



ALLA MAGNIFICA RETTRICE
DELL'UNIVERSITA' DEGLI STUDI DI MILANO

COD. ID: 6909

Il sottoscritto chiede di essere ammesso a partecipare alla selezione pubblica, per titoli ed esami, per il conferimento di un assegno di ricerca presso il Dipartimento di Fisica Aldo Pontremoli

Responsabile scientifico: Prof. Zapperi Stefano

[Nome e cognome] Qida Lin

CURRICULUM VITAE

INFORMAZIONI PERSONALI

Cognome	Lin
Nome	Qida

OCCUPAZIONE ATTUALE

Incarico	Struttura
Postdoctoral research fellow	Hunan University

ISTRUZIONE E FORMAZIONE

Titolo	Corso di studi	Università	anno conseguimento titolo
Laurea Magistrale o equivalente	Mechanical Engineering	Hunan University	19/06/2018
Specializzazione			
Dottorato Di Ricerca	Mechanics	Hunan University	18/06/2024
Master			
Diploma Di Specializzazione Medica			
Diploma Di Specializzazione Europea			
Altro			

ISCRIZIONE AD ORDINI PROFESSIONALI

Data iscrizione	Ordine	Città



LINGUE STRANIERE CONOSCIUTE

lingue	livello di conoscenza
Chinese	excellent
English	Good

PREMI, RICONOSCIMENTI E BORSE DI STUDIO

anno	Descrizione premio
2022	Scholarship supported by China Scholarship Council (CSC)
2021	Best Presentation Award at International Conference on Applied Nonlinear Dynamics, Vibration, and Control (ICANDVC-2021)
2022	First-class scholarship of Hunan University
2021	First-class scholarship of Hunan University
2020	First-class scholarship of Hunan University
2019	First-class scholarship of Hunan University

ATTIVITÀ DI FORMAZIONE O DI RICERCA

descrizione dell'attività

I got my PhD from Hunan University, China, in June of 2024. My research fields include mechanical/elastic metamaterials and structural design. Specifically, my PhD program is basically focused on the design and regulation of low-frequency band gaps of quasi-zero-stiffness locally resonant metamaterials. My PhD dissertation includes: (1) The 1D, 2D and even 3D quasi-zero-stiffness locally resonant metamaterials are designed by dimensional, shape and topological optimizations. (2) Dynamic analyses of the wave propagation along the locally resonant metamaterials are conducted by theoretical derivations and finite element simulations (Comsol, Abaqus and Ansys) to reveal the low-frequency complete band gaps. (3) The coupling between the vibration of local resonators and propagating waves are studied. (4) Metamaterial samples are fabricated by additive manufacturing, and experimental verifications are conducted to prove the low-frequency vibration attenuation.

During my PhD study, supported by China Scholarship Council, I was a one-year visiting student at University of Bologna, Italy. From this visit, I had close collaboration with Prof. Alessandro Marzani. Under his supervision, I conducted a series of researches on quasiperiodic metamaterials and topological modes. We exploited the fractal effect produced by quasiperiodic metamaterials to address the issue of the narrow band gaps.

I also develop good skills in science communication. Nowadays, I have published 16 high-impact peer-reviewed journal papers (ESI highly-cited papers: 2; total citations: 387; h-index: 11 (Scopus statistics)).

ATTIVITÀ PROGETTUALE

Anno	Progetto
------	----------



01/01/2022 - Present	<p>The title of this project is “Quasi-zero-stiffness vibration isolation and attenuation: theory and application”, which is funded by National Natural Science Foundation of China No. 12122206. Main works include:</p> <ul style="list-style-type: none">• Design of quasi-zero-stiffness vibration absorbers• Development of theoretical reduced models to study the absorber dynamics• Parameter studies• Experimental verification of the vibration isolation and attenuation• Exploring the application scenarios of the absorbers• Supervision of undergraduate student thesis from Hunan University• Writing technical reports• Dissemination in high-impact journal papers and academic conferences
08/02/2023 - 08/02/2024	<p>The title of this project is “Harnessing quasiperiodic pattern to widen the band gaps of elastic metamaterials”, which is funded by China Scholarship Council No. 202206130037. Main works include:</p> <ul style="list-style-type: none">• Design of quasiperiodic metamaterials• Conducting static analyses of the metamaterials• Studying the impacts of quasiperiodic pattern on the dynamics• Analysis of topological properties of quasiperiodic metamaterials• Computing topological invariants• Achievement of topological mode transition• Development of optimization strategies to widen the band gaps• Dissemination in high-impact journal papers and academic conferences

TITOLARITÀ DI BREVETTI

Brevetto
J. Zhou, Q. Wang, K. Wang, Q. Lin , D. Tan, A quasi-zero-stiffness mechanism for low-frequency vibration absorber and energy harvesting (CN216447350U).
Y. Zhang, Q. Lin , P. Zhao, H. Wei, A positioning and clamping device during laser welding of tailor rolled material (CN201721139939.1).

CONGRESSI, CONVEGNI E SEMINARI

Data	Titolo	Sede
09/05/2024-12/05/2024	Low-frequency band gap design and widening for elastic metamaterials, in the 3rd China Metamaterials Conference.	Wuzhen, China
29/03/2024-01/04/2024	Harnessing quasiperiodic pattern to widen the low-frequency band gaps, in	Nanjing, China



	the Conference of Chinese Solid Mechanics.	
23/08/2021-25/08/2021	Investigations on tunable low-frequency band gaps of two-dimensional metamaterials, in the International Conference on Applied Nonlinear Dynamics, Vibration, and Control.	Zhuhai, China
20/11/2020-22/11/2020	Design and regulation of the locally resonant band gaps for one-dimensional metamaterials, in the 8th Equipment Vibration and Noise Control Youth Forum.	Changsha, China

PUBBLICAZIONI

Libri
[titolo, città, editore, anno...]
[titolo, città, editore, anno...]
[titolo, città, editore, anno...]

Articoli su riviste
Nowadays, I have published 16 high-impact peer-reviewed journal papers (ESI highly-cited papers: 2; total citations: 387; h-index: 11 (Scopus statistics)).
1. Q. Lin , J. Zhou, K. Wang, D. Xu, G. Wen, Q. Wang, C. Cai, Low-frequency locally resonant band gap of the two-dimensional quasi-zero-stiffness metamaterials, <i>International Journal of Mechanical Sciences</i> , 222 (2022): 107230. (IF=7.1, ESI highly cited paper)
2. Q. Lin , J. Zhou, K. Wang, D. Xu, G. Wen, Q. Wang, Three-dimensional quasi-zero-stiffness metamaterial for low-frequency and wide complete band gap, <i>Composite Structures</i> , 307 (2023): 116656. (IF=6.3)
3. Q. Lin , J. Zhou, H. Pan, D. Xu, G. Wen, Numerical and experimental investigations on tunable low-frequency locally resonant metamaterials, <i>Acta Mechanica Solida Sinica</i> , 34 (2021): 612-623. (IF=2.0)
4. Q. Lin , J. Zhou, K. Wang, C. Cai, Q. Wang, Enhanced low-frequency band gap of nonlinear quasi-zero-stiffness metamaterial by lowering stiffness coupling, <i>Nonlinear Dynamics</i> , accepted. (IF=5.2)
5. Q. Wang, J. Zhou, K. Wang, Q. Lin , D. Xu, G. Wen, A compact quasi-zero-stiffness device for vibration suppression and energy harvesting, <i>International Journal of Mechanical Sciences</i> , 250 (2023): 108284. (IF=7.1, ESI highly cited paper)
6. Q. Wang, J. Zhou, K. Wang, J. Gao, Q. Lin , Y. Chang, D. Xu, G. Wen, Dual-function quasi-zero-stiffness dynamic vibration absorber: Low-frequency vibration mitigation and energy harvesting, <i>Applied Mathematical Modelling</i> , 116 (2023): 636-654. (IF=4.4)
7. Q. Wang, J. Zhou, K. Wang, Q. Lin , D. Tan, D. Xu, G. Wen, Design and experimental study of a two-stage nonlinear vibration isolators with quasi-zero stiffness, <i>Communications in Nonlinear Science and Numerical Simulation</i> , 122 (2023): 107246. (IF=3.4)
8. J. Gao, J. Zhou, Q. Wang, K. Wang, Q. Lin , D. Tan, Design and optimization of quasi-zero-stiffness dual harvester-absorber system, <i>International Journal of Mechanical Sciences</i> , 273 (2024): 109227. (IF=7.1)



9.	C. Cai, J. Zhou, K. Wang, Q. Lin , D. Xu, G. Wen, Quasi-zero-stiffness metamaterial pipe for low-frequency wave attenuation, <i>Engineering Structures</i> , 279 (2023): 115580. (IF=5.6)
10.	K. Wang, J. Zhou, D. Tan, Z. Li, Q. Lin , D. Xu, A brief review of metamaterials for opening low-frequency band gaps, <i>Applied Mathematics and Mechanics (English Edition)</i> , 43 (2022): 1125-1144. (IF=4.5)
11.	Q. Wang, J. Zhou, K. Wang, H. Pan, J. Gao, Q. Lin , D. Tan, A torsion quasi-zero stiffness harvester-absorber system, <i>Acta Mechanica Sinica</i> , accepted. (IF=3.8)
12.	Y. Zhang, Q. Lin , X. Yin, S. Li, J. Deng, Experimental research on the dynamic behaviors of the keyhole and molten pool in laser deep-penetration welding, <i>Journal of Physics D: Applied Physics</i> , 51 (2018): 145602. (IF=3.1)
13.	Y. Zhang, F. Li, Z. Liang, Y. Ying, Q. Lin , H. Wei, Correlation analysis of penetration based on keyhole and plasma plume in laser welding, <i>Journal of Materials Processing Technology</i> , 256 (2018): 1-12. (IF=6.7)
14.	J. Wu, P. Zhao, H. Wei, Q. Lin , Y. Zhang, Development of powder distribution model of discontinuous coaxial powder stream in laser direct metal deposition, <i>Powder Technology</i> , 340 (2018): 449-458. (IF=4.5)
15.	C. Lu, Q. Lin , B. Li, J. Wu, Y. Zhang, Effect of powder feeding rate on heat and mass transfer behaviors during filler powder laser welding, <i>Optics & Laser Technology</i> , 120 (2019): 105711. (IF=4.6)
16.	T. Liu, H. Wei, J. Li, J. Lu, Q. Lin , Y. Zhang, Wettability control of sapphire by surface texturing in combination with femtosecond laser irradiation and chemical etching, <i>ChemistrySelect</i> , 5 (2020): 9555-9562. (IF=1.9)

Atti di convegni
[titolo, struttura, città, anno]
[titolo, struttura, città, anno]
[titolo, struttura, città, anno]

ALTRE INFORMAZIONI

Scopus: https://www.scopus.com/authid/detail.uri?authorId=57200522151

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del DPR n. 445/2000.

Il presente curriculum, non contiene dati sensibili e dati giudiziari di cui all'art. 4, comma 1, lettere d) ed e) del D.Lgs. 30.6.2003 n. 196.

RICORDIAMO che i curricula **SARANNO RESI PUBBLICI sul sito di Ateneo** e pertanto si prega di non inserire dati sensibili e personali. Il presente modello è già precostruito per soddisfare la necessità di pubblicazione senza dati sensibili.

Si prega pertanto di **NON FIRMARE** il presente modello.

Luogo e data: Changsha, 23/10/2024