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Email
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Skills
Software
Solid Works, ANSYS, MatLab, Maple ,Arduino, LabVIEW, CMM, MasterCAM, LaTex, MS Office
Programming
Python, C, FORTRAN, C++

Specialty
MEMS ★★★★☆
CAD ★★★★★
Control ★★★★☆
Fluids ★★★☆☆

Languages
English ★★★★★
Mandarin ★★★★★
French ★★★★☆
Latin ★★★☆☆

AnanLU
Graduate student at McGill Space Institute

Education

2021 - now **PhD, Physics** McGill University
• Relevant subjects: Astrophysics, Astrophysical Fluids
• *Tentative Thesis: Star Formation Efficiency of 10 nearby galaxies, with data from SITELLE and ALMA. Supervisor: Prof. Daryl Haggard*

2020 - 2021 **Master of Science, Physics** McGill University
• Relevant subjects: Astrophysics, Astrophysical Fluids. Supervisor: Prof. Daryl Haggard. GPA 3.94 (out of 4.0)

2018 - 2020 **Master of Engineering, Mechanical Engineering-Thesis** McGill University
• Relevant subjects: Subsonic Aerodynamics, Experimental Fluid Dynamics, winged in-ground-effect vehicles
• *Title of the Thesis: "An investigation of ground effect on wingtip vortex generated by a rectangular NACA 0012 wing" . Supervisor: Prof. Tim Lee*

2011 - 2015 **Bachelor's Degree, Honour's Mechanical Engineering** McGill University
Dean's Honour List 2011-2012, GPA 3.51 (out of 4.0)
• Relevant subjects: MEMS and Microfluids, Control Systems, 3D Printing, Advanced Fluid Dynamics, Spacecraft Dynamics, Multi-Disciplinary Optimization
• *Title of the Thesis: "3D Printing Physical Sensors with Flexible and Conductive Thermalplastic Materials" .*

Experience

07/20 - now **MSci Graduate Student** McGill Space Institute, McGill University, Canada
• Data reduction and analysis of SITELLE (Integral Field Unit observation)
• Statistics related to giant molecular clouds (GMC)
Significant Projects:
- Quenching mechanism of star formation efficiency in galaxy bulges, with data of 10 nearby galaxies from SITELLE and ALMA
Supervisor: prof. Daryl Haggard

09/18 - 06/20 **MEng Graduate Student** Aerodynamics Lab, McGill University, Canada
• Involve in several experimental aerodynamic projects. Data acquisition and analysis. Design and maintainence of experimental set-up
Significant Projects:
- Wind tunnel experiments on wingtip vortex behind rectangular wing in ground effect
- Effects of winglets on wingtip vortex in ground effect
- Comparison of different ground boundary condition (stationary and moving)
Supervisor: prof. Tim Lee

04/16 - 07/18 **Junior Mechanical Engineer** LumenWerx
• Design custom sheet metal parts, and create drawings. Create CAD assemblies and bill of mateirals of standard or custom products.
• Involved in parts maintenance and production.
• Administrator for the company's Enterprise PDM vault, maintaining the organization and functionality of part creation and EPDM workflows.
• Involved in supply chain management using Epicor.
• Supervised a small team who create standard CAD assemblies, and provide training to new employees.

09/13 - 12/15 **Research Assistant** Biomechanical Microsystems Lab, McGill University, Canada
Significant Projects:
- Paper-based micro accelerometer and UV sensors
- 3D printing electronics and sensors with innovative materials
- Surface adhesion control system on soft robotic system
Supervisor: prof. Xinyu Liu

Publication

Lu, A.; Lee, T. (2021). **Effect of Ground Boundary Condition on Near-Field Wingtip Vortex Flow and Lift-Induced Drag** *Journal of Fluids Engineering, 143(3)*

Lu, A.; Lee, T. (2020). **Passive Wingtip Vortex Control by Using Tip-Mounted Half Delta Wings in Ground Effect** *Journal of Fluids Engineering, 142(2)*

Lu,A, Tremblay-Dionne,V., Lee,T. (2019). **Experimental Study of Aerodynamics and Wingtip Vortex of a Rectangular Wing in Flat Ground Effect** *Journal of Fluids Engineering, 141(11)*

Li, X., Wang, Y. H., Lu, A., Liu, X. (2015) **Controllable hydrothermal growth of ZnO nanowires on cellulose paper for flexible sensors and electronics** *IEEE Sensors Journal, 15(11), 6100-6107.*