Yulin SHI

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OBJECTIVES

Mechanical Engineer - Full time job (available from May 2016)

EDUCATION

Master of Mechanical Engineering (Thesis) **Sept 2014 - April 2016**
McGill University, Montreal *GPA: 3.82/4.0*
Thesis: design finite element and frequency algorithms for structure dynamics and vibration computing

Bachelor, major in Flying Vehicle Power Engineering **Sept 2009 - July 2013**
Beihang University (BUAA), Beijing, China *GPA: 3.65/4.0*
Publication: Shi, Yulin, et al. "Constructive non-iterative explicit models of turbofan engines with introduced poles." *Applied Sciences and Technology (IBCAST)*. IEEE, 2015.

SKILLS

Programming: Matlab/Simulink, Java, Python, C/C++, FreeFem++
Software: Latex, Eclipse, AutoCAD, Robot Operating System, NLR GSP
Hardware: Arduino, SCM-51, Soldering, CNC lathes, benchworks, UAV
Language: Mandarin (native), English (fluent)

PROFESSIONAL EXPERIENCES

Software engineer May 2015 - now
McGill Robotics Club *Montreal, Canada*

· Set up simulation environments on robot operating system (ROS) for testing flight controller.
· Built an autonomous rover with an Arduino board and a sonar sensor.

Research assistant, teaching assistant Sept 2012 - July 2014
Aero-engine Control Laboratory, Beihang University *Beijing, China*

· In an industrial project team, developed thermodynamics and aerodynamics models of turbofan engines using Matlab/Simulink. My fast non-iterative model increased simulation speed by 100 times.
· Designed fuel flow rate controllers which is robust to health degradation using the linear matrix inequality toolbox.
· Wrote technical reports. Made presentations to partners in aero-engine industries.

Mechanical engineer March 2013 - August 2013
Institute of Engineering Thermophysics, Chinese Academy of Science *Beijing, China*

· In a combustion lab, designed the embedded system prototype of temperature control using SCM-51 development kit. Wrote sensors drivers using assembly language. It enabled autonomous temperature adjustment.
· Built mathematical models of an industrial recuperative gas turbine generator using the Gas Turbine Simulation Program (GSP) and Matlab/Simulink. Wrote its starting manoeuvre handbook.

Mechanical engineer Sept 2010 - May 2011
Recuperative distiller product team *Beijing, China*

· Led a 4 people team, designed recuperative processes which recycle steam energy by 50%.
· Designed parts of prototypes with AutoCAD. Manufactured chambers by welding. Manufactured medal heat exchanger using drilling lathes.

RELEVANT COURSES

Dynamics: Aerodynamics, Thermodynamics, Heat Transfer, Rotor Dynamics, Aircraft Structure and System
Computer: Finite Element Method, Machine Learning, Artificial Intelligence, Numerical Computing
Control: Linear systems, Robust Control, Aircraft Engine Control, Robotics, Digital Signal Processing