# Jing REN

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# **EDUCATION**

#### **KAUST, Visual Computing Center (VCC)**

Jeddah, Saudi Arabia

PhD candidate in Computer Science; GPA: 3.92/4.0; Supervised by Prof. Peter Wonka

Aug 2015 - Present

Relative Coursework Introduction to Computer Vision, Special Topics in Machine Learning, Computer Graphics, Geometry Processing, Numerical Optimization...

## University of Oxford, St Edmund Hall

Oxford, United Kingdom

Master of Science in Mathematical and Computational Finance with distinction

Sep 2014 - Jul 2015

Relative Coursework Machine Learning, PDE, Statistics, Optimization, Numerical Methods, Stochastic Calculus, C++... Thesis Ensemble Learning for Financial Time Series Forecasting

#### Zhejiang University (ZJU), Chu Kochen Honors College

Zhejiang, China

Bachelor of Science in Mathematics and Applied Mathematics; GPA: 3.88/4.0 (top 5%)

Aug 2010 - Jun 2014

Relative Coursework Mathematical Analysis, Linear Algebra, Real Analysis, Complex Analysis, Functional Analysis, ODE, PDE, Differential Geometry, Combinatorial Optimization, Optimization Algorithms...

#### **PUBLICATION**

# 1 Fast Sinkhorn Filters: Using Matrix Scaling for Non-Rigid Shape Correspondence with Functional **Maps**

Gautam Pai, Jing Ren, Simone Melzi, Peter Wonka, Maks Ovsjanikov Proc. IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2021

[code]

#### 2 Geometric analysis of shape variability of lower jaws of prehistoric humans

Jing Ren, Peter Wonka, Gowtham Harihara, Maks Ovsjanikov L'Anthropologie, 2020

[code] [paper]

## 3 MapTree: Recovering Multiple Solutions in the Space of Maps

Jing Ren, Simone Melzi, Maks Ovsjanikov, Peter Wonka

ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2020

[code] [paper]

## 4 MGCN: Descriptor Learning using Multiscale GCNs

Yiqun Wang, Jing Ren, Dong-Ming Yan, Jianwei Guo, Xiaopeng Zhang, Peter Wonka ACM Transactions on Graphics (Proc. SIGGRAPH), 2020

[code] [paper]

#### 5 Consistent ZoomOut: Efficient Spectral Map Synchronization

Ruqi Huang, Jing Ren, Peter Wonka, Maks Ovsjanikov Computer Graphics Forum (Proc. SGP), 2020

[code] [paper]

# 6 ZoomOut: Spectral Upsampling for Efficient Shape Correspondence

Simone Melzi\*, Jing Ren\*, Emanuele Rodolà, Abhishek Sharma, Peter Wonka, Maks Ovsjanikov ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2019 (\* equal contribution)

[slides] [code] [paper]

#### 7 Structured Regularization of Functional Map Computations

Jing Ren, Mikhail Panine, Peter Wonka, Maks Ovsjanikov Computer Graphics Forum (Proc. SGP), 2019

[slides] [code] [paper]

## 8 Continuous and Orientation-preserving Correspondence via Functional Maps

Jing Ren, Adrien Poulenard, Peter Wonka, Maks Ovsjanikov

ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2018 [slides] [code] [paper]

# 9 Joint Graph Layouts for Visualizing Collections of Segmented Meshes

Jing Ren, Jens Schneider, Maks Ovsjanikov, Peter Wonka *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, 2017

[slides] [code] [paper]

#### **RESEARCH INTERNSHIP**

## Alibaba, DAMO Academy, AI center (City Brain)

Supervised by Dr. Chang Zhou and Dr. Lubin Fan

Zhejiang, China July 2020 - Jun 2021

## École Polytechnique, Laboratoire d'Informatique (LIX)

Supervised by Prof. Maks Ovsjanikov

Palaiseau, France Jun - Aug 2017, 2018, 2019

## **AWARDS & HONOURS**

CEMSE Student Research Excellence Award
Best Paper Award honorable mention
Accomplished Honors Program of Science & Engineering
Scholarship for Outstanding Merits (top 8%)
Excellent Student Awards (top 3%)

Symposium on Geometry Processing, 2019
Zhejiang University, 2014
Zhejiang University, 2011, 2012, 2013
Zhejiang University, 2011

## **SKILLS & ACTIVITIES**

**Programming Skills** MATLAB, Python, C++, R **Languages** Mandarin (Native); English (Fluent); Russian (Beginner) **Voluntary Activities** 

• Translator in Coursera's Global Translator Community

Sep 2016 - Present

Student Volunteer of ACM MultiMedia

Oct 2020

Paper reviewer of IEEE Computer Graphics and Applications

Student Volunteer of The Symposium on Geometry Processing 2018

Jun 2018 Jul 2018

• Volunteered at China Knives, Scissors and Swords Museum

Oct 2012 - Jun 2014

## **SCIENTIFIC REFEREES**

#### Prof. Peter Wonka

Full Professor, Visual Computing Center, KAUST

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#### **Prof. Maks Ovsjanikov**

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#### **Prof. Helmut Pottmann**

Full Professor, Visual Computing Center, KAUST

- https://www.kaust.edu.sa/en/study/faculty/helmut-pottmann