# Hufeng Wang

*Resume*

## Speciality

**Mathematics**, *Analysis, Numerical Computation, Optimization, Mathematical Modeling, Geometry and etc.*

**Image Processing**, *Pattern Recognition, Shape Deformation, Registration, Segmentation, 3D Reconstruction and Visualization and etc.*

**Languages**, *English, Chinese, Japanese.*

## Education

Dec 2015 **Master of Science**, *The University of Texas at Dallas*, Texas, .
Major: Applied Mathematics, Advisor: Yan Cao

Jul 2010 **Bachelor of Science**, *Qufu Normal University*, China Mainland, .
Major in Information and Computational Sciences
Thesis: Analysis of Lotka-Volterra Model with High Proliferation Rate Prey Group

## Work Experience

Jul 2018 - Present **Imaging Algorithm Engineer**, *Quantilogic Healthcare*, Hangzhou, China.
- design algorithms and program on liver cancer reporting system (experience in Qt)

Sep 2017 - Jun 2018 **Algorithm Engineer**, *Shengshi Vision*, Hangzhou, China.
- read and analyze medical images (experience in CT, MRI, Ultrasound, X-ray)
- design algorithms for organ detection and 3D reconstruction (experience in aorta, coronary artery, aortic valve and etc)
- provide geometrical and physical quantities for simulation (experience in flow simulation of aorta, coronary artery, auricle of left atrium and etc )

Nov 2016 - Jul 2017 **Researcher**, *Yubo Intelligent*, Qingdao, China.
- survey and develop laboratory equipment

Aug 2010 - Dec 2015 **Teaching Assistant**, *The University of Texas at Dallas*.
- Tutor students on Calculus, Linear Algebra, Ordinary Differential Equation and etc in problem solve session
- Grade students' homeworks and quizzes

Jun-Aug 2012, 2013 **Research Assistant**, *The University of Texas at Dallas*.
- working on several projects on medical image processing

## Computer Skills

Languages LaTeX, MATLAB, Python, C/C++, MATHEMATICA

Softwares /Packages MSOffice, ITK/VTK, OpenCV, Qt, Adobe Illustrator, SPSS, SolidWorks, SPM, VBM, 3DSlicer

☎ +86 155-8988-8070 (China) / +1 (213) 534-8118 (USA)
✉ tigerhu7@yahoo.com • www.hufeng.xyz

## Awards

2010–Present Graduate Tuition Scholarship – *The University of Texas at Dallas*

2007 Scholarship – *Qufu Normal University*

## Membership

2014 Society for Industrial and Applied Mathematics (SIAM) University of Texas at Dallas-Southern Methodist University student chapter

2010-Present UTDallas Friendship Association of Chinese Students and Scholars (FACSS)

## Patents

Issued (based on Patentstar.cn)
201310044583.3 A grain cooling equipment based on rotational heat exchange
201010500067.3 A grain preservation method based on automatic heat circulation pipes
201310031387.2 An automatic sterilization and disinfection device based on microwave
201220713728.5 An anti-oxidation oil preservation device
201320335903.6 A food processing device based on high pressure pulsating
201320430590.2 A simple fruit preservation device
201320675417.9 A removable fence style ice storage
Pending
Beef marbling segmentation and grading

## Research Projects

Nov 2016-Present **Beef Marbling Segmentation and Grading**.
- segment ribeye using Active Contour method
- utilize Superpixel to get blocks, then distinguish fat and lean blocks
- calculate fat portion, fat blocks portion and fractal dimension to get marbling grade

Jan 2015-Present **Geodesic Shooting method in Shape Analysis**, *The University of Texas at Dallas*.
- setup Geodesic Shooting equations based on LDDMM theories
- compare results using different filters

Jun 2014-Dec 2014 **Reaction-Advection-Diffusion Equation on Simulating Tumor Growth Model**, *The University of Texas at Dallas*.
- setup reaction-advection-diffusion equation to simulate tumor growth
- choose optimal parameters
- generate mesh grid and use Finite Element Method to find numerical solutions for growth

Sep 2013-May 2014 **Superpixel and its application on Brain Tumor Detection**, *The University of Texas at Dallas*.
- use SLICO to generate superpixels on Brain Image
- detect the abnormal region using Simulated Annealing Method

Jun 2013-Aug 2013 **Brain Tumor Detection Using Asymmetry**, *The University of Texas at Dallas*.
- generate Homogeneous Transform Matrix
- get the optimal parameters to transform Brain
- Estimate tumor position using symmetry measures