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个人概况

籍贯: 湖北仙桃 出生年月: 1991年7月
民族: 汉族 学历: 博士

工作经历

2021.01-2023.01 香港理工大学博士后

教育背景

2018/09-2020/03	澳大利亚斯威本科技大学联合培养		
2016/09-2020/06	湖南大学	博士	机械工程
2013/09-2015/12	湖南大学	硕士	机械工程
2009/09-2013/06	武汉科技大学	本科	车辆工程

研究方向

结构拓扑优化, 声/光/力学超材料设计, 智能材料设计, 结构耐撞性设计, 智能设计方法

论文发表

1. **Yafeng Chen**, Fei Meng, Guangyao Li, Xiaodong Huang. Topology optimization of photonic crystals with exotic properties resulting from Dirac-like ones. *Acta Materialia*, 2019, 164: 377-389. (Q1, IF = 9.1)
2. **Yafeng Chen**, Zhihao Lan, and Jie Zhu. Second-order topological phases in C_{4v} -symmetric photonic crystals beyond the two-dimensional Su-Schrieffer-Heeger model. *Nanophotonics*, 2022, 11(7), 1345-1354. (Q1, IF = 8.449)
3. **Yafeng Chen**, Jensen Li, and Jie Zhu. Topology optimization of quantum spin Hall effect-based second-order phononic topological insulator. *Mechanical Systems and Signal Processing* 164, 2022: 108243. (Q1, IF = 8.84)
4. **Yafeng Chen**, Fei Meng, Xiaodong Huang. Creating Acoustic Topological Insulators Through Topology Optimization. *Mechanical Systems and Signal Processing*, 2021, 146: 107054. (Q1, IF = 8.84)
5. **Yafeng Chen**, Fei Meng, Jie Zhu, and Xiaodong Huang. Inverse design of second-order photonic topological insulators in C_3 -symmetric lattices. *Applied Mathematical Modelling*, 2021, 102, 194-206. (Q1, IF = 5.262)
6. **Yafeng Chen**, Xiaodong Huang, Guangyong Sun, Guangyao Li. Maximizing spatial decay of evanescent waves in phononic crystals by topology optimization. *Computers & Structures*, 2017, 182, 430-447. (Q1, IF = 5.291)
7. **Yafeng Chen**, Zhonghao Bai, Linwei Zhang, Yulong Wang, Guangyong Sun, Libo Cao. Crashworthiness analysis of octagonal multi-cell tube with functionally graded thickness under multiple loading angles. *Thin-Walled Structures*, 2017, 110, 133-139. (Q1, IF = 5.7)
8. **Yafeng Chen**, Zhihao Lan, and Jie Zhu. Inversely designed second-order photonic topological insulator with multiband corner states. *Physical Review Applied*. 2022, 17 (5), 054003 (Q1, IF = 4.985)
9. **Yafeng Chen**, Fei Meng, Zhihao Lan, Baohua Jia, and Xiaodong Huang. Dual-Polarization Second-Order

- Photonic Topological Insulators. *Physical Review Applied*, 2021, 15(3): 034053. (Q1, IF = 4.985)
10. **Yafeng Chen**, Di Chen, and Baoshou Liu. Topology Optimization of Phononic Dirac - Like Cones and Topological Insulators with On - Demand Operation Frequencies. *Advanced Theory and Simulations*: 2200103, 2022 (Q2, IF = 4.0)
 11. **Yafeng Chen**, On the use of topology optimized band gap structures for the realization of second-order acoustic topological insulators with valley-selective corner states. *Structural and Multidisciplinary Optimization*, 2022.(Q1, IF = 4.542)
 12. **Yafeng Chen**, Zhihao Lan, Jensen Li, and Jie Zhu. Topologically protected second harmonic generation via doubly resonant high-order photonic modes. *Physical Review B*, 2021: 155421. (Q1, IF = 4.036)
 13. **Yafeng Chen**, Fei Meng, Yuri Kivshar, Baohua Jia, and Xiaodong Huang. Inverse design of higher-order photonic topological insulators. *Physical Review Research*, 2020,2,023115.
 14. **Yafeng Chen**, Fei Meng, Baohua Jia, Guangyao Li, and Xiaodong Huang. Inverse Design of Photonic Topological Insulators with Extra - Wide Bandgaps. *physica status solidi (RRL) - Rapid Research Letters*, 2019. (Q1, IF = 3.064)
 15. **Yafeng Chen**, Di Guo, Yangfan Li, Guangyao Li, Xiaodong Huang. Maximizing wave attenuation in viscoelastic phononic crystals by topology optimization. *Ultrasonics*, 2019, 94, 419-429. (Q1, IF = 3.981)
 16. **Yafeng Chen**, Fei Meng, Guangyao Li, and Xiaodong Huang. Designing photonic materials with complete band gaps by topology optimization. *Smart Materials and Structures*, 2018, 28, 1. (Q1, IF = 4.008)
 17. **Yafeng Chen**, Fei Meng, Guangyong Sun, Guangyao Li, and Xiaodong Huang. Topological design of phononic crystals for unidirectional acoustic transmission. *Journal of Sound and Vibration*, 2017, 410, 103-123. (Q1, IF =4.648)
 18. Shuwei An, Tuo Liu, Haiyan Fan, He Gao, Zhongming Gu, Shanjun Liang, Sibao Huang, Yi Zheng, **Yafeng Chen**, Li Cheng, Jie Zhu. Second-order elastic topological insulator with valley-selective corner states. *International Journal of Mechanical Sciences*, 2022 (Q1, IF = 6.607, 共同通讯作者)
 19. **陈亚枫**, 白中浩. 泡沫填充多边形单锥管与双锥管斜向加载下耐撞性分析. *振动与冲击*. 2017, 36(6):18-26.
 20. 白中浩, **陈亚枫**, 白芳华, 蒋彬辉. 儿童损伤生物力学实验研究综述: 结构响应测试. *中国生物医学工程学报*, 2015, 34(5), 598-606. (导师第一, 本人第二)
 21. 白中浩, **陈亚枫**, 程胜华, 王玉龙. 基于不同年龄的自适应儿童乘员约束系统参数优化研究. *机械工程学报*, 2015, 51(6), 118-125. (导师第一, 本人第二)
 22. Jiang Youzhi, Fei Meng, **Yafeng Chen**, Yun Zheng, Xiaobin Chen, Jiasheng Zhang, and Xiaodong Huang. Vibration attenuation analysis of periodic underground barriers using complex band diagrams. *Computers and Geotechnics* 2020, 128: 103821.
 23. Meng Fei, **Yafeng Chen**, Weibai Li, Baohua Jia, and Xiaodong Huang. Realization of multidimensional sound propagation in 3D acoustic higher-order topological insulator. *Applied Physics Letters* 2020, 117(15): 151903.
 24. Weibai Li, Fei Meng, **Yafeng Chen**, Yang fan Li, and Xiaodong Huang. Topology Optimization of Photonic and Phononic Crystals and Metamaterials: A Review. *Advanced Theory and Simulations*, 2019, 2, 7.
 25. 白中浩, 程胜华, **陈亚枫**. 内置式儿童安全座椅侧面碰撞安全性研究. *湖南大学学报: 自然科学版*,

2014,41(8), 1-6.

主持项目

2022.1-2023.12 粘弹性声子拓扑绝缘体波动机理及拓扑优化研究，国家自然科学基金青年项目，主持。

2019.1-2020.01 三维轻质胞状声子晶体板拓扑优化设计，湖南省研究生科研创新项目，主持。

荣誉奖励

2020 年入选“香江学者”计划

2019 年 10 月获得湖南大学优秀博士生奖学金

2018 年 10 月获得博士研究生国家奖学金

2015 年 10 月获得硕士研究生国家奖学金