Curriculum Vitae

Byeong-jun Han

PhD Candidate, School of Electrical Engineering, Korea University

Research Staff, Graduate School of Convergence Science and Technology, Seoul National University

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> hbj1147@korea.ac.kr; bjhan1147@gmail.com http://www.linkedin.com/profile/view?id=137749265

EDUCATION

2010 - present	Ph.D. Candidate in School of Electrical Engineering Korea University, Seoul, Korea.
	Research subject: Music information retrieval, music emotion recognition, context-aware music recommendation system, acoustic/musical feature learning
2008 - 2010	Ph.D. Student in School of Electrical Engineering Korea University, Seoul, Korea.
2005 - 2008	M.E. in School of Electrical Engineering Korea University, Seoul, Korea.
	Thesis: An adaptive voice query transcription scheme for music information retrieval
2001 - 2005	B.E. in School of Electrical Engineering Korea University, Seoul, Korea.

THESIS

An adaptive voice query transcription scheme for music information retrieval

Accurate music transcription is essential in the voice-based (such as humming) music retrieval. Even though many researches have been done so far to develop pitch tracking and musical onset detection algorithms for accurate music transcription, the results are not still satisfactory. In this thesis, a new music transcription scheme is present with following new features: (i) for accurate note onset/offset detection, a new method WAE (Windowed Average Energy) was proposed. WAE defines multiple small but coherent windows with local threshold values; (ii) for accurate ADF onset detection,

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Dynamic ADF defines instead of traditional single threshold based methods using DTC (Dynamic Threshold Curve); (iii) for accurate acquisition of fundamental frequency of each frame, CAMDF (Circular Average Magnitude Difference Function) was used; and finally (iv) for the frequency realignment, K-means clustering algorithm was applied. To evaluate the performance of the proposed scheme, prototype music transcription system called AMTranscriber (Automatic Music Transcriber) was implemented and various experiments were carried out. Experimental result shows that the proposed scheme can improve the transcription accuracy up to 95%. And also, mobile music information system named M-MUSICS (Mobile MUsic Semantic Indexing and Content-based retrieval System), which is based on GA (Genetic Algorithm) and RF (Relevance Feedback), was implemented. By this implementation, it is proved that the scheme is applicable in music information retrieval system.

Advisor: Prof. Eenjun Hwang.

SKILL SETS

Academic Pattern Recognition Skills:

GMM, HMM, SVM, supervised/semi-supervised/unsupervised source

separation(NMF, PLCA, etc.), non-parametric model, etc.

Signal Processing Skills:

Spectral analysis in MATLAB, Fourier/Wavelet/Chirplet/Curvelet transforms.

Retrieval Algorithm (like DTW) & Statistical Analysis.

Development Languages:

C/C++/C# (native, managed, GUI), Java(Processing), PHP, MATLAB, Python,

HTML/XML.

Tools:

Microsoft development tools (Visual Studio), Eclipse, Subversion(version control), MATLAB, Microsoft Project(project management tool), Processing/Arduino, Max/MSP, Notepad (for creating from nothing).

Development Environments:

Command-line interface(CLI), MFC, Processing(/w Java-based OpenGL),

Web(PHP)

Electrical Engineering

Digital & Analog Circuit Design & Implementation (for HCI and media arts).

Language English (fluent in speaking, listening, and writing),

Japanese (fluent in speaking, listening, and writing),

Korean (native).

SCHOLARSHIPS / STUDENT TRAVEL GRANTS

2012 ACM Multimedia 2012 - Student Travel Grant Supported (40,000 yen)

2010 Research Internship in **AIST** (Advanced Industrial Science and Technology)

Media Interaction Group (Group Leader: Dr. Masataka GOTO)

with selection in 17th Winter Institute (FY 2009).

Funded by following foundations:

JKF (Japan-Korea industrial co-operation Foundation), Japan; NRF (National Research Foundation of Korea), Korea;

JISTEC (Japan International Science and Technology Exchange Center)

JENESYS project, Japan.

http://www.jistec.or.jp/WI/WI_e.html

http://www.jistec.or.jp/ http://www.aist.go.jp/

http://www.nrf.go.kr/html/kr/

2008-2010 Seoul City Science Scholarship.

Funded by Seoul City, Korea. http://www.seoul.go.kr/

MEMBERSHIPS

2010-**present** Student member of **KIPS** (Korea Information Processing Society)

http://www.kips.or.kr/

2007-**present** Student member of **ACM** (Association for Computing Machinery)

http://www.ieee.org/

2007-**present** Student member of **IEEE** (the Institute of Electrical and Electronics Engineers, Inc.)

http://www.ieee.org/

2007-**present** Student member of **IEEK** (the Institute of Eletronics Engineers of Korea)

http://www.ieek.or.kr/

2006-**present** Student member of **KIISE** (Korea Institute of Information Sciences and Engineers)

http://www.kiise.or.kr/

REVIEW ACTIVITIES (JOURNAL/TRANSACTIONS)

2013-present Reviewer of KSII Transactions on Internet and Information Systems (TIIS)

2012-present Reviewer of Multimedia Systems (MMSJ)

2011-present Reviewer of Engineering Applications on Artificial Intelligence (EAAI)

2011-present Reviewer of Signal Processing (SIGPRO)

2009-present Reviewer of Information Sciences (INS)

2008-present Reviewer of Multimedia Tools and Applications (MTAP)

REVIEW ACTIVITIES (CONFERENCES)

2013	Reviewers of:
	IEEE International Conferences on Multimedia and Expo (ICME 2013) Workshop on Affective Computing (AAC)
	International Conference on Communications, Signal Processing, and their Applications 2013 (ICCSPA 2013)
	IEEE International Conference on Control System, Computing and Engineering (ICCSCE 2013)
	IEEE Business, Engineering & Industrial Applications Colloquium (BEIAC 2013)
	IEEE Symposium on Industrial Electronics and Applications (ISIEA 2013)
2012	Reviewers of:
	IEEE Symposium on Wireless Technology & Applications (ISWTA 2012)
	IEEE Symposium on Industrial Electronics and Applications (ISIEA 2012)
	IEEE Symposium on Computers & Informatics (ISCI 2012)
	IEEE Conference on Computer Applications & Industrial Electronics (ICCAIE 2012)
	IEEE Symposium on Business, Engineering & Industrial Applications (ISBEIA 2012)
	IEEE International Conference on Control System, Computing and Engineering (ICCSCE 2012)
	IEEE Colloquium on Humanities, Science & Engineering Research (CHUSER 2012)
	IEEE Business, Engineering & Industrial Applications Colloquium (BEIAC 2012)
2011	Reviewers of:
	IEEE Student Conference on Research and Development (SCOReD 2011)
	IEEE Conference on Open Systems (ICOS 2011)
	The Tenth International Conference on Machine Learning and Applications (ICMLA 2011)
	IEEE Conference on Computer Applications & Industrial Electronics (ICCAIE 2011)
	IEEE Symposium on Computers & Informatics (ISCI 2011)
	The second International Conference on Software Engineering and Computer Systems

	(ICSECS 2011)
2010	Reviewers of:
	International conference on Swarm, Evolutionary and Memetic Computing (SEMCCO 2010)
	IEEE international workshop on Multimedia and Semantic Technologies (MUST 2010)

INVITED TALK

2009 Music Information Retrieval: Tries to Bridge the Gap Between Content and Semantics

Sejong University.

MILITARY

2010 Mar

- 2013 Feb

Technical Research Personnel,
Research Institute for Information and Communication Technology (RICT),
Korea University

LANGUAGE CERTIFICATES

2011 Aug 28	Japanese-Language Proficiency Test (JLPT) Level N1 Certificate. (Certificate No. N1A046869A)
2010 Jan 29	Japanese-Language Proficiency Test (JLPT) Level 1 Certificate.
2009 Aug 28	Japanese-Language Proficiency Test (JLPT) Level 2 Certificate.

TEACHING EXPERIENCES

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2013 Fall	Part-time Lecturer of Advanced Multisensory Interaction (2013-52962)
	Department of Digital Media (Graduate School) The Catholic University of Korea (CUK) http://www.catholic.ac.kr/
	Part-time Lecturer of Embedded Hardware (KA04204-01/02)
	Division of Computer Media Information Engineering Kangnam University http://www.kangnam.ac.kr/
2011 Fall	International Teaching Assistant (TA) of Engineering Mathematics 2 (KEEE202-03)
	Lecture by Prof. K. Bharanitharan

School of Electrical Engineering, Korea University, Korea.

http://ee.korea.ac.kr/ http://www.korea.ac.kr/

2011 Spring **International TA** of Object-oriented Programming (KEEE243-02)

Lecture by Prof. K. Bharanitharan

School of Electrical Engineering, Korea University, Korea.

2010 Fall **International TA** of Engineering Mathematics 2 (KEEE202-03)

Lecture by Prof. K. Bharanitharan

School of Electrical Engineering, Korea University, Korea.

2010 Spring **International TA** of Digital System (KEEE207-04)

Lecture by Prof. K. Bharanitharan

School of Electrical Engineering, Korea University, Korea.

2008 Spring **International TA** of Signals and Systems (KEEE325)

Lecture by Prof. Khoa Nguyen Le

School of Electrical Engineering, Korea University, Korea.

International TA of Object-Oriented Programming and Laboratory (KEEE243) 2007 Spring

Lecture by Prof. Eenjun Hwang

School of Electrical Engineering, Korea University, Korea.

2006 Fall **International TA** of Database Management System (KEEE476)

Lecture by Prof. Eenjun Hwang

School of Electrical Engineering, Korea University, Korea.

2006 Spring & 2006 Fall

Lecturer of Database Management System

Lecture by Prof. Eenjun Hwang (theory) and Byeong-jun Han (programming)

AIIT, Korea.

http://www.aiit.or.kr/

SOCIAL ACTIVITIES

2008-present Member of YEHSenior

(Senior Member of YEHS: Young Engineers Honor Society)

http://yehs.or.kr/web/

2004-2007 Member of YEHS

http://yehs.or.kr/web/

Attendance on **56th CEO Forum** as the Representative of Engineering Students. 2004.3.30.

E-NewsArticle:

http://www.etnews.co.kr/news/detail.html?id=200403300058 http://www.sciencetimes.co.kr/article.do?atidx=0000005775

The 13th President of **One And Zero (OAZ)** 2004

Computer Science Study Group in Schoool of Electrical Engineering,

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Korea Univ.

http://oaz.korea.ac.kr/

2001-2005 Senior Member of **One And Zero (OAZ)**

Computer Science Study Group in Schoool of Electrical Engineering,

Korea Univ.

http://oaz.korea.ac.kr/

2003-2004 OAZ Director of 'Book Benchmark' Column of "Microsoftware" Magazine

http://www.imaso.co.kr/

PROJECTS

2010 Mar-Nov **Development of Music Similarity Retrieval System**

2011 Mar-Nov Research Staff

Korea Copyright Commission, Korea

2012 Mar (Academic-Industrial Cooperation with Seoul National University (SNU))

- 2013 Jul Audio signal processing, audio feature extraction, musicological analysis.

MATLAB, C/C++

2012 May – Sept. Digiti Sonus

Technical Director Seoul Art Space

Fingerprint feature extraction, fingerprint sonification, 3D graphics and animation

Processing(Java)/Arduino, OpenGL, TTL Sensor API, Max/MSP

2011 Jan Rich Music Descriptor Extraction of Music Audio

- 2012 Mar Research Staff

NHN Corp.

(Academic-Industrial Cooperation with Seoul National University (SNU))

Monaural audio source separation, music instrument analysis, audio signal processing, audio feature extraction, machine learning, database engineering, musicological analysis.

MATLAB, C/C++

2010 Jun-Dec Track-based Musical Feature Modification Module Development for Music Mood Control

Practice Director

Electronics and Telecommunications Research Institute (ETRI)

(Academic-Industrial Cooperation with Seoul National University (SNU))

Monaural audio source separation, music instrument analysis, audio signal processing, musicological analysis.

MATLAB

2007 Dec

Ontology-based Music Recommendation System Using Music Moods and Features

- 2008 Nov

Research Staff

National Research Foundation (NRF), Korea

(Academic-Industrial Cooperation with Korea University)

Audio signal processing, audio feature extraction, ontology, machine learning, musicological analysis, psychological analysis, user survey.

MATLAB

2006 Nov

Fast Position Searching Algorithm Development on Car Navigation

- 2007 Oct

Research Staff

LG Electronics (DM)

(Academic-Industrial Cooperation with Korea University)

Database engineering, algorithm.

C++

2006 Sept-Oct

Multimedia Technology Trend Survey

Research Staff

Samsung Electronics

(Academic-Industrial Cooperation with Korea University)

2006 Mar

Development of MTP-based High Speed Database Search Engine on Mobile Device

- 2007 Aug

Practice Director

LG Electronics

(Academic-Industrial Cooperation with Korea University)

Database engineering, algorithm, operating system, file system.

C++ (COM)

2005 May - Nov

Development of Media Transmoding Module Considering Mobile Consumer Environment

Research Staff

Electronics and Telecommunications Research Institute (ETRI)

(Academic-Industrial Cooperation with Korea University)

Video signal processing, video transcoding/transmoding, mobile programming, network traffic control.

C++ (COM)

2005 Mar

Research on QoS Traffic Engineering and Multimedia Service Platform Technology on Next Generation BcN Environment

-2007 Aug

Research Staff

Yeungnam University IT Research Center (ITRC)

(Academic-Industrial Cooperation with Korea University)

MEDIA ART EXHIBITIONS

2012-2013 **Digiti Sonus** (2013)

http://yoonchunghan.com/projects/digiti-sonus-2012-2013/

Technical Director

Processing(Java), Arduino, Max/MSP, OpenGL, TTL Sensor(Fingerprint sensor) and API Programming.

2011-2012 **Virtual Pottery** (2012)

http://yoonchunghan.com/projects/virtual-pottery-2012/

Technical Collaborator

Processing(Java), Arduino, Max/MSP, OptiTrack, Kinect, hand gesture recognition.

2010 May 13 **Pieces of You** (2010)

http://www.yoonchunghan.com/index.php?/project/pieces-of-you-2010/

Technical Advisor

UCLA MFA Thesis project, at UCLA Design, Media arts New Wight Gallery, USA.

Digital circuit design and implementation (Arduino), adaptive object tracking algorithm (processing).

2010 Mar 12 **Mirror, Mirror** (2010)

http://www.yoonchunghan.com/index.php?/project/mirror-mirror-2010/

Technical Advisor

ULCA MFA Thesis project, at UCLA Design, Media arts, USA.

Digital circuit design (Arduino), adaptive object tracking algorithm (processing).

2009. **Jellyfish** (2009)

May 19-30. http://www.yoonchunghan.com/index.php?/projects/jellyfish-2008/

Jul 10-24. Technical Advisor

Aug 25-29. 4th Take away Festival of DIY Media 2009, Dana Centre in London Science Museum, London, UK, May 19-30, 2009.

"Five": Korean Young Artists, Korean Culture Center, Los Angeles, CA, USA, Jul. 10-24, 2009.

The Fragments of Sound, Seoul, Sept. 9-15, 2009.

Digital circuit design and implementation (Arduino), adaptive sound synthesis (processing).

2008 Feb 13-15 **Color Note 2** (2008)

http://www.yoonchunghan.com/index.php?/projects/color-note-2-2008/

Awarded: HCI KOREA 2008 Creative Award.

Programming Collaborator

HCI KOREA 2008 - Lifenology, Pheonix Park, Pyeongchang, Korea.

User interface design and implementation, image processing & object recognition, adaptive sound synthesis, display design (Processing).

2007 Jun 12 **Harmonia** (2007-2008)

- 2008 Jan 26 http://www.yoonchunghan.com/index.php?/projects/harmonia-2008/

Awarded: Asia Digital Art Award 2008.

Programming Collaborator

A Thesis Project for MFA Degree Show, Samwon S&D Hall, Seoul National University, Korea.

User interface design and implementation, image processing & object recognition (reactivision), adaptive sound synthesis, display design (processing).

2007 **Symphony** (2007)

http://www.yoonchunghan.com/index.php?/projects/symphony-2007/

Programming Collaborator

Individual Work (Yoon Chung Han).

User interface design and implementation, image processing & object recognition (reactivision), adaptive sound synthesis, display design (processing).

2007 **Color Note** (2007)

http://www.yoonchunghan.com/index.php?/projects/color-note/

Programming Collaborator

Individual Work (Yoon Chung Han).

User interface design and implementation, image processing & object recognition (reactivision), adaptive sound synthesis, display design (processing).

INTERNATIONAL JOURNALS

- 1. Yoon Chung Han and <u>Byeong-jun Han</u>, "Digiti Sonus," Leonard Journal, vol.46, no.4, pp.392-393, Jul. 2013. DOI=10.1162/LEON a 00613
- 2. Yoon Chung Han and **Byeong-jun Han**, "Virtual Pottery: A virtual 3D audiovisual interface using natural hand motions," Multimedia Tools and Applications (MTAP), Feb. 2013. (accepted and online published) DOI=10.1007/s11042-013-1382-3
- 3. **Byeong-jun Han**, Seungmin Rho, Sanghoon Jun, Eenjun Hwang, "Music emotion classification and context-based music recommendation," Multimedia Tools and Applications (MTAP): Special Issue on Emerging Multimedia Applications, vol.47, no.3, pp.433-460, Aug. 2010. DOI=10.1007/s11042-009-0332-6
- 4. Seungmin Rho, <u>Byeong-jun Han</u>, Eenjun Hwang and Minkoo Kim, "MUSEMBLE: A Novel Music Retrieval System with Automatic Voice Query Transcription and Reformulation," Journal of Systems and Software (JSS), vol.81, no.7, pp.1065-1080, Jul. 2008. DOI=10.1016/j.jss.2007.05.038

INTERNATIONAL CONFERENCES

- 1. Yoon Chung Han, <u>Byeong-jun Han</u>, Matthew Wright, "Digiti Sonus: Advanced interactive fingerprint sonification using visual feature analysis," in Proceedings of 13th international Conferences on New Interfaces on Musical Expression (NIME), May. 2013.
- 2. Yoon Chung Han and <u>Byeong-jun Han</u>, "Digiti Sonus: An interactive fingerprint sonification," in Proceedings of the 20th ACM International Conferences on Multimedia (MM), pp.1201-1204, Oct. 2012. DOI=10.1145/2393347.2396418
- 3. Yoon Chung Han and **Byeong-jun Han**, "Virtual Pottery: An interactive audio-visual installation," in Proceedings of 12th International Conferences on New Interfaces on Musical Expression (NIME), May. 2012.
- 4. <u>Byeong-jun Han</u>, Seungmin Rho, Roger B. Dannenberg, Eenjun Hwang, "SMERS: Music emotion recognition using support vector regression," in Proceedings of International Conferences on Music Information Retrieval (ISMIR 2009), pp. 651-656, Oct. 2009.
- 5. Seungmin Rho, <u>Byeong-jun Han</u>, Eenjun Hwang, "SVR-based music mood classification and context-based music recommendation," in Proceedings of ACM Multimedia 2009, pp. 713-716, Oct. 2009.
- 6. **Byeong-jun Han** and Eenjun Hwang, "Environmental sound classification based on feature collaboration," in Proceedings of IEEE International Conference on Multimedia & Expo (ICME 2009), pp. 542-545, Jul. 2009.
- 7. Sanghoon Jun, <u>Byeong-jun Han</u>, Eenjun Hwang, "A similar music retrieval scheme based on Musical mood variation," in Proceedings of 1st Asian Conference on Intelligent Information and Database Systems (ACIIDS'09) pp. 167-172, Apr. 2009.
- 8. Sanghoon Jun, Seungmin Rho, <u>Byeong-jun Han</u> and Eenjun Hwang, "A fuzzy inference-based music emotion recognition system," in Proceedings of The 5th IET International Conference on Visual Information Engineering 2008 (VIE '08), pp. 673-677, Jul. 2008.

- 9. <u>Byeong-jun Han</u>, Eenjun Hwang, Seungmin Rho and Minkoo Kim "M-MUSICS: Mobile content-based music retrieval system," in Proceedings of ACM Multimedia 2007, pp. 496-497, Sept. 2007.
- Seungmin Rho, <u>Byeong-jun Han</u>, Eenjun Hwang and Minkoo Kim, "An adaptation framework for QBH-based music retrieval," Springer Lecture Notes on Computer Science (LNCS), 11th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2007), pp. 596-603, Sept. 2007.
- 11. Seungmin Rho, <u>Byeong-jun Han</u>, Eenjun Hwang and Minkoo Kim, "MUSEMBLE: Music retrieval system based on learning environment," in Proceedings of IEEE International Conference on Multimedia & Expo (ICME 2007), pp.1463-1466, Jul. 2007.
- 12. Seungmin Rho, <u>Byeong-jun Han</u>, Eenjun Hwang and Minkoo Kim, "Voice query transcription and expansion scheme for efficient music retrieval," in Proceedings of IEEE 8th Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2007), pp.31-36, Jun. 2007.
- 13. **Byeong-jun Han**, Seungmin Rho and Eenjun Hwang, "An efficient voice transcription scheme for music retrieval," in Proceedings of IEEE International Conference on Multimedia and Ubiquitous Engineering (MUE 2007), pp.366-371, Apr. 2007.
- 14. D. Kim, <u>Byeong-jun Han</u>, S. Lee and Eenjun Hwang, "An MTP-based indexing scheme for fast database update in mobile devices," in Proceedings of 2007 International Conference on Ubiquitous City Technology (ICUCT 2007).

DOMESTIC JOURNAL (KOREAN)

- 1. 노승민, <u>한병준</u>, 송세헌, "내용기반의 음악 추천을 위한 지능형 프레임워크," 한국 정보기술융합학회 논문지, vol.3, no.1, pp.1-10, 2010년 6월.
- 2. <u>한병준</u>, 노승민, 황인준, "A Threshold Adaptation based Voice Query Transcription Scheme for Music Retrieval," 한국전기전자학회 (IKEEE) 전기학회논문지, vol.59, no.2, pp.445-451, 2010년 2월.
- 3. <u>한병준</u>, 황인준, "음악 추천을 위한 감정 전이 모델 기반의 음악 분류 기법," 한국 전기전자학회 (IKEEE) 전기전자학회논문지, vol.13, no.2, pp.159-166, 2009년 6월.
- 4. 노승민, <u>한병준</u>, "음악 검색 및 추천에 관한 최신 연구 동향," 한국정보기술융합학 회 논문지, vol.2, no.1, pp.23-34, 2009년 3월.

DOMESTIC CONFERENCES (KOREAN)

- 1. 권세준, <u>한병준</u>, 한윤창, 이교구, "실시간 오디오-악보 정렬에 기반한 사용자 연주음고 피드백 시스템," 한국HCI학회 HCI KOREA 2013 학술대회 논문집, pp. 766-769, 2013년 1월.
- 2. <u>한병준</u>, 이교구, 노승민, 황인준, "확률적 은닉 성분 분석 및 음향 기술자를 사용한 내용 기반 음악 요소 검색 방법," 제35회 한국정보처리학회 춘계학술발표대회, 2011년 5월.
- 3. <u>한병준</u>, 김현우, 김철환, 이교구, "동적 시간 왜곡(DTW)을 이용한 음악 유사도 비교 인터페이스," 한국HCI학회 HCI KOREA 2011 Fun the Mental, 2011년 1월.

- 4. <u>한병준</u>, 이장우, 이교구, "확률적 은닉 성분 군집화에 기반한 타악기 음원 분리," 2010년 대한전자공학회(IEEK) 추계학술대회, pp.383-384, 2010년 11월.
- 5. <u>한병준</u>, 김연주, 이장우, 김민제, 이교구, "확률적 은닉 성분에 기반한 드럼 onset 검출 방법," 제34회 한국정보처리학회(KIPS) 추계학술발표대회, pp.762-765, 2010년 11월.
- 6. 김현우, <u>한병준</u>, 김철환, 이교구, "내용 기반 음악 유사 검색 시스템," 제34회 한국 정보처리학회(KIPS) 추계학술발표대회, pp.732-735, 2010년 11월.
- 7. 문대진, 노승민, <u>한병준</u>, 탁윤식, 황인준, "효과적인 질의 생성 방법을 이용한 자동음악 앨범 커버 아트 작성 방법," 한국HCI학회 HCI KOREA 2010 OPEN CREAVITY 함께하는 창조, 2010년 1월. (will be held on Pyeongchang Pheonix Park, Korea @ 01/27-29, 2010)
- 8. 김진규, <u>한병준</u>, 유승학, 황인준, 윤성로, "음색 특징과 SVM을 이용한 감정 분류," 대한전자공학회(IEEK) 2008년도 정기총회 및 추계학술대회, 2008년 11월. (held on Yonsei University, Korea @ 11/29, 2008)
- 9. 전상훈, <u>한병준</u>, 황인준, "음악 무드의 변화 기반 유사 음악 검색 기법," 한국정보 처리학회(KIPS) 제30회 추계학술발표대회, 2008년 11월. (held on Korea University, Korea @ 11/14-11/15, 2008)
- 10. <u>한병준</u>, 노승민, 황인준, "음악 무드 분류에서 음향 특성과 차원 감쇄 기법의 효과 연구,"한국정보과학회(KIISE) KCC 2008, 2008 한국컴퓨터종합학술대회 논문집, vol.35, no.1(C), pp.406-411, 2008년 6월. (held on Pyeongchang Pheonix Park, Korea @ 06/29-07/01, 2008)
- 11. 한윤정, <u>한병준</u>, "인터렉티브 사운드 설치와 사용자 의도 분석에 관한 연구 작품 Color note를 중심으로," 한국HCI학회 HCI 2008 Lifenology, vol.2, pp.268-273. 2008년 2월. (held on Pyeongchang Pheonix Park, Korea @ 02/13-02/15, 2008)
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