Minje Kim

700 N. Woodlawn Ave., Luddy Hall Rm 4140, Bloomington, IN 47408 http://minjekim.com http://saige.sice.indiana.edu minje.kim@gmail.com

+1 (812) 856-3675

1. POSITIONS HELD

Indiana University, Bloomington, IN

Aug. 2016 - present - Assistant Professor

School of Informatics, Computing, and Engineering

+ Department of Intelligent Systems Engineering (home department)

+ Data Science Program

Adobe Research, San Francisco, CA

Summers in 2012 — 2015 Research Intern

Creative Technologies Lab

University of Illinois at Urbana-Champaign

- Research Assistant Fall 2011 — Spring 2015 (except for Fall 2014) Department of Computer Science

Teaching Assistant Fall 2014, Fall 2015, Spring 2016

Department of Computer Science

ETRI (A National Lab in Korea), Daejeon, Korea

Feb. 2006 — Jun 2011 - Researcher

Audio Research Team

POSTECH, Pohang, Korea

Spring 2004 — Fall 2005 - Research Assistant (except for Fall 2004)

Department of Computer Science and Engineering Fall 2004 Teaching Assistant

Department of Computer Science and Engineering

2. EDUCATION

Ph.D. in Computer Science

May. 2016

⁻ University of Illinois at Urbana-Champaign

Committee: Paris Smaragdis (Advisor), Rob A. Rutenbar, Mark Hasegawa-Johnson, Gautham Mysore

Dissertation: "Audio Computing in the Wild: Frameworks for Big Data and Small Computers"

M.S. in Computer Science and Engineering, Summa Cum Laude

Feb. 2006

- POSTECH, Pohang, Korea
- Advisor: Seungjin Choi
- Thesis: "Monaural Music Source Separation: Nonnegativity, Sparseness, and Shift-Invariance"

B.E. in Information and Computer Engineering, Honor

Feb. 2004

- Ajou University, Suwon, Korea

3. RESEARCH FUNDING

Intel Corporation (\$180K)

Jan. 2017 — Dec. 2018

- Title: "Bitwise Deep Recurrent Neural Networks for Efficient Context-Aware Pervasive Systems"
- Principal Investigator

Korean Ministry of Science, ICT and Future Planning (\$1.75M in total; my portion is \$330K)

Jan. 2017 — Dec. 2021

- Title: "Research on Audio Signal Analysis/Synthesis Technology Based on Machine Learning"
- Principal Investigator
- In collaboration with ETRI

Synaptics Inc. (\$75K)

Aug. 2017 — Aug. 2018

- Title: "To Tackle Heterogeneity in Real-World Audio Processing Tasks by Using Collaborative Machine Learning Models"
- Principal Investigator

4. HONORS, AWARDS & FELLOWSHIPS

Outstanding Teaching Assistant

Fall 2015

Dept. of Computer Science, UIUC, for the class "Machine Learning for Signal Processing (CS598PS)"

Finalist for the Best Student Papers on Audio Signal Processing

Jul. 2015

For the paper published in LVA/ICA 2015 [C023]

Qualcomm Innovation Fellowship 2015 Finalist

Dec. 2014

- 35 finalists out of 146 submitted proposals from 18 participating universities

Starkey Signal Processing Research Student Grant

Apr. 2014

For the paper published in ICASSP 2014 [C017]

Intel PhD Fellowship Finalist

Feb. 2014

- One of six nominees to represent the University of Illinois in the national competition

Microsoft Research PhD Fellowship Nominee

Oct. 2013

- Selected as one of three applicants to represent the Dept. of Computer Science in the University of Illinois

Google ICASSP Student Travel Grant and AASP Best Student Paper

Jun. 2013

For the paper published in ICASSP 2013 [C012]

Richard T. Cheng Endowed Fellowship

Aug. 2011 — Jul. 2012

As an exceptional incoming student, Dept. of Computer Science, UIUC (\$9,999)

Summa Cum Laude

Feb. 2006

- POSTECH

Graduate with Honor

Feb. 2004

- Ajou University

Full Scholarship for the four years of the undergraduate study

Mar. 2000 — Feb. 2004

As the departmental top-scored student in the university entrance exam

5. TEACHING

Teaching Courses

- "Deep Learning Systems" (ENGR-E 533, ISE IUB), Spring 2018
- "Machine Learning for Signal Processing" (ENGR-E 599, ISE IUB), Fall 2017
- "Machine Learning for Signal Processing" (ENGR-E 599, ISE IUB), Spring 2017

Teaching Assistant

- "Probability in Computer Science (CS361)," Dept. of Computer Science, UIUC, Spring 2016
- "Machine Learning for Signal Processing (CS598PS, CS598PSO)," Dept. of Computer Science, UIUC, Fall 2015 [Outstanding Teaching Assistant Award]
- "Machine Learning for Signal Processing (CS598PS)," Dept. of Computer Science, UIUC, Fall 2014
- "Automata and Formal Languages," POSTECH, Fall 2004

6. ADVISING

PhD Advisees

PhD Candidates

- Sanna Wager (Informatics at IUB)
- Mrinmoy Maity (CS at IUB)

PhD Students

- Lijiang Guo (ISE at IUB)
- Kai Zhen (CS at IUB)
- Sun Woo Kim (CS at IUB)
- Aswin Sivaraman (ISE at IUB)

PhD Dissertation Committee Member

- Jerome Mitchell (CS at IUB)
- Liang Chen (Informatics at IUB)
- Supun Kamburugamuve (CS at IUB)
- Yucong Jiang (Informatics at IUB)
- Lei Le (CS at IUB)

PhD Advisory Committee Member (Before the Qualifying Exam)

- Xuan Dong (CS at IUB)
- Tyler Balson (ISE at IUB)
- Pulasthi Supun Wickramasinghe (CS at IUB)
- Vibhatha Abeykoon (ISE at IUB)

Independent Study

- Aswin Sivaraman (ISE at IUB): "Psychoacoustic Models and Neural Networks," Fall 2017
- Lijiang Guo (ISE at IUB): "Bitwise Source Separation," Fall 2017
- Sun Woo Kim (CS at IUB): "End-to-end models," Fall 2017
- Mrinmoy Maity (CS at IUB): "Efficient Hashing," Fall 2017
- Kai Zhen (CS at IUB): "Psychoacoustic Models and Neural Networks," Fall 2017
- Brahmendra Sravan Kumar Patibandla (Data Science at IUB): "LSTM autoencoders," Summer 2017
- Vibhatha Abeykoon (ISE at IUB): "Denoising autoencoders," Spring 2017
- Sanna Wager (Informatics at IUB): "Dereverberation in the multi-channel environment," Spring 2017
- Sanna Wager (Informatics at IUB): "Concatenative Sound Synthesis," Fall 2016
- ⁻ Mrinmoy Maity (CS at IUB): "Bitwise Recurrent Neural Networks," Fall 2016, Spring 2017
- Lijiang Guo (ISE at IUB): "Hashing-based fully bitwise source separation," Spring 2017
- Lijiang Guo (ISE at IUB): "Deep Learning and Parallel Computing," Fall 2016
- Zhaozhi Zhang (ISE at IUB): Coursework advisor, Fall 2016

Mentoring Undergraduate Thesis Research at UIUC

- Aswin Sivaraman: "Quantization Error Tolerance in Hashed Audio Spectra," Fall 2014 Spring 2015
- Vinay Maddali: "Multichannel Audio Source Separation Using Probabilistic Latent Component Sharing,"
 Fall 2012 Spring 2013
- Igor Fedorov: "Timbre Exchange Among Speakers Using Source-Filter Model," Fall 2011 Spring 2012

7. PROFESSIONAL ACTIVITIES

Technical Committee

IEEE Audio and Acoustic Signal Processing Technical Committee; Member (2018-2020, elected)

Conference Session (Co-)Chair

(Co-chair) IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), "AASP-L3:
 Deep Learning for Source Separation and Enhancement I"

Journal Reviewer

- IEEE/ACM Transactions on Audio, Speech, and Language Processing
- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transactions on Signal Processing
- IEEE Signal Processing Letters
- The Journal of the Acoustical Society of America (JASA)
- Elsevier Neurocomputing
- Elsevier Signal Processing
- Elsevier Speech Communication

Conference Reviewer and PC Member

- Neural Information Processing Systems (NIPS)
- International Conference on Machine Learning (ICML)
- ⁻ International Joint Conference on Artificial Intelligence (IJCAI)
- Association for Advances in Artificial Intelligence (AAAI) Conferences on Artificial Intelligence
- ⁻ IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)
- IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)
- Asian Conference on Machine Learning (ACML)
- The International Society for Music Information Retrieval Conference (ISMIR)
- ⁻ European Signal Processing Conference (EUSIPCO)
- International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA)
- Digital Audio Effects (DAFx)
- Joint Conference of Workshops on Statistical and Perceptual Audition and Speech Communication with Adaptive Learning (SAPA-SCALE)
- IEEE Global Conference on Signal and Information Processing (GlobalSIP)

Member of IEEE and IEEE Signal Processing Society

- Since 2012

8. PUBLICATION

International Journal Articles

- [J005] Hongwei Wang, Yunlong Gao, Shaohan Hu, Shiguang Wang, Renato Mancuso, *Minje Kim*, Poliang Wu, Lu Su, Lui Sha, and Tarek Abdelzaher, "On Exploiting Structured Human Interactions to Enhance Sensing Accuracy in Cyber-physical Systems," *ACM Transactions on Cyber-Physical Systems*, vol. 1, no. 3, article 16, pp. 16:1-16:19, Jul. 2017.
- [J004] Po-Sen Huang, Minje Kim, Mark Hasegawa-Johnson, and Paris Smaragdis, "Joint Optimization of Masks and Deep Recurrent Neural Networks for Monaural Source Separation," IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 23, no. 12, pp. 2136-2147, Dec. 2015.
- [J003] *Minje Kim* and Paris Smaragdis, "Mixtures of Local Dictionaries for Unsupervised Speech Enhancement," *IEEE Signal Processing Letters*, vol. 22, no. 3, pp. 288-292, Mar. 2015 (Also presented in ICASSP 2015).
- [J002] *Minje Kim,* Jiho Yoo, Kyeongok Kang and Seungjin Choi, "Nonnegative Matrix Partial Co-Factorization for Spectral and Temporal Drum Source Separation," *IEEE Journal of Selected Topics in Signal Processing*, vol. 5, no. 6, pp. 1192-1204, Oct. 2011.
- [J001] Seungkwon Beack, Taejin Lee, Minje Kim, and Kyeongok Kang, "An Efficient Time-Frequency Representation for Parametric-Based Audio Object Coding," ETRI Journal, vol. 33, no. 6, pp. 945-948, Dec. 2011.

Refereed International Conference Proceedings

- [C029] Lijiang Guo and Minje Kim, "Bitwise Source Separation on Hashed Spectra: An Efficient Posterior Estimation Scheme Using Partial Rank Order Metrics," in Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Calgary, Canada, April 15-20, 2018. (accepted)
- [C028] *Minje Kim* and Paris Smaragdis, "Bitwise Neural Networks for Efficient Single-Channel Source Separation," in Proc. *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Calgary, Canada, April 15-20, 2018. (accepted)
- [C027] Lei Jiang, Minje Kim, Wujie Wen and Danghui Wang, "XNOR-POP: A Processing-in-Memory Architecture for Binary Convolutional Neural Networks in Wide-IO2 DRAMs," In Proc. IEEE/ACM International Symposium on Low Power Electronics and Design (ISLPED), Taipei, Taiwan, July 24-26, 2017.
- [C026] Minje Kim, "Collaborative Deep Learning for Speech Enhancement: A Run-Time Model Selection Method Using Autoencoders," In Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), New Orleans, LA, March 5-9, 2017.
- [C025] Sanna Wager, Liang Chen, Minje Kim, and Christopher Raphael, "Towards Expressive Instrument Synthesis Through Smooth Frame-By-Frame Reconstruction: From String To Woodwind," in Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), New Orleans, LA, March 5-9, 2017.
- [C024] Minje Kim and Paris Smaragdis, "Efficient Neighborhood-Based Topic Modeling for Collaborative Audio Enhancement on Massive Crowdsourced Recordings," In Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Shanghai, China, March 20-25, 2016.
- [C023] Minje Kim and Paris Smaragdis, "Adaptive Denoising Autoencoders: A Fine-tuning Scheme to Learn from Test Mixtures," In Proc. International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA), Liberec, Czech Republic, August 25-28, 2015.

[Nominated for the Best Student Paper on Audio Signal Processing]

- [C022] Minje Kim, Paris Smaragdis, and Gautham J. Mysore, "Efficient Manifold Preserving Audio Source Separation Using Locality Sensitive Hashing," In Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Brisbane, Australia, April 19-24, 2015.
- [C021] Yunlong Gao, Shaohan Hu, Renato Mancuso, Hongwei Wang, Minje Kim, Poliang Wu, Lu Su, Lui Sha, and Tarek Abdelzaher, "Exploiting Structured Human Interactions to Enhance Estimation Accuracy in Cyber-physical Systems," In Proc. International Conference on Cyber-Physical Systems (ICCPS), Seattle, WA, April 14-16, 2015.
- [C020] Minje Kim and Paris Smaragdis, "Efficient Model Selection for Speech Enhancement Using a Deflation Method for Nonnegative Matrix Factorization," In Proc. IEEE Global Conference on Signal and Information Processing (Global SIP), Atlanta, GA, December 3-5, 2014.
- [C019] Po-Sen Huang, *Minje Kim*, Mark Hasegawa-Johnson, and Paris Smaragdis, "Singing-Voice Separation From Monaural Recordings Using Deep Recurrent Neural Networks," In Proc. *International Society for Music Information Retrieval Conference (ISMIR)*, Taipei, Taiwan, Oct. 27-31, 2014.
- [C018] Ding Liu, Paris Smaragdis, and Minje Kim, "Experiments on Deep Learning for Speech Denoising," In Proc. Annual Conference of the International Speech Communication Association (Interspeech), Singapore, September 14-18, 2014.
- [C017] Po-Sen Huang, Minje Kim, Mark Hasegawa-Johnson, and Paris Smaragdis, "Deep Learning for Monaural Speech Separation," In Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Florence, Italy, MAY 4-9, 2014.

[Winner of the Starkey Signal Processing Research Student Grant]

[C016] Johannes Traa, Minje Kim, Paris Smaragdis, "Phase and Level Difference Fusion for Robust Multichannel Source Separation," In Proc. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Florence, Italy, MAY 4-9, 2014.

- [C015] Paris Smaragdis and *Minje Kim*, "Non-Negative Matrix Factorization for Irregularly-Spaced Transforms," In Proc. *IEEE Workshop on Applications of Signal Processing to Audio and Acoustics* (WASPAA), New Paltz, NY, Oct. 20 23, 2013.
- [C014] Minje Kim and Paris Smaragdis, "Single Channel Source Separation Using Smooth Nonnegative Matrix Factorization with Markov Random Fields," In Proc. IEEE International Workshop on Machine Learning for Signal Processing (MLSP), Southampton, UK, Sep. 22 25, 2013.
- [C013] *Minje Kim* and Paris Smaragdis, "<u>Manifold Preserving Hierarchical Topic Models for Quantization and Approximation</u>," In Proc. *International Conference on Machine Learning (ICML)*, Atlanta, Georgia, Jun. 16 21, 2013.
- [C012] Minje Kim and Paris Smaragdis, "Collaborative Audio Enhancement Using Probabilistic Latent Component Sharing," In Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Vancouver, Canada, May 26 – 31, 2013.
 [Winner of the Google ICASSP Student Travel Grant]
 - [Best Student Paper Award in the Audio and Acoustic Signal Processing (AASP) area]
- [C011] C. Zhang, G.G. Ko, J.W. Choi, S.-N. Tsai, Minje Kim, A.G. Rivera, R. Rutenbar, P. Smaragdis, M.S. Park, V. Narayanan, H. Xin, O. Mutlu, B. Li, L. Zhao, M. Chen, and R. Iyer, "EMERALD: Characterization of Emerging Applications and Algorithms for Low-power Devices," In Proc. IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS), Austin, TX, Apr. 21 23, 2013.
- [C010] Minje Kim, Paris Smaragdis, Glenn G. Ko, and Rob A. Rutenbar, "Stereophonic Spectrogram Segmentation Using Markov Random Fields," In Proc. IEEE International Workshop on Machine Learning for Signal Processing (MLSP), Santander, Spain, Sep. 23 26, 2012.
- [C009] *Minje Kim,* Seungkwon Beack, Keunwoo Choi and Kyeongok Kang, "Gaussian Mixture Model for Singing Voice Separation from Stereophonic Music," In Proc. *Audio Engineering Society 43th Conference (AES Conference)*, Pohang, Korea, Sep. 29 Oct. 1, 2011.
- [C008] Minje Kim, Jiho Yoo, Kyeongok Kang and Seungjin Choi, "Blind Rhythmic Source Separation: Nonnegativity and Repeatability," In Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Dallas, TX, Mar. 14 – 19, 2010.
- [C007] Jiho Yoo, *Minje Kim*, Kyeongok Kang and Seungjin Choi, "Nonnegative Matrix Partial Co-Factorization for Drum Source Separation," In Proc. *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Dallas, TX, Mar. 14 19, 2010.
- [C006] Minje Kim, Seungkwon Beack, Taejin Lee, Daeyoung Jang and Kyeongok Kang, "Segmented Dimensionality Reduction Coding on Frequency Domain Signal," In Proc. Audio Engineering Society 34th Conference (AES Conference), Jeju Island, Korea, Aug. 28 30, 2008.
- [C005] *Minje Kim*, Minsik Park, Seung-jun Yang, Ji Hoon Choi and Han-kyu Lee, "System Aspects of TV-Anytime Metadata Codec in a Uni-directional Broadcasting Environment," In Proc. *IEEE International Symposium on Consumer Electronics (ISCE)*, Dallas, TX, Jun. 20 23, 2007.
- [C004] Seung-jun Yang, Jung Won Kang, Dong-San Jun, *Minje Kim*, and Han-kyu Lee, "TV-Anytime Metadata Authoring Tool for Personalized Broadcasting Services," In Proc. *IEEE International Symposium on Consumer Electronics (ISCE)*, Dallas, TX, Jun. 20-23, 2007.
- [C003] *Minje Kim* and Seungjin Choi, "<u>ICA-based Clustering for Resolving Permutation Ambiguity in Frequency-Domain Convolutive Source Separation</u>," In Proc. *IEEE International Conference on Pattern Recognition (ICPR)*, Hong Kong, Aug. 20 24, 2006.
- [C002] *Minje Kim* and Seungjin Choi, "<u>Monaural Music Source Separation: Sparseness, Nonnegativity and Shift-invariance</u>," In Proc. *International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA)*, pp. 617-624, Charleston, SC, Mar. 5 8, 2006. (LNCS 3889).
- [C001] *Minje Kim* and Seungjin Choi, "On Spectral Basis Selection for Single Channel Polyphonic Music Separation," In Proc. *International Conference on Artificial Neural Networks (ICANN)*, Warsaw, Poland, Sep. 11 15, 2005. (LNCS 3697).

The Other Papers

- [M002] Minje Kim and Paris Smaragdis, "Bitwise Neural Networks," International Conference on Machine Learning (ICML) Workshop on Resource Efficient Machine Learning, Lille, France, Jul. 6-11, 2015
- [M001] Minje Kim and Paris Smaragdis, "Collaborative Audio Enhancement: Crowdsourced Audio Recording," Neural Information Processing Systems (NIPS) Workshop on Crowdsourcing and Machine Learning, Montreal, Canada, Dec. 8-13, 2014

9. SELECTED TALKS & POSTERS

- ⁻ [Poster/workshop] "Bitwise Source Separation on Hashed Spectra: An Efficient Posterior Estimation Scheme Using Partial Rank Order Metrics," NIPS 2017 workshop on Machine Learning for Audio, Dec. 8, 2017
- [Poster/workshop] "Bitwise Neural Networks for Efficient SingleChannel Source Separation," NIPS 2017 workshop on Machine Learning for Audio, Dec. 8, 2017
- ⁻ [Invited Talk] Int'l Conf. on Parallel Architectures and Compilation Techniques (PACT) Workshop on Computational Intelligence and Soft Computing (CISC 2017), Sep. 10, 2017
- [Invited Talk] Intel Labs., Hillsboro, OR, Aug. 16, 2017
- [Talk/project] CRC Human Computer Interaction Committee Academic Project Review, Intel Corp., Hillsboro, OR, Aug. 16, 2017
- [Talk/workshop] Midwest Music and Audio Day, Northwestern University, Evanston, IL, Jun. 23, 2017
- ⁻ [Talk/workshop] Applied Research Institute Sensor Fusion Workshop, Indiana University, Bloomington, IN, Jun. 2, 2017
- ⁻ [Talk/workshop] Indiana University Bloomington/Bielefeld University Cognitive Interaction Technology Workshop, Indiana University, Bloomington, IN, May 17, 2017
- [Talk/workshop] IBM CIO's visit to IUB, May 3, 2017
- [Talk/seminar] Department of Statistics Colloquium Series, Indiana University, Bloomington, IN, Oct. 31, 2016
- [Talk/seminar] Intelligent & Interactive Systems Talk Series, School of Informatics and Computing, Indiana University, Bloomington, IN, Oct. 31, 2016
- ⁻ [Invited Talk] Graduate School of Culture Technology, KAIST, Daejeon, Korea, Oct. 7, 2016
- ⁻ [Invited Talk] Graduate School of Convergence Science and Technology, Seoul National University, Suwon, Korea, Oct. 6, 2016
- [Invited Talk] Qualcomm Korea, Seoul, Korea, Oct. 6, 2016
- ⁻ [Talk] Worldwide Youth in Science and Engineering (WYSE) Summer Camp: Discover Engineering, Urbana, IL, Jun. 27, 2016
- [Invited Talk] Hanyang University, Seoul, Korea, Apr. 6, 2016
- [Invited Talk] ETRI, Daejeon, Korea, Mar. 29, 2016
- [Invited Talk] Naver Labs, Seongnam, Korea, Mar. 29, 2016
- [Talk] Google, Mountain View, CA, Mar. 9, 2016
- [Talk] School of Informatics and Computing, Indiana University, Bloomington, IN, Feb. 29, 2016
- [Talk] Lyric Labs, Analog Devices, Cambridge, MA, Feb. 23, 2016
- [Talk/workshop] Coordinated Science Laboratory Student Conference, Urbana, Feb. 18-19, 2016
- [Talk] Adobe Research, San Francisco, CA, Feb. 10, 2016
- ⁻ [Talk] IBM T. J. Watson Research Center, Yorktown Heights, NY, Jan. 7, 2016
- [Poster/workshop] Speech and Audio in the Northeast (SANE) Workshop, New York, NY, Oct. 22, 2015
- ⁻ [Talk/seminar] Beckman Graduate Seminar, Urbana, IL, Oct. 14, 2015
- [Poster/workshop] Speech and Audio in the Northeast (SANE) Workshop, New York, NY, Oct. 24, 2013
- [Talk] Lyric Labs, Analog Devices, Cambridge, MA, Jun. 12, 2012
- [Talk/project] Department of Electrical and Computer Engineering, UIUC (with visitors from Sony, Japan),
 May 10, 2012

- [Poster/project] Intel Science and Technology Center Embedded Computing (ISTC-EC) Workday, Apr. 4-5, 2012
- [Invited Talk] Sejong University, Seoul, Korea, Jun. 10, 2011

10. SELECTED PATENTS

Named in more than 50 (20 US) patent applications, 10 of which are US patents issued.

- Minje Kim et al, "Irregular Pattern Identification Using Landmark Based Convolution," US Patent Application (pending), 2013
- Minje Kim et al, "Method and System for Separating Music Sound Source Using Time and Frequency Characteristics," US Patent No. 8,563,842, 2013
- Minje Kim et al, "Method and System for Separating Music Sound Source," US Patent No. 8,340,943, 2012
- Minje Kim et al, "Method and system for separating musical sound source without using sound source database," US Patent No. 8,080,724, 2011
- Minje Kim et al, "Method and System for Unified Source Separation," Korea Patent No. 1013754320000, 2014, US Patent Application (Pending), 2011
- ⁻ Minje Kim et al, "Apparatus and method for separating sound source," Korea Patent No. 1015274410000, 2015
- ⁻ Minje Kim et al, "Pattern Matching of Sound Data Using Hashing," US Patent No. 9,449,085, 2016
- Minje Kim et al, "Multichannel Sound Source Identification and Localization," US Patent Application (pending), filed in 2013
- Minje Kim et al, "Sound Data Identification," US Patent No. 9,215,539, 2015.
- Minje Kim et al, "Known information compression apparatus and method for separating sound source," US
 Patent Application (Pending), 2011

11. EXTRACURRICULAR ACTIVITIES

- Some home recordings are available here: http://minjekim.com/ext_acts.html
- The pick of my pics: https://goo.gl/OWvLRc