

Mingrui Yuan

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[\[Github\]](#)

[\[Homepage\]](#)

Education

Tsinghua University

Bachelor of Engineering,

Dept. of Electronic Engineering

GPA: 3.77/4.0

Beijing

Aug 2016-Present

Research Interests

Speech Processing, Speaker Verification, Audio Signal Processing, Adversarial
Machine Learning

Research Experiences

University of Rochester

Visiting Student Researcher,

Supervisor: Prof. Zhiyao Duan

Rochester, NY

Jun 2019-Sep 2019

- ♦ Proposed simple and effective multi-speaker representation in deep learning Text-to-speech (TTS) model.
- ♦ Verified significant spoofing effects of deep learning TTS on speaker verification systems in black-box condition.
- ♦ Uncovered threat of TTS on anti-spoofing systems when model structures are not kept confidential.

Tsinghua University

Student Researcher

Supervisor: Prof. Weiqiang Zhang

Beijing

May 2018-Present

- ♦ Worked on replay speech detection. [\[Report\]](#)
- ♦ Investigated real-time speech enhancement based on hybrid digital signal processing/deep learning method.
- ♦ Spoofing and anti-spoofing on speaker verification based on reinforcement learning. (In progress)

Publication

Mingrui Yuan, Zhiyao Duan. "Spoofing Speaker Verification Systems with Deep Multi-speaker Text-to-speech Synthesis," *arXiv preprint*, 2019. (Submitted to ICASSP 2020) [\[pdf\]](#) [\[code\]](#)

Background and Skills

Mathematics Calculus I [4.0/4.0], II [4.0/4.0]; Linear Algebra I [4.0/4.0], II [3.6/4.0]; Probability and Stochastic Processes I [4.0/4.0], II [4.0/4.0] [[Course Project Report](#)].

Professional Courses Signals and Systems [3.6/4.0], Digital Signal Processing [4.0/4.0], Media and Cognition (*Contents: machine learning*) [4.0/4.0], Introduction to Auditory-visual Information System [4.0/4.0].

Programming C, Python, Matlab, Shell. Data Structures and Algorithms[4.0/4.0].

English Proficiency TOEFL[106]. GRE—V[166]+Q[170]+AW[4.0]

Honors and Awards

Academic Excellence Award 2017

Awarded by Dept. of Electronic Engineering

Social Duties Excellence Award 2019

Awarded by Dept. of Electronic Engineering

Extracurricular Activities

Sports Football, badminton, table tennis, tennis

Reading & Writing Chinese traditional poems

Student Association Feb 2018-Present

Associate Chairman, Boarder Caring Association

- ♦ Focus on living condition of boarders in underdeveloped areas of China.