TIANHENG LUO

PERSONAL INFORMATION

Mobile：	+86 15022593885	**E-mail：**	tianheng21luo@yeah.net
Address:	Flat 602, Building 15, Vanke Baicuiyuan, Tianjin, China Postcode: 300221		

EDUCATIONAL BACKGROUND

09/2018-06/2022   **Xi'an Jiaotong-Liverpool University (XJTLU), China**
BEng Mechatronics and Robotic Systems

- **Expected Degree：** First Class Honours Degree;
- **Average Grade:** Year 0: 65, Year 1: 71, Year 2: 72;
- **Core Modules:** Linear Algebra, Calculus, Engineering Mathematics, Machine Learning, Robotic Systems, Engineering Structures, Electronic Circuits, Electronic Circuits and Systems, Electrical Circuits, Digital Electronics, Introduction to Mechatronics, Mechanical Engineering Design, Mechatronic Systems Development, C programming and Software Engineering, Continuous and Discrete Time Signals and Systems, Microprocessor Systems, Dynamic Systems, Industrial Automation and Robot Control, Manufacturing Engineering;
- **Programming & Software skills:** C programming, FPGA, ARM Microprocessor, Python, Linux, MATLAB, ANSYS Workbench, ADAMS, Creo, SOLIDWORKS, Rhino (Grasshopper), AutoCAD, KeyShot, Origin, Adobe (Illustrator, Premiere Pro, After Effects, Audition), LaTeX, Microsoft Office, etc.

RESEARCH EXPERIENCES

10/2021-06/2022   **Research Assistant: Aggregation of Perceptive 3D-Printed Smart Structures, Southeast University (SEU), China**

- Jointly supervised by Prof Min Chen from XJTLU and Prof Ji LI (PI) from SEU;
- Gain inter-disciplinary background in the static, dynamics, thermal and electrical fields;
- Expected results: develop and implement a health detection system for the fuel grain.

10/2021-05/2022   **Final Year Project: Structural Optimization Based on Bionic Lattices, XJTLU, China**

- Conduct a comprehensive literature review on lattice structures;
- Propose a novel lattice structure performing required properties under multi-physics coupled and multi-objective conditions;
- Investigate predicting methods based on the homogeneous theory;
- Obtain publishable results.

08/2021-02/2022   **Summer Undergraduate Research Fellowship (SURF): Parametric and Lightweight Design of Free Shape Exoskeleton, XJTLU, China**

- Supported by XJTLU (2000 RMB);
- Propose the 3D-printing based topology optimization and generative design of exoskeleton structure;
- Employ different CAD and CAE approaches to perform design and analysis;
- Enhance project management skills.

05/2021-12/2021   **Research Assistant: Auxetic Lattice Tubular Structure with Negative Poisson's Ratio (NPR), XJTLU, China**

- Supervised by Prof Min Chen from XJTLU;
- Investigate Auxetic lattice tubular structure with Negative Poisson's Ratio (NPR);
- Perform multiscale analysis based on the shakedown theorem;
- Assist in simulations, experiments and paper writing.

04/2021-06/2021	**Individual Project: Numerical Simulation of Lattice Structure, XJTLU, China**

- Developed proficient skills of computer aided engineering (CAE) software;
- Quantitatively demonstrated the characteristics and advantages of lattice structure;
- Proposed a novel equivalent material having the same performance but greatly improving the computing efficiency.

02/2021-05/2021	**Industrial Collaboration with Synventive: Hot Runner Thermal Simulation**

- Research assistant to Prof Min Chen;
- Constructed a finite element model and performed power evaluation using the response surface method;
- Analysed the impact of radiation, convection coefficient and structural configuration on temperature distribution;
- Performed FEM modelling-based analysis on ANSYS and simulation process guidance writing.

JOURNAL PUBLICATIONS

- L. Wang, F. Liu, **T. Luo**, M. Chen* and G. Chen*, "Multiscale Loading Capacity Prediction of Auxetic Lattice Tubular Structure Using Shakedown Theorem", *under review, Thin-Walled Structures*, 2021.
- F. Liu, **T. Luo**, L. Wang and M. Chen*, "Lightweight Optimization Using Voronoi Lattice", *under review, Additive Manufacturing*, 2021.

*: Corresponding author.

PATENT

- **T. Luo**, H. Ma, Y. Shi, Y. Wu, F. Liu, L. Wang and M. Chen, "An Adjustable Lightweight Exoskeleton Device of Lower Limbs", submitted, 2021.

LANGUAGE SKILLS

- Proficient in academic English;
- Good command of communicative Spanish.