

# Yongming Ding

(+86) 180-3705-3593 ◇ dingyongming1995@gmail.com ◇ Homepage: <http://dmt.moe/>

## EDUCATION

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### Shanghai Jiao Tong University (SJTU), Shanghai

Master of Science in Electronic Science and Technology

*Sep. 2016 - Present*

◇ Major GPA: 4.00/4.00

◇ Overall GPA: 3.72/4.00

◇ 1<sup>st</sup> Prize in 12th China Graduate Electronics Design Contest (Ranked 2<sup>nd</sup> in more than 100 teams in the final)

Bachelor of Science in Microelectronics

*Sep. 2012 - Jun. 2016*

◇ Major GPA: 90.22/100(upper division) ◇ Overall GPA: 89.13/100(upper division)

◇ Received a waiver for the National College Entrance Exam to enter SJTU, as 1st Prize in National Olympiad in Physics (Henan Province, top 0.01%)

## PUBLICATIONS

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**Yongming Ding**, Wei Jin, Guanghui He, Weifeng He. “Short Path Padding with Multiple-Vt cells for Wide-Pulsed-Latch Based Circuits at Ultra-Low Voltage.” *IEEE International Conference on ASIC* (2017). Accepted.

## RESEARCHES AND PROJECTS

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### Short Path Padding Technique Design

*July 2016 - present*

◇ Designed and implemented a short path padding software system employing integer linear programming method, which supports up to a wide pulse of 1/3 cycle time in pulsed-latch pipelines.

◇ Proposed step-by-step based and path group based schemes to reduce 80.9% runtime of the baseline padding algorithm and used multiple-Vt buffer cells to reduce additional hardware cost by 52.3%, on average.

### Three-dimensional Integrated Circuit(3D-IC) Partitioning Technique Design

*Jan. 2016 - Jun. 2016*

◇ Excellent graduate thesis in Department of Micro-Nano Electronics, Shanghai Jiao Tong University.

◇ Designed a 3D-IC partitioning algorithm for motion estimation(ME) module of HEVC, including an initial partition algorithm based on breadth first search and an iterative optimization algorithm. Achieved an optimum partition for the ME module, which reduced 42.9% of the cut edges while the area utilization rate reached 95.5%.

### Image Super-Resolution Using Convolutional Neural Network(CNN)

*July 2017*

◇ Applied deep learning techniques to sharpen or improve the quality of a low-resolution image input by outputting a super-resolved high-resolution image. Proposed a 7-layers CNN which got lower loss value and reduced 10% training time, compared with “waifu2x”, an open source image super-resolution software.

### “Eye of Providence”, an Intelligent Monitoring System

*May 2017*

◇ Led a group of 4 teammates to build an intelligent classroom monitoring system using face recognition, facial expression detection and speech identification techniques during “Hackathon SJTU 2017”.

### Design and realization of 5-stage-pipeline MIPS processor

*Oct. 2014 - Nov. 2014*

◇ Acted as a team leader and took charge of the module design and Verilog HDL code implementation. Resolved data hazards using forwarding and stalling. Implemented dynamic branch prediction to deal with control hazards.

## PROFESSIONAL EXPERIENCE

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### Shanghai Jiao Tong University, Shanghai

*Feb. 2017 - Jun. 2017*

Teaching Assistant of *Course Design for Digital Integrated Circuit Design* (MR322, Spring 2017)

### Ctrip Computer Technology Co.,Ltd., Shanghai

*July 2015 - Dec. 2015*

Software Engineer Intern in *Application Management Group, Ctrip Infrastructure Service*

◇ Developed and improved software tools to enhance site reliability and boost the efficiency of developing products.

◇ Constructed “**Alert-Subscribe**”, an alert event subscription system. Completed the back-end job including obtaining alert events periodically, classifying alert events with RegEx and sending notification to subscribers.

◇ Designed and implemented “**Prometheus**”, a web service cluster consumers display platform, to show the dependency relationships between web service clusters, using Django as a back-end framework, using Bootstrap as the front-end framework, and using MySQL database and Redis database to store tasks scheduling queue.

## HONORS, AWARDS AND CERTIFICATES

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Tang Youshu Scholarship, Shanghai Jiaotong University (4 recipients out of 116 students)

*2017*

First-class Academic Graduate Student Scholarship, Shanghai Jiaotong University

*2016*

Senior skill level computer programmer (JAVA, ARM), Occupational qualification certificate, China

*2015 and 2016*

Scholarship of Academic Excellence, Shanghai Jiao Tong University

*2014 and 2013*

Outstanding student, Shanghai Jiao Tong University

*2014 and 2013*

2<sup>nd</sup> Prize in Shanghai Region, National College Student Physics Competition

*2013*