GONG RONG

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EDUCATION

MTG-UPF   *May 2015-Present*
PhD candidate, expected graduation date: September, 2018   *Barcelona, Spain*
Music information retrieval applied to music education

UPMC/IRCAM/TELECOM   *September 2013-September 2014*
Master 2 ATIAM   *Paris, France*
Acoustics, Signal Processing and Computer Science in Musical Applications
Mention: Awarded with honours (Assez bien)
Thesis: Score Following for the Alignment of Singing Voice

Université du Maine   *September 2012-July 2013*
Master 1 in Acoustics and Signal processing   *Le Mans, France*
Acoustics, Signal Processing and Computer Science in Musical Applications
Mention: Awarded with honours (Assez bien) **Rank**: 1/20.
Project: Dimensioning of an elliptical opening on the top plate of the Chinese instrument Pi'pa

Communication University of China   *September 2008-July 2011*
Master in Acoustics, Psychoacoustics and Signal Processing   *Beijing, China*
Thesis: Analysis on Timbre features of the Plucked-string instruments

Northwest University   *September 2004-July 2008*
Bachelor in Applied Mathematics   *Xi'an, China*

SUMMARY OF COMPETENCES

Speech Enhancement
▷ Spectral subtraction (implicit Wiener filter, a priori SNR estimation Wiener filter). ▷ One step prediction Kalman filter. ▷ Noise power estimation by minimum statistics.

Music Signal Processing
▷ Chorus detection. ▷ Melody extraction. ▷ Intonation element segmentation. ▷ Note transcription. ▷ Tempo estimation. ▷ High resolution methods for spectral estimation (MUSIC, ESPRIT).

Computer Music
▷ Filter plug-in programming. ▷ Language LISP. ▷ Constraint programming. ▷ MIDI protocol.

Machine Learning
▷ Deep learning (CNNs, RNNs). ▷ Data clustering (PCA, K-means, Decision tree). ▷ Bayesian inference (HMMs, HSMMs, CRFs).

RESEARCH EXPERIENCES

National Academy of Chinese Theatre Arts (NACTA)   September 2016-Present
Project collaborator-Beijing City Social Science Foundation 16JDYTA016   *Beijing and Barcelona*

· Collect jingju singing material.
· Develop iOS application prototype for a jingju singing course.

MTG-UPF   May 2015-Present
CompMusic project   *Barcelona, Spain*

· Develop algorithms for jingu (Beijing opera) singing self-training system.
· Automatically retrieving Jingju singing features (syllable segmentation, singing phrase identification).

iOS developer   October 2014-May 2015
iOS music application development   *Paris, France*

· Develop the iOS application - Acousticbrainz jukebox for exploring music by emotion.

IRCAM   March 2014-August 2014
Master 2 internship   *Paris, France*

· Improve the performance of the score following system - Antescofo on singing voice.

Université du Maine   March 2013-June 2013
Master 1 project   *Le Mans, France*

· Design the opening on the top plate of the traditional Chinese instrument - Pi'pa to augment its low-frequency performance.

Communication University of China   September 2010-September 2011
Master thesis work   *Beijing, China*

· National Natural Science Foundation of China, NSFC10804100
· Analysis the timbre of traditional Chinese plucked-string instruments by musical features and subjective listening experience

3G Audio   November 2010-January 2011
Master internship   *Dongguan, China*

· Study the impact of membrane materials on the sound quality of loudspeaker

PUBLICATIONS IN CHRONOLOGICAL ORDER

Rong Gong, Rafael Caro Repetto, Xavier Serra
Creating an A Cappella Singing Audio Dataset for Automatic Jingju Singing Evaluation Research
4th International Digital Libraries for Musicology workshop (DLfM 2017), Shanghai, China, October, 2017

Rong Gong, Jordi Pons, Xavier Serra
Matching Audio to Score by Combining Phonetic and Duration Information
International Society for Music Information Retrieval Conference (ISMIR), Suzhou, China, October 2017

Jordi Pons, Rong Gong, Xavier Serra
Score-informed Syllable Onset Detection for A Cappella Singing Voice with Convolutional Neural Networks
International Society for Music Information Retrieval Conference (ISMIR), Suzhou, China, October 2017

Jordi Pons, Olga Slizovskaia, Rong Gong, Xavier Serra
Timbre Analysis of Music Audio Signals with Convolutional Neural Networks
European Signal Processing Conference (EUSIPCO), Kos island, Greece, August 2017

Rong Gong, Nicolas Obin, Georgi Dzhambazov, Xavier Serra
Score-informed Syllable Segmentation for Jingju A Cappella Singing Voice with Mel-frequency Intensity Profiles
Folk Music Analysis (FMA), Málaga, Spain, June 2017

Rong Gong, Yile Yang, Xavier Serra
Pitch Contour Segmentation for Computer-aided Jingju Singing Training
Sound and Music Computing Conference (SMC), Hamburg, Germany, August 2016

Rafael Caro Repetto, Rong Gong, Nadine Kroher, Xavier Serra
Comparison of The Singing Style Of Two Jingju Schools
International Society for Music Information Retrieval Conference (ISMIR), Málaga, Spain, October 2015

Rong Gong, Philippe Cuvillier, Nicolas Obin, Arshia Cont
Real-Time Audio-to-Score Alignment of Singing Voice Based on Melody and Lyric Information
Interspeech, Dresden, Germany, September 2015

Xin Wang, Rong Gong
Consonance of Musical Dyads of Chinese Plucked Instruments
2nd International Conference on Computer Science and Network
Technology, ICCSNT, Changchun, China, 2012

Rong Gong, Zihou Meng
Analysis on Tonal Components of Plucked-String Instruments Tones
National Youth Conference of Acoustical Society of China, CYCA 9th
Guangzhou, China, November 2011

Rong Gong, Zihou Meng
Analysis on Feature Discrimination of Plucked-string Instruments Tones
National Conference on Man-Machine Speech Communication, NCMMSC2011
Xi'an, China, October 2011

LANGUAGES

Mandarin	Mother tongue
English	Diploma CLE B2
French	Diploma TCF B2
Spanish	B1

COMPUTER SKILLS

Programming	Python, Matlab, C++, Objective-C, Swift
Machine learning packages	Keras, Scikit-learn
Music Production	Ableton Live, Cubase