ALI JAMMAL

Mechanical Engineer

Ottawa, Ontario
(343) 204-7357
Jammal.ali@live.com

SUMMARY

Accomplished PhD Mechanical Engineer graduate with 8 years of extensive research and industrial experience in laser-assisted additive manufacturing, acoustic sensors, and wind turbine gearbox failure. Proven track record in conducting innovative research, publishing in reputable journals, and contributing to significant advancements in the field. Specializes in CAD/CAM, multi scale modeling, computational fluid dynamics, and mechanical design. Demonstrates exceptional project management skills, successfully coordinating and leading multidisciplinary international research projects. Excellent industrial experience through strategic collaborations with international universities and engineering companies.

EDUCATION

PhD, Mechanical Engineering 11, 2016
Tsinghua University, Beijing, China

- Dissertation: The Effects of Loading Conditions and Flexibility on Wind Turbine Gearbox Failure
- Advisor: Prof. Yiming Rong

Master's Degree, Advanced Mechanical Engineering 02, 2012
Brunel University, London, United Kingdom

- Dissertation: Design, Modelling and Control of Quarter Car Suspension Rig Using LabVIEW and SIMULINK
- Advisor: Prof. Ibrahim Esat

Bachelor's Degree, Mechanical Engineering 07, 2010
University of Balamand, Koura, Lebanon

PROFESSIONAL EXPERIENCE

Assistant Professor 11, 2021-Present
Xi'an University, Xi'an, China

- Engage in research on the solidification process of Selective Laser Melting
- Deliver online and in person lectures on the fundamentals of computer-aided design
- Serve as a thesis advisor and advise students on program curricula and career path
- Directed an international collaborative Project, overseeing its successful execution from inception to completion within a budget allocation of 40,000 CAD

Administrative Assistant 08, 2022-10, 2022
MTL PCR, Montreal, Canada

- Welcomed patients as they entered the testing center and provided them with necessary paperwork, assisted patients with filling out registration forms and verified their identification
- Managed appointment schedules, booked new appointments over the phone and in-person
- Monitored and replenished supplies such as testing kits, and office supplies
- Facilitated the transportation of samples to the laboratory and coordinated with laboratory staff

Post-Doctoral Fellow 11, 2019-11, 2021

Northwestern Polytechnical University, Xi'an, China

- Conducted research on the design and efficiency of MEMs acoustic lenses
- Developed an acoustic lens using SolidWorks for signal detection in airborne and liquid media
- Engineered an experimental setup for the detection and filtration of low-frequency signals

Post-Doctoral Fellow 11, 2017-11, 2019

Southern University of Science and Technology, Shenzhen, China

- Carried research using phase field modeling on solidification in laser additive manufacturing
- Utilized and developed codes to simulate solidification, employing C++ programming language
- Conducted research in CFD to model molten pool flow and thermal profile using Ansys Fluent

Research Assistant 11, 2016-11, 2017

Tsinghua University, Beijing, China

- Conducted primary work with a focus on the design of bevel gears employing SolidWorks
- Modeled gear deformation during the carburizing process through FEA package Abaqus
- Supervised and tutored laboratory sessions on the use of lab equipment

SKILLS

- Software: AutoCAD, SolidWorks, CATIA, Abaqus, Ansys fluent, MATLAB/Simulink, C++, LabVIEW and Microsoft Office Suite
- Techniques: FEA, CFD, Heat Transfer, Thermodynamics, Mechanical Design, Remanufacturing

LANGUAGES

- **English**: Fluent (CLB 9); **French**: Fluent; **Arabic**: Native proficiency; **Mandarin**: Intermediate level

SELECTED PUBLICATIONS

Jammal, Ali, et al. "Thermodynamic Calculation and Characterization of Carbide Precipitation in Laser-Deposited Material for High-Speed Steel Alloy." Journal of Materials Engineering and Performance 30 (2021): 1825-1837.

Jammal, Ali, et al. "Multi-scale modelling of solidification and microstructure evolution in laser-deposition of T15 high speed steel." Journal of Manufacturing Processes 50 (2020): 24-33.

GRANTS

Tsinghua University Tuition Fees Scholarship for International Students 09, 2012-09, 2016

Tsinghua University, Beijing, China

Chinese Government Scholarship for Outstanding Foreign PhD Students 05, 2015

Tsinghua University, Beijing, China

VOLUNTEERING

Mover, Coordinator 07, 2024 – Present

Shelter Movers, Ottawa, Canada

- Help families fleeing abuse with packing and transporting their belongings
- Reach to movers to organise moving sessions