YIXUAN HE

University of Edinburgh /South China University of Technology

(86) · 18033246293 ⋄ Y.He-48@sms.ed.ac.uk

Bachelor′s: Mathematics and Statistics /Mathematics and Applied Mathematics (2+2)

EDUCATION

University of Edinburgh   *Sept.2018 - June 2020*
2+2 dual Bachelor′s degree: **(BSc Hons) Mathematics & Statistics**
Courses: Statistical Methodology**(100%)**, Financial Mathematics**(100%)**, Stochastic Modelling(95%),
Statistical Computing(95%), Honours Analysis(94%), Honours Algebra(94%), Statistical Learning(90%)etc.
Average: **93%, top 1** in Mathematics & Statistics

University of California, Berkeley   *Jan. 2018 - May 2018*
Courses: Numerical Analysis **(A+)**, Complex Analysis **(A+)**, Abstract Algebra (A)

South China University of Technology   *Sept.2016 - June 2020*
Major: **Mathematics & Applied Mathematics**
GPA: major **4.0/4.0**, overall 3.99/4.0, class ranking **1/54**
Major average score **97.33%**, overall average score 96.24%
Winning 2 years′ **National Scholarship** granted by Ministry of Education of China
650/710 in CET6, overtaking **99.98%** students in SCUT

RESEARCH EXPERIENCES

UCLA CSST summer research/REU: Deforestation Brazil   June 2019 - Sept. 2019
Researcher   *Supervisors: Andrea L. Bertozzi, Stanley Osher*

· Conduct data mining, data analysis, **matlab programming,** & model construction.
· Implement **level set method**, numerical PDEs, optimal path searching, satellite image processing,
  Maximum Penalized Likelihood Estimation (MPLE), time series simulation etc.
· **Present a poster** at Intelligence Community Academic Research Symposium **(ICARS) 2019**.

**Robust Image Salient Object Perception Prior for Image Segmentation based on PDEs
Related Methods**   Jan. 2016 - Present
Researcher   *Supervisor: Delu Zeng*

· Study level set methods and **beural networks** on **semantic image segmentation**.
· Cooperate on an extension of 2018s **IJCAI paper**- MEnet: A Metric Expression Network for Salient
  Object Segmentation.
· **First author** of paper at workshop of **CVPR 2019**: Scan-flood Fill (SCAFF): an Efficient Automatic
  Precise Region Filling Algorithm for Complicated Regions. https://arxiv.org/abs/1906.03366.
· Work on **lung nodule segmentation** using MEnet.
· Use platforms including Linux, caffe & programming in **Python**.
· Funded by **National Natural Science Foundation of China (NSFC)**.

**Efficiency of Collaborative Innovation Knowledge Output in Professional Towns in Inter-
net + Times**   May 2017 - May 2018
Research Team Leader   *Supervisors: Shifu Wang, Miaoxi Zhao, Shenquan Liu*

· **Cross-disciplinary**: Mathematics & Urban Planning.
· Responsible for data mining, data analysis, paper writing (pending publication).
· Funded by Ministry of Education of the China as part of the **National Training Program of Inno-
  vation for Undergraduates**.

CONFERENCES

Berkeley Undergraduate Number Theory Conference 2018	Attendee	April 2018
European Conference on Computer Vision(**ECCV**) 2018 pre-conference	Attendee	July 2018
Computer Vision and Pattern Recognition(**CVPR**) 2019	First author of paper at workshop **CEFRL**	June 2019
Intelligence Community Academic Research Symposium (**ICARS**) 2019	Poster presenter	Sept. 2019

MAJOR AWARDS

Gold medal	2014′s CYCC (China Youth **Creativity Competition**) for creation
Silver award	2014′s IENA international creation competition
Second Prize	2018′s ICM/MCM International **Mathematical Modeling** Competition
Second Prize	2017′s "Ninth National College Student **Mathematics Competition** (Mathematics)" in Guangdong
Second Prize	2017′s National College Student Mathematical Modeling Competition Undergraduate Group in Guangdong
Grand Prize	2018′s Mathematics Competition of South China University of Technology (Mathematics Group) (top 1)
Honour	2017-2018′s South China University of Technology′s **Pacemaker to Merit Student**
Prize	2017′s & 2018′s **National Scholarship**
Prize	2019′s Arthur Erdelyi Prize (top 3 in School of Mathematics at UoE)
Prize	2019′s James Ward Memorial Prize (**top 1** in Mathematics & Statistics at UoE)

COMPUTER SKILLS

Programming:	**Python (Advanced)**, C++ (Intermediate), VB (Basic) & Pascal (Basic)
Statistical Analysis:	**R (Advanced)**, SQL (Intermediate) & SPSS (Intermediate)
Modelling:	**Matlab (Advanced)**, Maple (Intermediate) & Xpress (Intermediate)
Paper writing:	Latex (Intermediate)

WORK EXPERIENCES

Head of Class   Sept. 2013-June 2018

· Convey notifications, organize activities & lead by example.
· 2017′s & 2018′s South China University of Technology **Outstanding Student Leader**.
· 2016-2017′s **outstanding class** of SCUT & 2017-2018′s top-16 classes of SCUT.

University Student Representative   May 2017-May 2018

· Actively listen to students′ opinions & participate in raising proposals.
· Outstanding Student Representative of South China University of Technology in 2017.

Student Assistant for School of Mathematics   Sept. 2016-Aug. 2017

· Assist in organizing materials & releasing notifications.
· Outstanding individual in work study of South China University of Technology.

Member of Public Relationship Dept. in Math Student Union   Sept. 2016-Oct. 2017

· **Lead** the hosting of a social party in School of Mathematics.
· 2017′s **Star** in Mathematics Student Union.

Host of School of Mathematics in SCUT   Oct. 2016- June 2018

· Hosted in 2016′s Mathematics Athletics Games & 2018′s Math flag-raising ceremony.