

Yi-Hsuan Yang (楊奕軒)^{1,2}

1 Associate Research Professor
Head of Music and AI Laboratory,
Research Center for Information Technology Innovation (CITI),
Academia Sinica

2 Chief Music Scientist
Taiwan AI Labs

128 Academia Rd., Sec. 2, Nankang District, Taipei 115, Taiwan
TEL: +886-2-2787-2388
<http://www.citi.sinica.edu.tw/pages/yang/>
affige@gmail.com

EXPERTISE

- Music information research; Artificial intelligence; Multimedia; Affective computing; Machine learning

EDUCATION

- Ph.D., Communication Engineering, National Taiwan University, Taiwan 2010
- B.S., Electrical Engineering, National Taiwan University, Taiwan 2006

WORK EXPERIENCES

- **Chief Music Scientist**, Taiwan AI Labs **since 2019/03**
- **Associate Research Professor**, Research Center for IT Innovation, Academia Sinica **since 2015/11**
- Joint-Appointment Associate Professor, CSIE, National Cheng Kung University 2017-2019
- Adjunct Associate Professor, CSIE, National Tsing-Hua University 2016
- **Assistant Research Professor**, Research Center for IT Innovation, Academia Sinica **2011–2015**
- Visiting Scholar (three months), Columbia University, USA 2013
- Visiting Scholar (three months), Music Technology Group, Universitat Pompeu Fabra, Spain 2011
- Second Lieutenant (one year), Communications, Electronics and Information, ROC Army 2010-2011

AWARDS & HONORS

- Multimedia Rising Stars Award, IEEE International Conference on Multimedia Expo. (ICME) 2019
- Best Associate Editor Service Award, IEEE Transactions on Multimedia 2018
- Best Conference Paper Award, IEEE Multimedia Communications Technical Committee (MMTC) 2015
- Best Paper Award, IEEE International Conference on Multimedia Expo. (ICME) 2015
- Young Scholars' Creativity Award, Foundations for the Advancement of Outstanding Scholarship 2015
- Ta-You Wu Memorial Research Award, Ministry of Science and Technology 2014
- Best Poster Award, IEEE/ACM Joint Conference on Digital Libraries 2014

- Project for Excellent Junior Research Investigators, National Science Council 2013–2016
- Career Development Award, Academia Sinica 2013–2017
- Pan Wen Yuan Research Exploration Award 2013
- First Prize, ACM Multimedia Grand Challenge 2012
- IEEE SPS Young Author Best Paper Award, IEEE Signal Processing Society 2011
- Best Ph.D. Dissertation Award, Graduate Institute of Communication Engineering, NTU 2010
- Best Ph.D. Dissertation Award, TAAI (Taiwanese Association for Artificial Intelligence) 2010
- MediaTek Fellowship 2009
- Microsoft Research Asia (MSRA) Fellowship 2008

SELECTED RECENT PUBLICATIONS

- “Compound Word Transformer: Learning to compose full-song music over dynamic directed hypergraphs,” *AAAI* 2021.
- “Pop Music Transformer: Beat-based modeling and generation of expressive Pop piano compositions,” *ACM MM* 2020.
- “Dilated convolution with dilated GRU for music source separation,” *IJCAI* 2019.
- “Musical composition style transfer via disentangled timbre representations,” *IJCAI* 2019.
- “Score-to-audio music generation with multi-band convolutional residual network,” *AAAI* 2019.
- “Learning to recognize transient sound events using attentional supervision,” *IJCAI* 2018.
- “MuseGAN: Multi-track sequential GAN for symbolic music generation and accompaniment,” *AAAI* 2018.
- “Generating music medleys via playing music puzzle games,” *AAAI* 2018
- “MidiNet: A convolutional GAN for symbolic-domain music generation,” *ISMIR* 2017
- *Music Emotion Recognition*, CRC Taylor & Francis Books, Feb. 2011.

ACADEMIC SERVICES

- **Associate Editor** of
 - IEEE Transactions on Multimedia 2016/9-2019/2
 - IEEE Transactions on Affective Computing 2016/11-2019/2
- **IEEE Senior Member** since 2017
- **Program Chair** of
 - Int. Society for Music Information Retrieval Conference (ISMIR) 2014
- **Guest Editor** of
 - ACM Transactions on Intelligent Systems and Technology 2015
 - IEEE Transactions on Affective Computing 2014
- **10K Award Committee Member** of
 - IEEE International Conference on Multimedia and Expo. (ICME) 2016–2018
- **Tutorial Chair** of
 - Int. Society for Music Information Retrieval Conference (ISMIR) 2021

- **Unconference Chair of**

Int. Society for Music Information Retrieval Conference (ISMIR) 2017

- **External PhD thesis committee member of**

Hong Kong University of Science and Technology 2015

- **Senior PC Member (Meta-reviewer) of**

AAAI 2022, ISMIR 2021, ...

- **Organizer of**

Int. Workshop on Affect and Sentiment in Multimedia, in conjunction with ACM MM 2015

MediaEval Affect Task: Music in Emotion 2013–2015

MIREX Singing Voice Separation Task 2014–2015

Int. Workshop on Affective Analysis in Multimedia, in conjunction with IEEE ICME 2013

Taiwanese Workshop on Music Information Retrieval 2012–2014

PROJECTS (that serve as the PI, not co-PI)

- Open DJ Project (II): Automatic EDM Generation MOST 2020-2022
- GenMusic Project: Industrial AI-Powered Music Composition Platform MOST 2018-2020
- Open DJ Project: AI for Automatic and Personalized DJing MOST 2018-2020
- User-centered Intelligent Music Streaming and Recommendation Platform (III) KKBOX Inc., 2017-2019
- User-centered Intelligent Music Streaming and Recommendation Platform (II) KKBOX Inc., 2015-2017
- User-centered Intelligent Music Streaming and Recommendation Platform KKBOX Inc., 2013-2015
- User Preference Modeling from Listening History & Artist Similarity KKBOX Inc., 2012-2013
- Music Recommendation based on Listening Context HTC Inc., 2012
- Dictionary-based Music Signal Analysis, Understanding, and Retrieval Academia Sinica, 2013-2017
- Mobile Music Recommendation using Brain-Computer Interfaces MOST 2015-2018
- Automatic Music Recommendation and Retrieval MOST 2013-2016
- Dictionary-based Multipitch Estimation of Polyphonic Music NSC 2012-2013
- Large-scale Music Emotion Recognition System using Social Media NSC 2011-2012

TUTORIALS

- Hao-Wen Dong and **Yi-Hsuan Yang**, “Generating Music with GANs: An Overview and Case Studies,” *Int. Society for Music Information Retrieval Conference (ISMIR)*, 2019 ([link](#)).
- Xiao Hu and **Yi-Hsuan Yang**, “Music Affect Recognition: The State-of-the-art and Lessons Learned,” *Int. Society for Music Information Retrieval Conference (ISMIR)*, 2012.

PUBLICATIONS (including number of citations indicated in Google Scholar [link](#))

Total citations: 5997; citations of most-cited paper: 503; h-index: 40; i10-index: 116

- **Book**

[1] Y.-H. Yang and H. H. Chen, *Music Emotion Recognition*, CRC Taylor & Francis Books, Feb. 2011.

• Proceedings (Edited)

[2] Meinard Müller, Emilia Gómez, and Yi-Hsuan Yang, "Computational methods for melody and voice processing in music recordings," Report from Dagstuhl Seminar 19052, 2019.

[3] Hsin-Min Wang, Yi-Hsuan Yang, and Jin Ha Lee, International Society for Music Information Retrieval Conference, Proceedings, ISMIR, Taipei, Taiwan, 2014.

• Journal Papers

[4] Juan Sebastián Gomez-Cañón, Estefanía Cano, Tuomas Eerola, Perfecto Herrera, Xiao Hu, Yi-Hsuan Yang, and Emilia Gómez, "Music Emotion Recognition: Towards new robust standards in personalized and context-sensitive applications," *IEEE Signal Processing Magazine*, accepted for publication

[5] Ching-Yu Chiu, Alvin Wen-Yu Su, and Yi-Hsuan Yang, "Drum-aware ensemble architecture for improved joint musical beat and downbeat tracking," *IEEE Signal Processing Letters (SPL)*, vol. 28, pp. 1100-1104, May 2021.

[6] Yin-Cheng Yeh, Wen-Yi Hsiao, Satoru Fukayama, Tetsuro Kitahara, Benjamin Genchel, Hao-Min Liu, Hao-Wen Dong, Yian Chen, Terence Leong, and Yi-Hsuan Yang, "Automatic melody harmonization with triad chords: A comparative study," *Journal of New Music Research*, vol. 50, no. 1, pp. 37-51, 2021.

[7] E. Zangerle, C.-M. Chen, M.-F. Tsai and Y.-H. Yang, "Leveraging affective hashtags for ranking music recommendations," *IEEE Transactions on Affective Computing (TAC)*, vol. 12, no. 1, pp. 78-91, 2021.

[8] Zhe-Cheng Fan, Tak-Shing T. Chan, Yi-Hsuan Yang, and Jyh-Shing R. Jang, "Backpropagation with N -D vector-valued neurons using arbitrary bilinear products," *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, vol. 31, no. 7, pp. 2638-2652, 2020.

[9] T.-W. Su, Y.-P. Chen, L. Su, and Y.-H. Yang, "TENT: Technique-embedded note tracking for real-world guitar solo recordings," *Transactions of the International Society for Music Information Retrieval (TISMIR)*, vol. 2, no. 1, pp. 15-28, 2019.

[10] S.-Y. Chou, J.-S. R. Jang, and Y.-H. Yang, "Fast tensor factorization for large-scale context-aware recommendation from implicit feedback," *IEEE Trans. Big Data (TBD)*, vol. 6, no. 1, pp. 201-208, Mar. 2020.

[11] J.-Y. Liu, Y.-H. Yang, and S.-K. Jeng, "Weakly-supervised visual instrument-playing action detection in videos," *IEEE Transactions on Multimedia (TMM)*, vol. 21, no. 4, pp. 887-901, Apr. 2019.

[12] J. Nam, K. Choi, J. Lee, S.-Y. Chou, and Y.-H. Yang, "Deep learning for audio-based music classification and tagging," *IEEE Signal Processing Magazine (SPM)*, vol. 36, no. 1, pp. 41-51, Jan. 2019.

[13] J.-C. Lin, W.-L. Wei, T.-L. Liu, Y.-H. Yang, H.-M. Wang, H.-R. Tyan, and H.-Y. M. Liao, "Coherent deep-net fusion to classify shots in concert videos," *IEEE Transactions on Multimedia (TMM)*, vol. 20, no. 11, pp. 3123-3136, Nov. 2018.

[14] Y.-H. Chin, J.-C. Wang, J.-C. Wang and Y.-H. Yang, "Predicting the probability density function of music emotion using emotion space mapping," *IEEE Transactions on Affective Computing (TAC)*, vol. 9, no. 4, pp. 541-549, Oct.-Dec. 2018.

[15] Y.-S. Huang, S.-Y. Chou, and Y.-H. Yang, "Pop music highlighter: Marking the emotion keypoints,"

Transactions of the International Society for Music Information Retrieval (TISMIR), vol. 1, no. 1, pp. 68-78, Sep. 2018.

- [16] Y.-P. Lin, P.-K. Jao, and Y.-H. Yang, "Improving cross-day EEG-based emotion classification using robust principal component analysis," *Frontiers in Computational Neuroscience*, Jul. 2017.
- [17] A. Aljanaki, Y.-H. Yang, and M. Soleymani, "Developing a benchmark for emotional analysis of music," *PLOS ONE*, vol. 12, no. 3, e0173392.doi:10.1371/journal.pone.0173392, Mar. 2017.
- [18] X. Hu and Y.-H. Yang, "The mood of Chinese pop music: Representation and recognition," *Journal of the Association for Information Science and Technology (JAIST)*, doi:10.1002/asi.23813, Jun. 2017.
- [19] Y.-A. Chen, J.-C. Wang, Y.-H. Yang, H. H. Chen, "Component tying for mixture model adaptation in personalization of music emotion recognition," *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, vol. 25, no. 7, pp. 1409-1420, Jul. 2017. [cover page of the issue]
- [20] X. Hu and Y.-H. Yang, "Cross-dataset and cross-cultural music mood prediction: A case on Western and Chinese pop songs," *IEEE Transactions on Affective Computing (TAC)*, vol. 8, no. 2, pp. 228-240, Apr. 2017.
- [21] T.-S. Chan and Y.-H. Yang, "Informed group-sparse representation for singing voice separation," *IEEE Signal Processing Letters (SPL)*, vol. 24, no. 2, pp. 156-160, Feb. 2017.
- [22] T.-S. Chan and Y.-H. Yang, "Polar n -complex and n -bicomplex singular value decomposition and principal component pursuit," *IEEE Transactions on Signal Processing (TSP)*, vol. 64, no. 24, pp. 6533-6544, Dec. 2016.
- [23] M. Schedl, Y.-H. Yang, and P. Herrera, "Introduction to intelligent music systems and applications," *ACM Transactions on Intelligent Systems and Technology (TIST)*, vol. 8, no. 2, article 17, Oct. 2016.
- [24] P.-K. Jao, L. Su, Y.-H. Yang and B. Wohlberg, "Monaural music source separation using convolutional sparse coding," *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, vol. 24, no. 11, pp. 2158-2170, Nov. 2016.
- [25] T.-S. Chan and Y.-H. Yang, "Complex and quaternionic principal component pursuit and its application to audio separation," *IEEE Signal Processing Letters (SPL)*, vol. 23, no. 2, pp. 287-291, Feb. 2016.
- [26] C.-Y. Liang, L. Su and Y.-H. Yang, "Musical onset detection using constrained linear reconstruction," *IEEE Signal Processing Letters (SPL)*, vol. 22, no. 11, pp. 2142-2146, Nov. 2015.
- [27] L. Su and Y.-H. Yang, "Combining spectral and temporal representations for multipitch estimation of polyphonic music," *IEEE/ACM Transactions on Audio, Speech, and Language Processing (TASLP)*, vol. 23, no. 10, pp. 1600-1612, Oct. 2015.
- [28] P.-K. Jao and Y.-H. Yang, "Music annotation and retrieval using unlabeled exemplars: correlation and sparse codes," *IEEE Signal Processing Letters (SPL)*, vol. 22, no. 10, pp. 1771-1775, Oct. 2015.
- [29] Y.-H. Yang and Y.-C. Teng, "Quantitative study of music listening behavior in a smartphone context," *ACM Transactions on Interactive Intelligent Systems (TiiS)*, vol. 5, no. 3, article 14, Aug. 2015.
- [30] M. Soleymani, Y.-H. Yang, G. Irie, and A. Hanjalic, "Challenges and perspectives for affective analysis in multimedia," *IEEE Transactions on Affective Computing (TAC)*, vol. 6, no. 3, pp. 206-208, 2015.
- [31] J.-C. Wang, Y.-H. Yang, H.-M. Wang, and S.-K. Jeng, "Modeling the affective content of music with a Gaussian mixture model," *IEEE Transactions on Affective Computing (TAC)*, vol. 6, no. 1, pp. 56-68, Feb. 2015.
- [32] L. Su, H.-M. Lin, and Y.-H. Yang, "Sparse modeling of magnitude and phase-derived spectra for

- playing technique classification,” *IEEE Transactions on Audio, Speech, and Language Processing* (TASLP), vol. 22, no. 12, pp. 2122-2132, Dec. 2014.
- [33] L. Su, C.-C. Yeh, J.-Y. Liu, J.-C. Wang, and Y.-H. Yang, “A systematic evaluation of the bag-of-frames representation for music information retrieval,” *IEEE Transactions on Multimedia* (TMM), vol. 16, no. 5, pp. 1188-1200, Aug. 2014.
- [34] Y.-P. Lin, Y.-H. Yang, and T.-P. Jung, “Fusion of Electroencephalogram dynamics and musical contents for estimating emotional responses in music listening,” *Frontiers in Neuroscience*, vol. 8, no. 94, pp. 1-14, May 2014.
- [35] Y.-H. Yang and J.-Y. Liu, “Quantitative study of music listening behavior in a social and affective context,” *IEEE Transactions on Multimedia* (TMM), vol. 15, no. 6, pp. 1304-1315, Oct. 2013.
- [36] K.-S. Lin, A. Lee, Y.-H. Yang, C.-T. Lee, and H. H. Chen, “Automatic highlights extraction for drama video using music emotion and human face features,” *Neurocomputing*, vol. 119, pp. 111–117, Nov. 2013.
- [37] C.-T. Lee, Y.-H. Yang and H. H. Chen, “Multipitch estimation of piano music by exemplar-based sparse representation,” *IEEE Transactions on Multimedia* (TMM), vol. 14, no. 3, pp. 608–618, Jun. 2012.
- [38] Y.-H. Yang and H. H. Chen, “Machine recognition of music emotion: a review,” *ACM Transactions on Intelligent Systems and Technology* (TIST), vol. 3, no. 3, article 40, May 2012.
- [39] Y.-C. Lin, Y.-H. Yang, and H. H. Chen, “Exploiting online tags for music emotion classification,” *ACM Transactions on Multimedia Computing, Communications, and Applications* (TOMCCAP), vol. 7s, no. 1, article 26, Oct. 2011.
- [40] Y.-H. Yang and H. H. Chen, “Prediction of the distribution of perceived music emotions using discrete samples,” *IEEE Transactions on Audio, Speech, and Language Processing* (TASLP), vol. 19, no. 7, pp. 2184 -2196, Sep. 2011.
- [41] Y.-H. Yang and H. H. Chen, “Ranking-based emotion recognition for music organization and retrieval,” *IEEE Transactions on Audio, Speech, and Language Processing* (TASLP), vol. 19, no. 4, pp. 762-774, May 2011.
- [42] Y.-F. Su, Y.-H. Yang, M.-T. Lu, and H. H. Chen, “Smooth control of adaptive media playout for video streaming,” *IEEE Transactions on Multimedia* (TMM), vol. 11, no. 7, pp. 1331–1339, Nov. 2009.
- [43] Y.-H. Yang, W.-H. Hsu, and H. H. Chen, “Online reranking via ordinal informative concepts for context fusion in concept detection and video search,” *IEEE Transactions on Circuits and Systems for Video Technology* (TCSVT), vol. 19, no. 12, pp. 1880–1890, Dec. 2009.
- [44] Y.-H. Yang, Y.-C. Lin, Y.-F. Su, and H. H. Chen, “A regression approach to music emotion recognition,” *IEEE Transactions on Audio, Speech, and Language Processing* (TASLP), vol. 16, no. 2, pp. 448–457, Feb. 2008.

• Conference Papers

- [45] Fu-Rong Yang, Yin-Ping Cho, Da-Yi Wu, Yi-Hsuan Yang, Shan-Hung Wu, and Yi-Wen Liu, “Mandarin singing voice synthesis with a phonology-based duration model,” in *Proc. Asia Pacific Signal and Information Processing Association Annual Summit and Conf. (APSIPA ASC)*, 2021.
- [46] Chin-Jui Chang, Chun-Yi Lee, and Yi-Hsuan Yang, “Variable-length music score infilling via XLNet and musically specialized positional encoding,” in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2021.

- [47] Tun-Min Hung, Bo-Yu Chen, Yen-Tung Yeh, and Yi-Hsuan Yang, "A benchmarking initiative for audio-domain music generation using the FreeSound Loop Dataset," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2021.
- [48] Hsiao-Tzu Hung, Joann Ching, Seungheon Doh, Nabin Kim, Juhan Nam and Yi-Hsuan Yang, "EMOPIA: A multi-modal pop piano dataset for emotion recognition and emotion-based music generation," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2021.
- [49] Juan Gómez-Cañón, Estefania Cano, Yi-Hsuan Yang, Perfecto Herrera, and Emilia Gomez, "Let's agree to disagree: Consensus entropy active learning for personalized music emotion recognition," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2021.
- [50] Pedro Sarmiento, Adarsh Kumar, C. J. Carr, Zack Zukowski, Mathieu Barthelet, and Yi-Hsuan Yang, "DadaGP: A dataset of tokenized GuitarPro songs for sequence models," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2021.
- [51] Antoine Liutkus, Ondřej Cífka, Shih-Lun Wu, Umut Simsekli, Yi-Hsuan Yang, and Gael Richard, "Relative positional encoding for Transformers with linear complexity," in *Proc. International Conference on Machine Learning (ICML)*, 2021.
- [52] Ching-Yu Chiu, Joann Ching, Wen-Yi Hsiao, Yu-Hua Chen, Alvin Wen-Yu Su, Yi-Hsuan Yang, "Source separation-based data augmentation for improved joint beat and downbeat tracking," in *Proc. European Signal Processing Conference (EUSIPCO)*, 2021.
- [53] Taejun Kim, Yi-Hsuan Yang, and Juhan Nam, "Reverse-engineering the transition regions of real-world DJ mixes using sub-band analysis with convex optimization," in *Proc. International Conference on New Interface for Musical Expression (NIME)*, 2021.
- [54] Wen-Yi Hsiao, Jen-Yu Liu, Yin-Cheng Yeh, and Yi-Hsuan Yang, "Compound Word Transformer: Learning to compose full-song music over dynamic directed hypergraphs," in *Proc. AAAI Conf. Artificial Intelligence (AAAI)*, 2021 (acceptance rate 21%).
- [55] Joann Ching, Antonio Ramires, and Yi-Hsuan Yang, "Instrument role classification: Auto-tagging for loop based music," in *Proc. Joint Conference on AI Music Creativity*, 2020.
- [56] Yu-Hua Chen, Yu-Siang Huang, Wen-Yi Hsiao, and Yi-Hsuan Yang, "Automatic composition of guitar tabs by Transformers and groove modeling," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2020.
- [57] Shih-Lun Wu and Yi-Hsuan Yang, "The Jazz Transformer on the front line: Exploring the shortcomings of AI-composed music through quantitative measures," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2020.
- [58] Bo-Yu Chen, Jordan Smith, and Yi-Hsuan Yang, "Neural loop combiner: Neural network models for assessing the compatibility of loops," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2020.
- [59] Taejun Kim, Minsuk Choi, Evan Sacks, Yi-Hsuan Yang, and Juhan Nam, "A computational analysis of real-world DJ mixes using mix-to-track subsequence alignment," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2020.
- [60] Antonio Ramires, Frederic Font, Dmitry Bogdanov, Jordan Smith, Yi-Hsuan Yang, Joann Ching, Bo-Yu Chen, Yueh-Kao Wu, Hsu Wei-Han, and Xavier Serra, "The Freesound Loop Dataset and annotation tool," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2020.
- [61] Jen-Yu Liu, Yu-Hua Chen, Yin-Cheng Yeh and Yi-Hsuan Yang, "Unconditional audio generation with

- generative adversarial networks and cycle regularization,” in *Proc. INTERSPEECH*, 2020.
- [62] Da-Yi Wu and Yi-Hsuan Yang, “Speech-to-singing conversion based on boundary equilibrium GAN,” in *Proc. INTERSPEECH*, 2020.
- [63] Ching-Yu Chiu, Wen-Yi Hsiao, Yin-Cheng Yeh, Yi-Hsuan Yang, and Alvin W. Y. Su, “Mixing-specific data augmentation techniques for improved blind violin/piano source separation,” in *Proc. IEEE Int. Workshop on Multimedia Signal Processing (MMSP)*, 2020.
- [64] Yu-Siang Huang and Yi-Hsuan Yang, “Pop Music Transformer: Beat-based modeling and generation of expressive Pop piano compositions,” in *Proc. ACM Int. Conf. Multimedia (MM)*, 2020.
- [65] Jen-Yu Liu, Yu-Hua Chen, Yin-Cheng Yeh, and Yi-Hsuan Yang, “Score and lyrics-free singing voice generation,” in *Proc. Int. Conf. Computational Creativity (ICCC)*, 2020.
- [66] Tsung-Han Hsieh, Kai-Hsiang Cheng, Zhe-Cheng Fan, Yu-Ching Yang, Yi-Hsuan Yang, “Addressing the confounds of accompaniments in singer identification,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2020.
- [67] Jayneel Parekh, Preeti Rao, Yi-Hsuan Yang, “Speech-to-singing conversion in an encoder-decoder framework,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2020.
- [68] Jianyu Fan, Yi-Hsuan Yang, Kui Dong, Philippe Pasquier, “A comparative study of Western and Chinese classical music based on soundscape models,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2020.
- [69] Hsiao-Tzu Hung, Chung-Yang Wang, Yi-Hsuan Yang, Hsin-Min Wang, “Improving automatic Jazz melody generation by transfer learning techniques,” in *Proc. Asia Pacific Signal and Information Processing Association Annual Summit and Conf. (APSIPA ASC)*, 2019.
- [70] Eva Zangerle, Michael Vötter, Ramona Huber and Yi-Hsuan Yang, “Hit song prediction: Leveraging low- and high-level audio features,” in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2019.
- [71] Kai-Hsiang Cheng, Szu-Yu Chou, and Yi-Hsuan Yang, “Multi-label few-shot learning for sound event recognition,” in *Proc. IEEE Int. Workshop on Multimedia Signal Processing (MMSP)*, 2019.
- [72] Frederic Tamagnan and Yi-Hsuan Yang, “Drum fills detection and generation,” in *Proc. Int. Symp. Computer Music Multidisciplinary Research (CMMR)*, 2019.
- [73] Jen-Yu Liu and Yi-Hsuan Yang, “Dilated convolution with dilated GRU for music source separation,” in *Proc. Int. Joint Conf. Artificial Intelligence (IJCAI)*, 2019.
- [74] Yun-Ning Hung, I-Tung Chiang, Yi-An Chen, Yi-Hsuan Yang, “Musical composition style transfer via disentangled timbre representations,” in *Proc. Int. Joint Conf. Artificial Intelligence (IJCAI)*, 2019.
- [75] Zhe-Cheng Fan, Tak-Shing Chan, Yi-Hsuan Yang and Jyh-Shing Jang, “Deep cyclic group networks,” in *Proc. Int. Joint Conf. Neural Networks (IJCNN)*, 2019.
- [76] Yun-Ning Hung, Yian Chen and Yi-Hsuan Yang, “Multitask learning for frame-level instrument recognition,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2019.
- [77] Tsung-Han Hsieh, Li Su, and Yi-Hsuan Yang, “A streamlined encoder/decoder architecture for melody extraction,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2019.
- [78] Szu-Yu Chou, Kai-Hsiang Cheng, Jyh-Shing Roger Jang, and Yi-Hsuan Yang, “Learning to match transient sound events using attentional similarity for few-shot sound recognition,” in *Proc. IEEE Int. Conf. Acoustics, Speech and Signal Processing (ICASSP)*, 2019.

- [79] Chih-Ming Chen, Chuan-Ju Wang, Ming-Feng Tsai and Yi-Hsuan Yang, "Collaborative similarity embedding for recommender systems," in *Proc. the Web Conference (WWW)*, 2019, short paper (acceptance rate 20%).
- [80] Vibert Thio, Hao-Min Liu, Yin-Cheng Yeh, and Yi-Hsuan Yang, "A minimal template for interactive web-based demonstrations of musical machine learning," in *Proc. Workshop on Intelligent Music Interfaces for Listening and Creation (MILC)*, 2019.
- [81] Bryan Wang and Yi-Hsuan Yang, "PerformanceNet: Score-to-audio music generation with multi-band convolutional residual network," in *Proc. AAAI Conf. Artificial Intelligence (AAAI)*, 2019 (acceptance rate 16%).
- [82] Jen-Yu Liu and Yi-Hsuan Yang, "Denoising auto-encoder with recurrent skip connections and residual regression for music source separation," in *Proc. IEEE Int. Conf. Machine Learning and Applications (ICMLA)*, 2018.
- [83] Hao-Ming Liu and Yi-Hsuan Yang, "Lead sheet generation and arrangement by conditional generative adversarial network," in *Proc. IEEE Int. Conf. Machine Learning and Applications (ICMLA)*, 2018.
- [84] Yi-Wen Chen, Yi-Hsuan Yang, and Homer H. Chen, "Cross-cultural music emotion recognition by adversarial discriminative domain adaptation," in *Proc. IEEE Int. Conf. Machine Learning and Applications (ICMLA)*, 2018.
- [85] Chia-An Yu, Ching-Lun Tai, Tak-Shing Chan and Yi-Hsuan Yang, "Modeling multi-way relations with hypergraph embedding," in *Proc. ACM Int. Conf. Information and Knowledge Management (CIKM)*, 2018.
- [86] Hao-Wen Dong and Yi-Hsuan Yang, "Convolutional generative adversarial networks with binary neurons for polyphonic music generation," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2018.
- [87] Yun-Ning Hung and Yi-Hsuan Yang, "Frame-level instrument recognition by timbre and pitch," in *Proc. Int. Society for Music Information Retrieval Conf. (ISMIR)*, 2018.
- [88] Szu-Yu Chou, Jyh-Shing Roger Jang, and Yi-Hsuan Yang, "Learning to recognize transient sound events using attentional supervision," in *Proc. Int. Joint Conf. Artificial Intelligence (IJCAI)*, 2018.
- [89] C.-W. Wu, J.-Y. Liu, Y.-H. Yang, J.-S. R. Jang, "Singing style transfer using cycle-consistent boundary equilibrium generative adversarial networks," in *Proc. Joint Workshop on Machine Learning for Music*, extended abstract, 2018.
- [90] A. Poddar, E. Zangerle, and Y.-H. Yang, "#nowplaying-RS: A new benchmark dataset for building context-aware music recommender systems," in *Proc. Sound and Music Computing Conf. (SMC)*, 2018.
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