 2022.

4. B. Han, X. Yang, J. Ren, L. Liu, E. Zhao, **X. Zhu**, etc., “Thermally stable deep-red emitting Sr₂GdTaO₆: Mn⁴⁺ double perovskites for indoor plant growth LEDs”, *Materials Today Chemistry*, vol. 23, pp. 100737, 2022. (**SCI, IF 7.613**)
5. Teng, X. Wen, Z. Liu, J. Zhang, Y. Zhang, N. Copner, J. Yang, K. Li, M. Bowkett, D. Gao, L. Yuan, **X. Zhu**, “An optical fiber integrated optoelectrode for the photoelectrochemical detection”, *Optics Communications*, vol. 502, pp. 127436, 2022. (**SCI, IF 2.335**)
6. B. Han, X. Yang, J. Ren, L. Liu, E. Zhao, **X. Zhu**, etc. “Thermally stable deep-red emitting Sr₂GdTaO₆:Mn⁴⁺ double perovskites for indoor plant growth LEDs”, *Materials Today Chemistry*, vol. 23, pp. 100737-1-7, 2002.(**SCI, IF 7.613**)
7. B. Han, J. ren, P. Teng, J. Zhu, Y. Shen, Z. Li, **X. Zhu**, X. Yang, “Synthesis and photoluminescence properties of a novel double perovskite Ga₂LaSbO₆:Sm³⁺ phosphor for w-LEDs”, *Ceramics International*, vol. 48, pp. 971-980, 2022. (**SCI, IF 5.532**)
8. **X. Zhu**, H Xiang. “Tapered splice technique for capillary optical fiber”, *Journal of Optical Fiber Technique*, vol. 36, pp. 130-133, 2017. (**SCI, impact factor 1.6**)
9. Q. Zhao, F. Tian, X. Yang, S. Li, J. Zhang, **X. Zhu**, J. Yang, Z. Liu, Y. Zhang, T. Yuan, L. Yuan, “Optical fibers with special shaped cores drawn from 3D printed preforms”, *Optik*, vol. 133, pp. 60-65, 2017. (**SCI, IF 2.840**)
10. XD Zhang, Y Jiang, **X. Zhu***, “A smart bending sensor based on microstructured fiber”, *Proceeding Of SPIE*, vol. 10459, pp. 1045904-1-7, 2017. (**EI**)
11. **Xiaoliang Zhu**, Libo Yuan* Zhihai Liu, et al. “Coupling theoretical model between single-core fiber and twin-core fiber”, *Journal of Lightwave Technology*, vol. 27, no. 24, pp. 5235-5239, 2009. (**SCI, IF 4.439**)
12. **Xiaoliang Zhu**, Libo Yuan*, Jun Yang, et al.. “Coupling model of standard single mode fiber and capillary fiber”, *Applied optics*, vol. 48(29), pp. 5624-5628, 2009. (**SCI, IF 1.905**)
13. Xinghua Yang, **XiaoLiang Zhu**, Libo Yuan, et al., “Fabricating of silver and copper nano/microtubes using nano-scale glass fiber as templates”, *Journal of Material*

- Science*, vol. 61(17), pp. 3705-3707, 2007. (SCI, IF 4.682)
14. **Xiaoliang Zhu**, Libo Yuan, Zhihai Liu, Jun Yang, Chunying Guan, “Coupling Approach and Mechanism of Single-Core and Twin-Core Fiber”, *Chinese Journal of Lasers*, vol. 36(4), pp. 913-917, 2009. Note that in Chinese version it is 朱晓亮, 苑立波, 刘志海, 杨军, 关春颖, “单芯光纤与双芯光纤的耦合方法与耦合机制”, 中国激光, vol. 36(4), pp. 913-917, 2009. (EI)
 15. Libo Yuan, **Xiaoliang Zhu**, Tao Zhang, etc., “Capillary optical fiber linking approach for biosensors”, *Proceeding of SPIE*, vol. 7503, pp. 750372, 2009. (EI)
 16. Jun Yang, Libo Yuan, **Xiaoliang Zhu**, Yu Zhang, Binbin Liu, etc., “Twin-core fiber white light interferometric bending sensor”, *Proceeding of SPIE* (19th International Conference on Optical Fibre Sensors), vol. 7004, pp. 70040Y, 2008. (EI)
 17. L Yuan, Q Dai, F Tian, T Zhang, C Guan, **X Zhu**, “Linear-core-array microstructured fiber”, *Optics Letters*, vol. 34(10), pp. 1531-1533, 2009. (SCI, IF 3.772)
 18. **Xiaoliang Zhu**, Libo Yuan, “Coupling Approach and Mechanism on Single Core Fiber and Capillary Optical Fiber”, *Chinese Journal of Lasers*, vol. 38, no. 5, pp: 151-155, 2011. Note that in Chinese version it is 朱晓亮, 苑立波, “单芯光纤与毛细管光纤的耦合方法及其机理”, 中国激光, 38(5), pp: 151-155, 2011. (EI)
 19. **Xiaoliang Zhu**, Libo Yuan, “Supermode Coupling Characteristics of Linear Core Array Fiber”, *Chinese Journal of Lasers*, vol. 38(7), pp. 0705006, 2011. Note that in Chinese version it is 朱晓亮, 苑立波, “平行阵列芯光纤的超模耦合特性”, 中国激光, vol. 38(7), pp. 0705006, 2011. (EI)
 20. **Xiaoliang Zhu**, Xiaodong Zhang. “Side-Polished Coupling for a Single-Mode Fiber and a Novel Capillary Optical Fiber”, *Chinese Journal of Lasers*, vol. 40(6), pp. 0605006, 2013. Note that in Chinese version it is 朱晓亮, 张晓东, “单模光纤与新型毛细管光纤的侧抛耦合”, 中国激光, vol. 40(6), pp. 0605006, 2013.(EI)
 21. **Xiaoliang Zhu**, Weimin Sun, Qi Yan, “Investigation of Astronomical Fiber Mode Converter”, *Acta Optica Sinica*, vol. 34(s1), pp. s106003, 2014 (EI)
 22. **Xiaoliang Zhu**, Xiaodong Zhang, “Characterization on Laser Direct Manufacturing METal Thin Wall Cylinder”, *Laser&Optoelectronics Progress*, vol.51(7), pp. 92-97,

2014. Note that in Chinese version it is 张晓东, 朱晓亮, “激光直接制造薄壁圆筒零件的特性”, 激光与光电子学进展, vol.51(7), pp. 92-97, 2014.
23. **Xiaoliang Zhu**, Xiaodong Zhang, “Study on Optical Bistability Using Fiber Mach-Zehnder Interferometer”, *Laser&Optoelectronics Progress*, vol. 51(7), pp. 080601-1-4, 2014. Note that in Chinese version it is 朱晓亮, 张晓东, “利用光纤马赫曾德尔干涉仪实现的光学双稳性研究”, 激光与光电子学进展, vol. 51(7), pp. 080601-1-4, 2014.
 24. Xiaodong Zhang, **Xiaoliang Zhu**, Zhixiang Wang, “Microstructure and Contact Fatigue Properties of Laser Cladding Coating of Manganese Iron Based Alloy”, *Materials Production*, vol. 50(11), pp. 1-4, 2017. Note that in Chinese version it is 张晓东, 朱晓亮, 王志翔, “中锰铁基合金激光熔覆层组织和接触疲劳性能”, 材料保护, vol. 50(11), pp. 1-4, 2017.
 25. **Zhu Xiaoliang**, Zhang Xiaodong, “Microstructure and Impact Abrasive Wear Properties of the Medium Manganese Iron Based Alloy Laser Cladding Coating”, *Applied Laser*, vol. 38(01), pp:19-25, 2018. Note that in Chinese version it is 张晓东, 朱晓亮, “中锰铁基合金激光熔覆层组织和冲击磨料磨损性能研究”, 应用激光, vol. 38(01), pp:19-25, 2018.
 26. **X Zhu**, Q Yan, H Yu, W Sun, “Supermodes Coupling Characterizaion of Optical Fiber Brush”, *proceeding of ICOM*, pp: 183-185, 2013. (EI)
 27. W Sun, Q Yan, H Yu, **X Zhu**, “Tapering technique for an embedded microstructure fiber device”, *proceeding of ICOM*, pp: 186-188, 2013. (EI)
 28. Xiaodong Zhang, Yuan Jiang, **Xiaoliang Zhu***, Jiwei Zhi. “A smart bending senor based on microstructured fiber”, *proceeding of SPIE*, 2017. (EI)

PUBLISHED TEACHING REFORM PAPERS:

1. **X Zhu**, Z Gan, T Ye, C Shen, X Zhang, “The Application of trial teaching Method in College Physics Reform”, *Contemporary Educational Practice and Teaching Research*, vol. 5, pp. 38, 2016. Note that in Chinese version it is 朱晓亮, 甘志刚, 叶天语, 沈忱, 张晓东, “尝试教学法在大学物理改革中的应用研究”, 当代教育实

- 践与教学研究, vol. 5, pp. 38, 2016.
2. **X Zhu**, X Zhang, T Ye, Z Gan, C Shen, “Research on the Necessity of Trial Teaching Method in College Teaching Reform”, *Education*, vol. 3, pp. 306, 2016. Note that in Chinese version it is 朱晓亮, 张晓东, 叶天语, 甘志刚, 沈忱, “尝试教学法在大学教学改革中的必要性研究”, 教育, vol. 3, pp. 306, 2016.
 3. **X Zhu**, X Zhang, T Ye, Z Gan, C Shen, “The Application of Trial Teaching Method in College Physics Experiment Teaching”, *Exam Weekly*, no. 45, pp. 127, 2016. Note that in Chinese version it is 朱晓亮, 张晓东, 叶天语, 甘志刚, 沈忱, “尝试教学法在大学物理实验教学中的应用研究”, 考试周刊, no. 45, pp. 127, 2016.
 4. X Zhang, **X Zhu**, “The application of ‘Internet +’ in teaching reform”, *Exam Weekly*, no. 8, pp. 31, 2018. Note that in Chinese version it is 张晓东, 朱晓亮, “互联网+”在教学改革中的应用”, 考试周刊, no. 8, pp. 31, 2018.
 5. X Zhang, **X Zhu**, “Awakening education and Internet+”, *Exam Weekly*, no. 6, pp. 37, 2018. Note that in Chinese version it is 张晓东, 朱晓亮, “唤醒式教育与互联网+”, 考试周刊, no. 6, pp. 37, 2018.
 6. X Zhang, **X Zhu**, “Trend and direction of education reform development in China”, *Exam Weekly*, no. 3, pp. 31, 2018. Note that in Chinese version it is 张晓东, 朱晓亮, “中国教育改革发展趋势与方向”, no. 3, pp. 31, 2018.

Graduate Student Supervision:

1. Huoxing Xiang, Zhejiang Gongshang University (ZJGSU), “Fabrication and study of the optical characteristics of micro nano optical fiber”, 2016-2019
2. Yao Yu, ZJGSU, “Study of Micro - Nano fiber bending sensor”, 2020-2023
3. Hanjie Pan, ZJGSU, “Research on a high sensitivity strain optical fiber sensor” 2021-present
4. Xinben Song, ZJGSU, “Research on a high sensitivity optical fiber pressure sensor”, 2021-present

5. Xiaobin Bi, ZJGSU, “Research on fiber torsional sensor based on seven core fiber”, 2021-present

Undergraduate Student Supervision:

1. Hao Dou, ZJGSU, “Research on deadlock prevention controller of flexible manufacturing system based on petri net”, 2017
2. Dian Wang, ZJGSU, “Study on near-field characteristics of single mode fiber”, 2017
3. Yingmei He, ZJGSU, “Design and manufacture of a fiber optic fusion pull-cone equipment”, 2018
4. Y Liang, ZJGSU, “Research on fabrication technology of micro/nano fiber”, 2018
5. X Yu, ZJGSU, “Study on optical properties of the nanoscale optical fiber”, 2018
6. Xiaodie Yu, ZJGSU, “Research on the application of photosensitive materials in optical fiber sensing”, 2018
7. M Huang, ZJGSU, “A kind of Micro bending sensor”, 2018
8. Jiajie Mo, ZJGSU, “Study of an in time optical fiber power monitoring system”, 2020
9. Haokang Lin, ZJGSU, “Single-mode optical fiber displacement sensor”, 2020

Instruct students to win prizes in the Innovation and Entrepreneurship Competitions

✧ Instructor: **X Zhu**, Students: X Wang, H Jiang, W Yan, etc., “Insect Master Micro voltage Pest Repellent Instrument”, “The 4th ‘Statistical Mathematics Cup’ of college students entrepreneurship competition”, 2017, 1st Award.

✧ Instructor: **X Zhu**, Students: X Wang, Z Su, J Cai, W Yan, etc., “Insect Master Micro-voltage Pest Repellent Instrument Limited Company”, “Creative Youth” 11th “Challenge Cup • Xiaoshan” College Students Entrepreneurship Competition of Zhejiang Province, 2018, Bronze Award.

✧ Instructor: **X Zhu**, Students: Y Yu, C Huang, J Chen, Z Sun, J Z, Y Chen, Y Lu, Y Zhuang, The 8th “Internet Plus” College Student Innovation and Entrepreneurship Competition of Zhejiang Gongshang University, 2022, 2nd Award.

TEACHING ACTIVITIES

- ✧ Participate in “the construction of Excellent Physics Course” of Zhejiang Province, Team member: 3, 2010
- ✧ Participate in Classroom Teaching Reform Project of Zhejiang Province, “Research on the Construction of Trinity TEC Teaching Platform for College Physics”, Team member: 7, 2013-2015
- ✧ Participated in the edit of “Physics Loose Leaf Work for University Students”, Published by Beijing Higher Education Press, 2014

AWARDS/HONOR

- ✧ The 9th Zhejiang Gongshang University Young Teachers Teaching Skills Competition, Second award, 2016
- ✧ Instructor of innovation and entrepreneurship for university student in Zhejiang Province