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职称：特聘副研究员

学历学位：博士研究生

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教育背景

2010-09 至 2015-12, 清华大学, 固体力学, 博士;

2006-09 至 2010-06, 东南大学, 工程力学, 学士。

工作经历

2016-06 至 2022-12, 宁波大学, 机械工程与力学学院, 讲师

2022-12 至今, 宁波大学, 机械工程与力学学院, 特聘副研究员

教学: 讲授本科生《工程流体力学》、《理论力学》、《弹性力学》等课程, 全国周培源大学生力学竞赛优秀指导教师。

科研: 主持国家自然科学基金青年项目 1 项, 宁波市自然科学基金 1 项, 中广核横向课题 1 项, 作为主要成员(排名第二)参与宁波市重点研发计划 1 项; 相关工作已在国际光学领域权威期刊 *Optics Express*, *Optics and Laser in Engineering* 等重要杂志上发表了二十余篇 SCI 论文, 其中在 *Science China Physics, Mechanics & Astronomy* 的论文被选为封面文章。

社会服务: 《应用力学学报》青年编委, *Optics and Laser in Engineering*、*Measurement Science and Technology* 等杂志审稿人。

研究方向: 实验固体力学; 微纳尺度形变测量方法: 基于散斑/光栅的微纳尺度形变测量方法的研究; 红外无损检测技术: 研究红外图像后处理方法, 缺陷定量表征方法, 新的激励方式; 基于神经网络深度学习技术的图像处理方法的研究: 图像复原, 图像缺陷检测等。

主持项目:

1. 国家自然科学基金青年项目, ITO 薄膜/柔性基底的断裂与脱层失效行为实验研究, 11702151, 2018.01-2020.12
2. 宁波市基金, 氧化锡铟薄膜/柔性基底断裂力学性能的实验表征研究, 2018A610143, 2018.11-2020.10

主要论文:

1. Dan Wu*, Wei Han. Optical microscopy image restoration and its application in strain measurement by digital image correlation method. *Optics and Lasers in Engineering*, 161 (2023) 107400.
2. Pengfei Zhu, Dan Wu*, Yifan Wang. Defect detectability based on square wave lock-in thermography. *Applied Optics*, 2022, 61(21):6134-6143.
3. Pengfei Zhu, Dan Wu*, Lingxiao Yin, and Wei Han. Quantitative detection of defect size based on infrared thermography: temperature integral method. *Optics Express*, 2022, 30(6): 9119-9136.
4. Pengfei Zhu, Dan Wu*, Lei Qian. Detection of defects in metallic materials using an improved post-processing method of pulsed thermography. *Optics and Lasers in Engineering*, 2022, 151: 106927.
5. D. Wu*, L. Qian, and P. F. Zhu. A novel micro-tensile system for full-field deformation measurement of thin films. *Review of Scientific Instruments*, 2021, 92, 093901.
6. Dan Wu*, Lei Qian, Pengfei Zhu. The distortion elimination of an optical microscope based on optimized windowed Fourier transform. *Precision Engineering*, 2021, 70: 124-134.
7. Wu Dan*, Xie Huimin, Huang Dejin. The application of moire inversion technique in the characterization of micro-scale 3D periodic structures. *OPTICS AND LASERS IN ENGINEERING*,

- 2018, Vol. 106, pp. 132-138.
8. Wu Dan*, Xie Huimin. A novel 3D deformation measurement method under optical microscope for micro-scale bulge-test. OPTICS AND LASERS IN ENGINEERING, 2017. Vol. 98.pp. 190-197.
 9. Wu Dan*, Xie Huimin, Wang Rong. Methodology for microscale deformation measurement of free-standing thin films. OPTICAL ENGINEERING, 2017, Vol. 56, No. 5, 054105.
 10. Dan Wu, Huimin Xie, Minjin Tang, Zhenxing Hu, A new method for the characterization of micro-/nano-periodic structures based on microscopic moiré fringes, Ultramicroscopy, 2014, Vol.136, pp. 1-6.
 11. Wu Dan, Yin Yajun, XieHuimin, Shang Yuanfang, Li Chuanwei, Wu Lifu1 & Dai Xianglu, Controlling the surface buckling wrinkles by patterning the material system of hard-nano-film/soft-matter-substrate, SCIENCE CHINA-PHYSICS MECHANICS & ASTRONOMY, 2014, Vol. 57, No. 4 pp. 637-643.
 12. Wu Dan, XieHuimin, Dai Xianglu, A novel method to fabricate micro-gratings applied for deformation measurement around a crack in a thin film, Measurement Science and Technology, 2014, Vol. 25, No. 2, 025012.
 13. Dan Wu, HuiminXie, Heling Wang, Jie Zhang and Chuanwei Li, Dynamic buckling behavior of thin metal film lines from substrate, Journal of Micromechanics and Microengineering, 2014, Vol. 24, 105008.
 14. 10. Dan Wu, Yajun Yin, Fan Yang, HuiminXie, Mechanism for controlling buckling wrinkles by curved cracks on hard-nano-film/soft-matter-substrate, Applied Surface Science, 2014, vol. 320, pp. 207-212.
 15. Dan Wu, HuiminXie, Chuanwei Li and Rong Wang, Application of the digital phase-shifting method in 3D deformation measurement at micro-scale by SEM, Measurement Science and Technology, 2014, Vol. 25, No. 12, 125002.
 16. Dan Wu, Huimin Xie, Yajun Yin and Minjin Tang, Micro-scale delaminating and buckling of thin film on soft substrate, Journal of Micromechanics and Microengineering, 2013, Vol. 23, 035040.
 17. WU Dan, YIN Ya-Jun, XIE Hui-Min, DAI Fu-Long, The Archimedes Spiral Cracks Developed in the Nano-film/Substrate System, Chinese Physics Letters, 2013, Vol. 30, No. 3, 036801.

主要专利:

- 1) 吴丹; 微力加载装置, 2020-7-28, 中国, 202010736714.4 (发明专利)
- (2) 吴丹; 一种便捷式智能型家用排气机, 2021-1-1, 中国, ZL201710228233.0 (发明专利)
- (3) 吴丹; 一种净化自然风的低能耗室外空气净化系统中的水过滤空气净化装置, 2018-5-7, 中国, CN201810461309.9 (发明专利)
- (4) 吴丹 ; 一种节能环保灶台, 2018-7-8, 中国, ZL201810774682.X (发明专利)
- (5) 吴丹; 一种应急潜水供氧装置, 2019-3-9, 中国, CN201910207104.2 (发明专利)
- (6) 吴丹; 一种在下水涵洞口能自动疏通排水入口的装置, 2018-11-7, 中国, CN201811349913.9 (发明专利)
- (7) 吴丹; 便捷型家庭厨房垃圾分类箱, 2021-5-25, 中国, ZL202010021840.1 (发明专利)
- (8) 吴丹; 一种半自动家庭垃圾分类箱, 2019-4-15, 中国, CN201910327334.2 (发明专利)