

# Mincong Zhang

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EDUCATION	<b>University College London</b> 2013-2014 MSc Computer Graphics, Vision and Imaging
	<b>Queen Mary, University of London &amp; Beijing University of Posts and Telecommunications</b> 2009-2013 BSc Telecommunications Engineering with Management <i>Double-degree, First Class Honours</i>
INTERNSHIP	<b>3D Industri.es (a 3D retrieval/printing startup company)</b> Jun-Sep, 2014 I built a experimental 3D retrieval system for the company. It is also my MSc final project <ul style="list-style-type: none"><li>- A shape-based retrieval system, which provides a scan to search solution</li><li>- Used spherical harmonics and shape histograms to describe 3D shapes</li><li>- Involving: C++, MFC, OpenGL, OpenMesh</li><li>- Repo: <a href="https://github.com/mincongzhang/3D_Retrieval_scan2search">github.com/mincongzhang/3D_Retrieval_scan2search</a></li></ul>
	<b>Ericsson - Region North East Asia (RNEA)</b> Apr-Aug, 2013 Worked in a Cross Function Team in Development Unit for IP & Broadband department <ul style="list-style-type: none"><li>• Project on PT router Imported a web server (based on https protocol) into PT router<ul style="list-style-type: none"><li>- I developed the frontend website framework</li><li>- Including login, main pages, Data Communication Network (DCN) page and Software Download (SWDL) page</li><li>- Applied Ajax and Json, and focused on the cross-browser ability</li></ul></li><li>• Project on IP Operating System (IPOS) White box test for IPOS<ul style="list-style-type: none"><li>- Unit test: applied Google C++ Testing Framework</li></ul></li><li>• Project on SP switch Black box test for Quality of Service (QoS)<ul style="list-style-type: none"><li>- Perl scripting to verify the Congestion Avoidance functions on SP switch</li></ul></li></ul>
	<b>HACKATHON</b> <b>J.P. Morgan and the Code for Good Challenge</b> Nov, 2013 An android app to collect customer information for micro-nance rms, including Client Registrations, Group Registrations, Loan Applications and Offline Mode <ul style="list-style-type: none"><li>- I developed the frontend User Interface of the Group Registrations</li><li>- Joint runners-up team</li></ul>
RESEARCH	<b>Undergraduate Final Project: The influence of amplifier settings on the perception of 'heaviness' in guitar timbre</b> Nov, 2013 Aims to objectively measure the relationship between amplifier settings and the perception of 'heaviness' <ul style="list-style-type: none"><li>- More than 900 registered users from UK and China participated in the final web-based listening test</li><li>- Supported by 2 supervisors from Centre for Digital Music in Queen Mary, University of London</li><li>- Results contribute to the fields of emotion detection in music and genre</li></ul>

- Involving: Python scripting, website construction (Django), database (SQLite), signal processing (Matlab), Algorithm design
- Repo: [github.com/mincongzhong/UnderGradFinalProject](https://github.com/mincongzhong/UnderGradFinalProject)

**Project: Research into the Ruin Probability Problems** 2011-2012

Introduced multiple transition states into ruin probability matrix, to find out the absorption time of the Birth-death Chain with two absorption barriers (Game Theory)

- Team leader (of 5 members), Won *The Beijing Municipal Research Award*
- Publication:  
**Mincong Zhang**, Hao Zhang, Tingting Wang *The Gambler's Ruin Problem with Multiple Transition States*  
*The 7th International Conference on Matrix and Operator Theory*

**PROJECTS**

**Machine Vision** 2013-2014

- Apple Detection (EM algorithm), Panorama, Augmented reality, etc.
- Repo: [github.com/mincongzhong/MachineVision](https://github.com/mincongzhong/MachineVision)

**Acquisition and Processing of 3D Geometry** 2013-2014

- Sketch-to-search 3D retrieval system
- ICP alignment/Mesh denoising system
- Repo: [github.com/mincongzhong/3DGeometry](https://github.com/mincongzhong/3DGeometry)

**Computer Graphics** 2013-2014

- Sketch-to-search 3D retrieval system
- Implemented Ray Tracing, Clipping, Robot modelling and Splines
- Repo: [github.com/mincongzhong/ComputerGraphics](https://github.com/mincongzhong/ComputerGraphics)

**Image Processing** 2013-2014

- Face Detection & Poisson Editing
- Repo: [github.com/mincongzhong/ImageProcessing](https://github.com/mincongzhong/ImageProcessing)

**Advanced Transforms** 2011-2012

- Wavelet/Fast Fourier transform
- Repo: [github.com/mincongzhong/Toolbox/tree/master/AdvancedTransform](https://github.com/mincongzhong/Toolbox/tree/master/AdvancedTransform)

**Digital Signal Processing** 2011-2012

- Butterworth filter design
- Repo: [github.com/mincongzhong/Toolbox/tree/master/DSP](https://github.com/mincongzhong/Toolbox/tree/master/DSP)

**POSITIONS**

- Staff in IT department of Chinese Students and Scholars Association at UCL Union 2013-2014
  - Managed the CSSA website and WeChat public platform
- Vice president of the Animation & the Guitar Societies 2010-2011
  - Both of the societies won the title of Top Five Associations
- In charge of the Student-Staff Liaison Committee (with university staff in Beijing and London) 2009-2010

**SKILLS**

C++, OpenGL/OpenMesh, Matlab, Python, Perl, JavaScript (Ajax, Json), Django

**INTERESTS**

Guitar (5 years), Animation, Tennis, Jitsu