

## Yujian Zheng (郑玉健)

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### EDUCATION

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#### Bachelor, Software Engineering

2014.9-2018.06

Harbin Institute of Technology(HIT), Weihai, School of Computer Science and Technology  
GPA:84.97/100

### RESEARCH INTERESTS

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My current research focuses on geometric modeling and computer aided design. And I am now working on computer-aided ship hull design with developable surfaces. I also have broad interests in fabrication oriented geometric design and optimization, as well as more natural, convenient and intelligent human-computer interaction techniques.

### PUBLICATIONS

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[4] Zhang X Q, Bo P B, **Zheng Y J**, Zhang C M. Cone Spline Surface Fitting (in Chinese). Accepted to *Chinagraph 2018*

[3] **Zheng Y J**, Bo P B. Quasi-developable Surface Construction Based on Boundary Curve and its Application in Ship Hull Design (in Chinese). *J Comput-Aid Desig Comput Graph*, 2018

[2] Piao D S, **Zheng Y J**, Bo P B. Volume Rendering with Adaptive Local Feature Enhancement (in Chinese). *CSIAM Geometric Design and Computing of China(GDC)*, Yantai, 2017

[1] Bo P B, Wang Z, Zhang C M, **Zheng Y J**. Developable Surface Reconstruction from Noisy Data with L0-norm Minimization (in Chinese). *Sci Sin Inform*, 2017

### RESEARCH EXPERIENCES

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#### Multi-Strip Developable Surface Representation and Optimization 2018.6-Present Current Project

We proposed an optimization method for multi-strip developable ruled surfaces modeling. This method has the ability to eliminate the gap between adjacent patches. Our technical paper will be produced and submitted to *Computer-Aided Design* in a month.

#### Developable Surface in Ship Hull Design 2017.12-2018.6 Excellent Graduation Project in HIT

A design system based on developable surface for optimizing ship lines and hulls has been designed and implemented. Using this system, ship designers can design smooth ship lines with interactive operations and obtain quasi-developable ship hulls through optimization.

#### Developable Surface Construction between Two Boundaries 2016.12-2017.8 GDC 2017, Yantai, Oral Report

The subject is aimed to find a robust method which can construct a quasi-developable surface between two boundaries using several specific numerical optimization techniques. The phased results have been applied in ship hull design, which have been accepted by *J Comput-Aid Desig Comput Graph*.

## **Volume Rendering**

**2017.7**

*GDC 2017, Yantai, Oral Report*

This work is an optimization of Volume Illustration which is a well-known method in volume rendering based on non-photorealistic rendering.

## **Developable Surface Reconstruction from Noisy Data**

**2016.5-2016.11**

*China CAD&CG 2016*

We presented an innovative method for Developable Surface Reconstruction from Noisy Data. In this work, I implemented an optimization approach to smooth normal vector field of given model via L0-norm minimization.

## **PROFESSIONAL SKILLS**

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**Standardized Test:** IELTS(6.5)

**Programming Languages:** C/C++, Java

**Libraries and Tools:** HLBFGS, OpenGL, OpenMesh, GeometricTools, Eigen

## **AWARDS**

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**Excellent Student, HIT**

**2017**

**National Inspirational Scholarship, Ministry of Education, China**

**2016**