

Index

2D-FMC *See* 2-dimensional Fourier
Magnitude Coefficients, 179
2-dimensional Fourier Magnitude
Coefficients, 179
50 Cent, 8
101 Dalmatians, 14
2001:
 A Space Odyssey, 16
[xor] synth, 202
 β rhythm, 211
 β -wave, 211, 212

A

A2IM *See* American Association of
Independent Music, 6
Ableton Live, 131, 132
Ableton Push, 132
absolutist view, 137
acoustic fingerprint, 4
acoustic instrument, 52
acoustic signal, 102
Advanced Audio Coding, 4
Advancing Interdisciplinary Research in
Singing, 72
aesthetic attitude, 139
aesthetic emotion, 139
aesthetic experience, 139, 140, 145
aesthetic judgment, 139
aesthetic perception, 128, 146, 157
aesthetic preference, 139
aesthetics of sonification, 189
aesthetic stimuli, 139
affect, 48, 68
affectation, 30, 48, 49, 50, 51, 52, 53, 54, 55,
 56, 57, 64, 65, 66, 68, 69, 72
affective expression, 89
affective sound, 186
Ahmet Ertegun Award, 1
Air-Quality Egg, 185

Akkersdijk, S., 86, 88
Albin, Zak J., 40
Albon, S. D., 61
aleatoric music, 120
aleatoric procedures, 37, 131
algorithmic composer, 138
algorithmic composition, 38, 132, 133
algorithmic composition engine, 91
algorithmic improvisation system, 101
algorithms, 31
al-Jazarī, 36
Allvin, Raynold L., 240
Almighty, The, 21
alpha band, 206
alpha leader, 60
alto clef, 241
Amazon mp3, 17
ambient music, 129, 130
ambient sound, 130
American Association of Independent
Music, 6
American Idol, 9, 25
amplification, 53
amplifiers, 51, 52
amplitude envelope, 131
analysis of variance, 210
andante, 252
Andrade, Mark, 14
Andrews, Kevin, 21
Angel of Death, 138
animal communication, 46, 60
animal learning, 140
animation, 247
annotation, 87
ANOVA *See* analysis of variance, 210
Antares, 49
anti-apartheid anthem, 19
anticipatory paradigm, 137

- API *See* application programming interface, 196
- Apple, 1, 6
- application programming interface, 196
- appraisal structure, 139
- Arduino, 186, 190, 191, 192, 193, 194, 195, 196, 198, 199, 201, 202
- Ardweeny, 191, 192
- arias, 243
- Aristotle, 145
- arousal, 187, 208, 209, 211, 212, 214, 215, 217, 232
- arousal potential, 139
- artifact possessing agency, 81
- artifacts, 33, 49, 64, 79, 80
- artifice, 49
- artificial intelligence, 71, 91, 252
- artificial life, 91
- artificial lucidity, 123
- Artiphon, 17
- artist classification, 166
- artist expression, 66
- Ashby, Hal, 3
- Assayag, G., 116, 152
- asymmetrical spatial filter, 222
- atemporal music, 121
- attack time, 161
- Audacity, 70
- Audience Effect, 59
- Audio Oracle, 141, 142, 147, 148, 150, 151, 153, 155, 156, 157, 158
- Audio Oracle representation, 138
- audio signal analysis, 71
- audio stimulus, 211, 213, 214, 215, 225, 227, 231
- auditory channel, 85
- auditory perception, 43, 51, 56, 71
- Autechre, 131
- automated mixing, 130
- automatic music analysis, 160
- automatic recommendation, 166
- autonomous improvisation, 138
- autonomous musical machine, 128
- auto-tagging, 166
- auto-tune, 20, 49
- Avelar, Frank, 14
- Avicii, 25
- B**
- Baby Bells, 4
- Bach, J. S., 3, 129, 247, 248
- Bachorowski, J.-A., 48
- bag of features, 166
- bag of words, 166
- Baldi, P. F., 145
- Bamberger, J., 120
- Band-OUT-of-the-Box, 103
- Bardachenko, Ievgenii, 19
- bass clef, 241
- bass note, 177
- Bayesian model, 140
- BCI-based game interface, 205, 206
- BCI *See* brain-computer interface, 205
- Beach Boys, The, 44
- beat, 172
- Beatles, The, 17
- Beat Of Magic Box, 202
- Beaton, B., 86, 87, 93
- Beilharz, K. A., 79
- Bell Atlantic, 4
- Bell Laboratories, 4, 13, 16
- Bello, Juan Pablo, 159
- Bell South, 4
- Bense, Max, 138
- Bergomi, Mattia G., 205
- Berlynes, Daniel, 139
- beta band, 206
- beta follower, 60
- Bianchi-Berthouze, N., 85
- Billboard, 17
- bioacoustics, 159
- bioinformatics, 160, 179
- biology, 30, 43, 51, 56
- biomechanics, 48, 51
- Birdwell, Rob, 15
- Birkhoff, George David, 138
- Björk, 71, 127
- Black Eyed Peas, The, 16
- blind source separation, 219
- Bloch, G., 152
- Boarduino, 190, 191
- BoB *See* Band-OUT-of-the-Box, 103
- BOF *See* bag of features, 166
- B.O.M.B. *See* Beat Of Magic Box, 202
- Bonnell, Pamela, 14
- Bono, 47, 52
- Boolean logic, 252
- Boop, Betty, 19
- Borchers, J., 87, 92
- Borys, Michael, 14
- Boston Court Performing Arts Center, 108
- Bowie, David, 54
- Boyle, Susan, 8
- brain channel, 207
- brain-computer interaction, 81
- brain-computer interface, 83, 205
- brain rhythm, 207
- brain signal, 207, 218, 219

- Brandenburg, Karlheinz, 4, 17
 brightness, 161
 Brokaw, Harold Cicada, 14
 Brooks, Evan, 70
 Brooks, Mel, 8
 Brown, James, 54
 Brown, Rob, 131
 Brunswik lens model, 50
 Bruza, Michael, 14
 Bryan-Kinns, N., 87
 BSS *See* blind source separation, 219
 Burns, Mike, 19
 Burns, K., 140, 145
 Burr, Raymond, 3
 Butera, Mike, 17
 Byrne, Mick, 201
- C**
- Cage, John, 37, 108, 122, 130
 CAI *See* computer-aided instruction, 240
 Callisto, 14
 Candy, Michael, 201
 canon, 113, 115
 Carnegie Hall, 245
 Case, Steve, 3
 Castellani, Simone, 205
 catalog information, 134
 CEA *See* Consumer Electronics Association, 4
 Čebyšev band-pass filter, 212, 218
 cellular automata, 133
 cepstral analysis, 163, 164
 cepstral representation, 165
 CGA *See* color graphics adapter, 241
 ChaChaCha, 173
 chance music, 37
 Chan, Dennis, 250
 channel vocoder, 162, 163
 chaos theory, 133
 Charles, Ray, 3
 Charlie X, 14
 Chau, Kai Ton, 13
 Chemillier, M., 152
 Cheney, D. L., 59, 65
 Cher, 20
 Chew, Elaine, 152
 Chomsky, Noam, 133
 choral conducting, 244
 chord, 174
 chord estimation, 179, 180
 chord progression, 177
 chord recognition, 160, 177, 180
 chord sequence, 92, 174, 175
 chord sequence estimation, 178
 choreography, 92, 93
 chroma features, 174, 175, 176, 177, 178, 179
 chromagram, 175, 176, 179
 chromatic musical style, 128
 chromatic scale, 243, 246
 chroma vector, 175, 176
 Clarke, Arthur C., 16
 Clark, H., 60
 classical music, 130
 classical repertoire, 43
 Clayton, Josephine, 13
 Clutton-Brock, T. H., 61
 coaxial cable, 4
 Cobra, 119, 121
 cocktail party problem, 219
 co-creative agent, 90, 92
 coercion, 58
 cognition, 34, 43, 48
 cognitive mastering, 139, 157
 cognitive musicology, 128
 cognitive science, 33, 90, 91
 Coldcut, 6
 collaborative musical expression, 80, 95
 collaborative sonification, 83
 Collins, Karen, 132
 color graphics adapter, 241
 common chords, 239
 communication, 30, 44, 45, 46, 48, 50, 51, 53, 56, 57, 59, 60, 64, 65, 66, 72, 100
 communication failure, 64
 compressed complexity, 138
 compression algorithm, 140, 143, 144
 Compression Rate, 142, 144
 Compror algorithm, 143
 computational creativity, 94
 computer-aided instruction, 240, 252
 computer music composition, 34
 computer programming, 13
 computer-synthesized voice, 16
 computer vision, 160
 conceptual art, 130
 concertos, 243
 Conference on New Interfaces for Musical Expression, 193
 configurable interface, 84
 consonance, 128
 constant Q transform, 223, 224
 Consumer Electronics Association, 4
 contextual significance, 174
 continuation, 91
 Continuator, 91, 103
 contrast pattern, 66
 Cooper, Jay L., 8, 17
 Cope, David, 39, 133

cover-song identification, 178
 Cowell, Henry, 121
 creativity, 100, 123
 Cretan music, 174
 Crick, C., 90
 Crochemore, M., 136
 Crosby, Bing, 51
 Crow, Sheryl, 8
 Csound, 71, 195, 200
 cue-configuration, 48

D

Daisy Bell (Bicycle Built for Two), 16
 Daisyphone, 87
 Dammers, Jerry, 19
 dance, 83, 89, 93
 Dannenberg, Roger, 70
 d'Arezzo, Guido, 128
 da Vinci, Leonardo, vii, 185
 Dawkins, Richard, 58
 DAWs *See* digital audio workstations, 131
 DCT *See* discrete cosine transform, 165
 deception, 62
 Dedman, Gary, 21
 deep learning, 133
 degrees of freedom, 36, 39, 42, 48
 de Leon, Dan DJ, 26
 delta band, 206
 deus ex machina, 145
 diaphragm, 51
 diatonic scale, 128
 Dibben, N., 64
 digital audio workstations, 131
 digital media, 123, 239
 digital media artifacts, 32
 digital production environment, 70
 digital rights management, 6
 digital signal processing, 218
 digital signal processors, 31
 dimensions of emotion, 208
 DiscoVision, 3
 discrete cosine transform, 165
 discrete Fourier transform, 163, 171, 208, 223
 DisneyBlast.com, 14
 Disney.com, 14
 Disney Online, 14
 distance music education, 250, 251
 DMG, 21
 Doctor Dolittle, 45
 dodecaphonic, 129
 Donnelly, Jason, 21
 dopamine neurons, 128
 downsampling, 163
 Dre, Dr., 8

Driscoll, S., 90, 103
 DSP *See* digital signal processing, 218
 Dubnov, Shlomo, 17, 153
 dubstep, 21
 Dufay, Guillaume, 128
 duo performance, 154
 dynamic structure, 50
 dynamic texture model, 133
 DYNUFAM index, 140

E

earmarks, 39
 EarMaster, 252
 ECG *See* electrocardiogram, 223
 economic utility theory, 140
 EEG, 83, 205, 206, 208, 209, 210, 211, 218, 219, 222, 223, 227, 231, 232, 233
 Eigenfeldt, Arne, 91, 93
 Eisenberg, Evan, 56
 electrocardiogram, 223
 Electroencephalography *See* EEG, 205
 electronic dance music, 130
 electronic keyboard, 239, 242, 249
 electronic metronome, 243
 electronic music, 122, 130
 electronic persona, 56
 e-licktronic, 202
 emo-tagging, 233
 emotion, 46, 47, 48, 50, 58, 67
 Emotiv Epoc, 205, 206, 207, 208, 209, 210, 211, 232, 233
 emulation, 69
 Eno, Brian, 47, 71, 127, 130
 entropy, 135, 138, 140, 142, 143, 146, 147, 151
 environment, 59
 environmental sound, 130, 160, 166
 equalizers, 52
 Erler, Sven, 21
 Euclidean distance, 179, 215, 227
 Evans, C. S., 59
 EVE', 140, 145, 146
 exaggeration, 66, 67
 Experimenta House of Tomorrow, 185, 186, 187
 expert system, 133
 explicit classification, 139
 expressive gestures, 34

F

Facebook, 9, 23
 Factor Oracle, 135, 136, 141, 152
 faders, 35
 Fakebit Polytechnic, 202

false note, 132
 Fanning, Sean, 4
 Farrell, Kelly, 26
 Faust, 71
 feature extraction, 160, 179, 180
 FeelSound, 81
 Fender, Leo, 3
 fiber optic, 4
 fidelity, 49, 56
 field recording, 130
 Flood, Daniel, 201
 Florence Cathedral, 129
 Flotsam, 190, 191, 192, 193, 194
 Flurry, Henry, 14
 FM spectrum, 191
 Folgieri, Raffaella, 205
 foot pedal, 154
 foreign language, 245
 Formalized Music, 132
 Fox, Liza, 19, 21, 26
 fractals, 133
 François, Alexandre R. J., 152
 Franklin, Carl, 15
 Fraunhofer Institute, 4
 Freeman, Clinton, 201
 frequency domain, 161
 Frith, Simon, 55
 Frith, W. T., 66
 furniture music, 130
 fuzzy logic, 252

G

Gabriel, Peter, 40, 71
 Gaga, Lady, 8
 Gaisburg, Fred, 29
 game, 47, 132, 205
 game command, 205
 game music, 207, 232
 gamer, 205
 game sound, 207
 Gann, Kyle, 121
 Gardner, Daniel, 21
 Gates, Bill, 3
 Gaussian distribution, 166
 General Layer, 134
 generative instrument, 130
 Generative Music Lab, 131
 generative procedure, 130, 131, 132
 Generative Theory of Tonal Harmony, 38
 genetic algorithm, 133
 genre classification, 166
 Georges, Cathy, 14
 Gerhäuser, Heinz, 4
 gesture interface, 82, 83, 84

gesture parametrization, 84
 gesture sonification, 83, 94
 Gilbert, Jesse, 14
 Gilmore, Steve, 26
 Girty, Gwen, 14
 Github, 201
 Glass, Philip, 38
 glissandi, 167
 Goina, M., 83
 Gonzalez, L.C., 19
 Goodall, Jane, 58
 Google, 1
 Google Ears, 17
 Google Play, 17
 Gotcher, Peter, 70
 Gräf, Albert, 71
 Grafen, A., 61
 Grammy Legend Award, 1
 grand stave, 241
 granular synthesis, 127
 Greenberg Traurig LLP, 8
 Green, Dave, 202
 Grixis, 21
 groove, 173
 Grove, Dick, 15
 gStrings, 246
 GTTH *See* Generative Theory of Tonal
 Harmony, 38
 Guetta, David, 25
 Guitar Hero, 84
 Gulf of Evaluation, 185

H

Haile/Pow, 103
 HAL 9000, 16
 Hammond, Kenneth R., 50
 Hancock, Herbie, 3, 172
 Hanning window, 208
 Hannu, Håkan, 21
 haptic interface, 81
 haptics, 81, 94
 haptic sensation, 192
 haptic vibration, 191, 192
 Hardin, Brett, 1
 Hargreaves, D., 48
 Harmonic Progression, 91, 93
 harmonics, 176
 harmonic similarity, 178
 harmonic transition, 110
 harmonization, 111
 harmony creation, 82
 harmony perception, 91
 Haris, Tony, 19
 Harper, David, 58

Hausdorff distance, 215
 Hauser, M. D., 59
 Hauxwell, Caroline, 201
 hedonomics, 186
 Hernández, A., 120
 hidden Markov model, 133, 177
 Hierarchical Sequential Memory for Music, 91
 hierarchical memory theory, 91
 Higgins, W., 242
 Hiller, Lejaren, 38, 132
 histogram, 166
 Hoffmann, G., 91
 Hong Kong Arts Centre, 13
 hook, 53, 54
 Hoxton Whores, 21
 Huff, Eric, 1, 14
 human-computer interaction, 159
 human-machine improvisation system, 100
 human voice, 238, 239
 Human Workplace, 16
 Hunchback of Notre Dame, The, 14
 Huron, D., 137, 145
 Hyperscore, 120

I

IADS *See* International Affective Digitized Sounds, 208
 IAPS *See* International Affective Picture System, 212
 IBM 704, 16
 ICA *See* Independent Component Analysis, 218
 IEEE 1599, 157,
 Imaginative-Tension-Predictive-Reactive-Appraisal, 145
 imitation, 36
 implicit memory integration, 139
 improvisational spontaneity, 123
 ImprovisationBuilder, 103
 improvised performance, 99
 Incremental Parsing, 135
 Independent Component Analysis, 218, 219
 Information Dynamics, 141, 153, 157
 Information Rate, 137, 138, 142, 143, 150, 158
 instant peer communication, 250
 instrumental fragment, 130
 instrumental improviser, 155
 instrumentalists, 15
 instrument identification, 180
 instrument recognition, 166
 Interactive Affect Design Diagram, 187
 interactive communication, 85
 interactive couch, 185

Interactive Entertainment BAFTA for Technical Innovation, 130
 interactive improvisation, 138
 interactive improvisation system, 102, 107
 interactive music system, 100, 159
 interactive sonification, 186
 interactive sound, 186
 International Affective Digitized Sounds, 208, 212
 International Affective Picture System, 212
 Internet, 4, 9, 244, 250, 251, 253
 Internet of Things, 185
 interpolation, 109
 inversion, 129
 Invisible Studios, The, 20
 IOSONO, 5
 iPad, 7, 127, 243
 iPhone, 17
 iPod, 7
 iPod Touch, 17
 IP *See* incremental parsing, 135
 IR *See* Information Rate, 137
 Isaacson, Leonard, 132
 isorhythmic technique, 128
 ITPRA *See* Imaginative-Tension-Predictive-Reactive-Appraisal, 145
 Itti, L., 145
 iTunes, 1, 17, 23
 Iyer, Vijay, 40

J

Jackendoff, Ray S., 38, 41, 63
 Jackson, Michael, 1
 Jagger, Mick, 57
 JayB, 19
 Java, 229
 Jean Hersholt Humanitarian Award, 1
 Jetsam, 190, 191, 192, 193, 194
 Jones, Craig, 26
 Jones, Quincy, 1, 17
 Juslin, P. N., 50

K

Kane, Helen, 19
 karaoke, 244
 Kasem, Casey, 17
 Kay, Alan, 3
 Kazaa, 6
 Keil, Charles, 40
 Kelly, Jr. John L., 16
 Kersten, Stefan, 71
 key signatures, 242
 kinesthetic learner, 245, 247
 Kinetic engine, 91

King, Jr. Martin Luther, 19
 Kivy, P., 67
 Klaar, Pia, 23
 Klaassen, Sjors, 19
 Knight, Laura, 1
 knowledge engineering, 133
 Koan, 130
 Kolmogorov Dynamics, 143
 Korg nanoKONTROL, 116
 Kramer, Lawrence, 44, 63
 Krata, Ira, 244
 Krebs, John R., 58
 Kuhn, Wolfgang E., 240
 Kundera, Milan, 129

L

Labson, Erick, 21
 Lagan, 190, 192, 193, 194
 language games, 64
 language of time, 166
 Lanois, Daniel, 61
 latent parameter, 145
 Latifah, Queen, 6
 Laukka, P., 50
 learning algorithm, 136
 LeBeau, Brad, 26
 Leder, H., 139
 Lee, Inessa, 7
 Lee, Joey, 11
 Lee, Newton, 2, 14
 Lee, Phil, 23
 Lefford, M. Nyssim, 18
 Legge, Walter, 29
 Lempel-Ziv, 135
 Lerdahl, Fred, 38, 41, 63
 Letterman, David, 9
 Levey, Robin, 14
 Lewis, George, 101, 123, 134
 Libera Awards, 6
 Library of Congress, 16
 life science, 91
 linguistics, 43
 Linn 9000, 4
 Lion King Animated Storybook, The, 14
 listening process, 138, 146
 Logic Layer, 134
 Long Term Memory, 91
 looping, 130
 lossy compression, 135
 Lucier, Alvin, 83
 Luleå University of Technology, 72
 lyrics, 44, 46, 47, 50, 52, 54, 55, 63
 LZ *See* Lempel-Ziv, 135

M

machine clock, 154
 machine improvisation, 100, 101, 102, 105,
 106, 107, 134, 136, 138, 141, 152, 157
 machine learning, 91, 128, 133, 159, 160, 177,
 178, 180
 machine listening, 159, 160, 164, 166, 174,
 179, 180
 Machinima, 23
 Macintosh SE, 13
 magnetic tape, 239
 MahaDeviBot, 89, 91
 Mahalanobis distance, 222
 Main, Katie, 14
 Malinowski, Stephen, 247
 mand, 62
 Mandela, Nelson, 19
 manipulator, 58, 61, 66
 Mappe per Affetti Erranti, 83, 89
 Marimba robot, 89
 Markov chain, 127, 131, 133, 137
 Marler, P., 45, 59
 Martin, George, 17
 masterclass, 251
 mastering, 21
 mathematics, 16, 32
 Mathews, Max, 16
 Matthias, Dave DJ, 26
 Maxis, 127
 Max/MSP, 71, 102, 132, 153, 155
 Maynard-Smith, John, 58
 Mazzoni, Dominic, 70
 MCA, 3
 McCarthy, John, 252
 McCartney, James, 71
 McComb, K. T., 58
 McDermott, J., 90
 Media Development Authority, 11
 Mediated Communication, 84
 Mel-Frequency Cepstral Coefficients, 144,
 164
 melodic cycle, 128
 melodic patterns, 50
 melodic riff, 53
 Melody-Morph, 84
 Messiaen, Olivier, 115
 metadata, 5
 metronome, 243
 Meyer, L. B., 137
 Meyer, Leonard B., 38
 MFCCs *See* Mel-Frequency Cepstral
 Coefficients, 144
 Michigan Leading Edge Technology Award,
 14

- micro-coordination, 79, 80, 85, 95
- microphone, 51, 52, 54, 219, 237, 245
- MIDI, 82, 101, 102, 105, 115, 116, 117, 132, 134, 135, 152, 154, 160, 178, 202, 240, 242, 245, 249, 253
- Migamo, 132
- Mignone, Thomas, 23
- Miko, Hatsune, 56
- Miller, K., 84
- Million Song Dataset, 179, 180
- Mimi, 152, 153
- Mimi4x, 100, 116, 117, 118, 119, 120, 121, 122, 123
- mind reader, 60, 61, 62
- minimalism, 130
- Minuet, 129
- Miracles, The, 50
- MIREX *See* Music Information Retrieval Evaluation eXchange, 180
- MIROR project, 84, 93
- mixing, 20, 82, 127
- mixing console automation, 35, 49
- MMO *See* Music Minus One, 244
- mobile device, 193
- mobile instrument, 89
- monologue communication, 89
- monophonic texture, 246
- Monte Carlo Markov chains, 91
- Montgomery, Monk, 3
- mood estimation, 180
- MoodMixer, 83
- Moorefield, Virgil, 39, 44, 54
- Moore, Scottie, 56
- Motown, 3, 50
- Mozart, 37, 129
- Mozzi, 186, 194, 195, 196, 197, 198, 199, 201, 202
- MP3 Surround, 6
- MP3 *See* MPEG-1 Layer 3, 1
- MPEG-1 Layer 3, 4
- MPEG-2, 4
- MTV, 1
- multidimensional directed information, 223
- multi-instrumental ensemble, 167
- Multimodal Interaction for Musical Improvisation, 99
- Multimodal Music Interaction, 81
- Munoz, E. E., 89
- musical automatons, 37
- musical collaboration, 79, 84, 85, 93, 94
- musical creation process, 100
- musical data, 127, 140
- musical expectation, 137, 140
- musical experience, 130, 137
- musical expression, 79, 80, 81, 82, 83, 84, 85, 86, 87, 89, 92, 94, 95
- musical fruit fly experiment, 201
- musical gesture, 59, 62, 68
- musical instrument, 80
- Musical Instrument Digital Interface *See* MIDI, 249
- musical interaction, 80, 82, 87
- musical interpretations, 38, 51
- musical language, 129, 241, 245
- musical meta-creation, 91
- musical notation, 34, 241, 249
- musical pattern, 33, 34, 35, 38, 46, 60, 70
- musical performance, 34, 35, 36, 37, 40, 48, 66, 68, 71, 84
- musical phrase, 93
- musical score, 138, 153
- musical signal, 128, 157
- musical sonification, 189
- musical structure, 128, 130, 133, 134, 137, 138, 141, 145, 149, 150, 154, 157
- Music Animation Machine, 247, 248
- music classification, 180
- music classroom, 238
- music composition, 13, 38, 41, 71, 82, 205, 207, 239, 244
- MusicDb, 91
- music education technology, 240
- music educator, 237, 238, 239
- music entertainment tool, 205
- music evaluation, 139
- Music for Solo Performer, 83
- musicianship, 178
- music improvisation, 135
- music informatics, 160, 166
- Music Information Dynamics, 128, 142, 156
- Music Information Retrieval Evaluation eXchange, 180
- music listening, 63
- Music Minus One, 244
- musicological analyses, 134
- musicology, 43
- music pedagogy, 238, 240, 249, 251, 252
- music perception, 90, 95, 128, 137, 157
- music producer, 18, 29, 53
- music production, 17, 18, 33, 67, 205, 207
- music recommendation services, 159
- music recording, 29, 30, 35, 42
- music retrieval, 133
- music rudiments, 240, 242
- music similarity, 174, 180
- music stream, 116, 118, 122
- music technology, 79, 80, 90, 238
- music video, 19

- Music Week, 17
 Musikalisches Wurfenspiel, 129
 musique d'ameublement, 130
 musiXmatch, 17
 mutual engagement, 87
 mutual modifiability, 87
 myographic interface, 205
 myographic signal, 207
 MySpace, 9, 23
- N**
- Nakanishi, Yoshihito, 202
 nanotechnology, 3
 Napster, 4
 Narmour, Eugene, 137
 National Academy of Recording Arts and Sciences Heroes Award, 6
 National University of Singapore, 11
 natural listening environments, 53
 natural selection, 59, 60
 Netflix, 1
 neural network, 94, 133, 178, 223
 neurophysiology, 128
 neuroscience, 90, 95, 128
 Neurosky MindWave, 206, 207, 208, 209, 210, 211, 232, 233
 Newman, Allyson, 18
 New Music Seminar, 6
 New York City, 245
 New York University, 159, 240
 Ngee Ann Polytechnic, 11
 Ng, Kenneth, 14
 Nimoy, Leonard, 13
 Noatikl, 130, 131
 noisy signals, 47, 49
 non-musician, 79, 80, 81, 84, 93
 non-negative matrix factorization, 180
 normalize levels, 32
 Norman, Donald, 185
 North, C., 48
 Northwestern University, 238
 Notational, Performance and Audio Layers, 134
 novelty detection, 166, 169
 novelty function, 167, 170, 171, 172
 Nuper Rosarum Flores, 129
 Nyxl, 21
- O**
- off-pitch, 238
 Oh, Mina, 14
 OMax, 102, 103, 134, 152, 153
 on ground, 250
 online music education, 251
 onset, 166, 170
 onset detection function, 167
 onset pattern, 174
 onset strength signal, 167
 OpenMusic, 102
 OpenMusic/Max, 152
 OpenSound Control, 102
 opportunistic overlay improvisation, 92
 Oracle visualization, 105, 107
 orbitofrontal cortex, 128
 orchestration, 239
 organized duration, 166
 Orlarey, Yann, 71
 oscilloscope, 245, 246
 OsciPrime, 246
 Osgood, Charles E., 62
 Owren, M.J., 48
 Oxenham, A. J., 90
- P**
- Pachet, F., 103
 Page, David, 3
 Paine, G., 89
 Pape, Dave, 202
 Paramount Recording Studios, 20
 participatory skills, 43
 Pasquier, Philippe, 93
 passing melody, 177
 Patcher, 71
 pattern matching, 160
 Peermusic, 20
 peer pressure, 61
 peer-to-peer file sharing, 1
 Peeters, Geoffroy, 173
 Peloušek, Václav, 202
 pentatonic scale, 128
 People Inside Electronics, 108, 111
 perception, 30, 32, 38, 43, 47, 50, 59, 66, 67
 perceptual analyses, 139
 percussive sound, 177
 performance visualization, 103, 107
 Performing Information, 153
 Perry, Katy, 8
 personalized radio streams, 159
 Personal Orchestra, 92
 personnages rythmiques, 115
 Petri Nets, 133, 134
 Phillips, Sam, 56
 phrase structure, 166
 physiological psychology, 137
 physiology, 46, 51, 52, 67
 piano roll notation, 103
 piano rolls, 9
 PICAXE, 187, 189

Picchiotti, Mark, 21
 Pierce, John, 16
 piezo buzzer, 193
 piracy, 9
 pitch, 174
 pitch change, 131
 pitch detection, 91
 pitch structure, 166
 Pittman, Carrie, 14
 Plank, 81
 Plato's Stepchildren, 13
 playlisting, 166
 PLP *See* predicted local pulse, 172
 Pocahontas, 14
 Polotti, P., 83
 polymath, vii, 36
 polyphonic ensemble, 167
 polyphonic texture, 113, 246
 polyphony, 135
 Polyplayground, 132
 Pomona College, 108
 popular music, 35, 42, 43, 44, 47, 53, 56, 129, 130
 predicted local pulse, 172
 predictive model, 133
 Presley, Elvis, 56
 probabilistic functionalism, 50
 probabilistic model, 103
 Probabilistic Suffix Tree, 135
 procedural literacy, 32
 procedural representations, 34
 Processing, 229
 processing algorithm, 71
 programming language, 71
 Prokofiev, Sergei, 144, 147, 148
 ProTools, 70
 prototypicality, 139
 PSO *See* Public Sound Objects, 86
 PST *See* Probabilistic Suffix Tree, 135
 psychoacoustic phenomena, 130
 psychology, 43, 48
 Public Sound Objects, 86
 Puckette, Miller, 71
 Puckette, M. S., 102
 pulse train algorithm, 192
 Pulse-Width Modulation, 192, 196
 Pure Data, 71, 153, 195
 Puzzle, DJ, 21
 PWM *See* Pulse-Width Modulation, 192
 PyOracle, 135, 153, 154, 155, 156
 Pythagoras, 128
 Pythagorean tuning, 128
 Python, 155, 196

Q

Q-transform, 212
 quantize performances, 32
 quartets, 243
 Queensland University of Technology, 202
 query-by-example, 178
 Query by Humming, 6

R

Ramachandran, V. S., 66
 Rare, Joe, 21
 RCA-Victor, 3
 reacTable, 81
 real sonification, 84
 Recording Industry Association of America, 6
 recording session, 20, 29
 Recurrence Plot, 223, 227
 RED camera, 26
 Reddy, V., 61
 redundancy, 63
 referentialist view, 137
 Reich, Steve, 38
 Reidsma, Dennis, 87
 remixes, 21
 Renaissance, vii, 13, 17
 Requiem For Methuselah, 14
 retrograde, 129
 reverberation, 33, 52, 54
 reversal-recognition, 145
 reverse metronome calculation, 243
 Reyes, Jonathan, 19
 Reynolds, Roger, 138
 rhythm, 160, 166, 169, 170, 171, 173, 174
 rhythm creation, 82
 rhythmic activity, 121
 rhythmic cells, 115
 rhythmic cycle, 128
 rhythmic patterns, 50
 rhythmic phrase-matching improvisation, 92
 RIAA *See* Recording Industry Association of America, 6
 Richie, Lionel, 3
 Riley, Terry, 38, 120, 121
 RMFH, DJ, 19
 Robinson, Smokey, 50
 robotic drummer, 103
 robotic music-making, 90
 robotic performer, 86
 robotics, 159
 Rock & Roll, 3
 Rock & Roll Hall of Fame, 1
 Rodgers and Hammerstein, 13
 Rojas, Heidi, 19

- Romanticism, 129
 rondo, 114, 115
 Rosario, Ralph, 21
 Rubin, Rick, 49
 Rudolph, Ilonka, 21
 rule-based system, 123
 Rumba, 173
 RuPaul, 6
 Russian Arm, 26
 Ruthmann, Alex, 240
 Ryan, Liz, 16
- S**
- SAI *See* Software Architecture for Immersipresence, 100
 sampler, 71
 Sanger, J., 83
 Satie, Erik, 130
 Saturday Night Live, 9
 Schankler, Isaac, 108, 111
 schizophrenic performance, 84
 Schoenberg, Arnold, 129
 Schubert, Franz, 244
 Scriabin, Alexander, 103
 seagull, 66
 sea-wave sound, 192
 Second Life, 23
 second voice, 113
 Seinfeld, Jerry, 8
 Seitzer, Dieter, 4
 semantic analysis, 127
 semantic meaning, 44, 47, 50
 serialism, 129
 Serrie, Keir, 14
 Seyfarth, R. M., 59, 65
 Sharman, James, 21
 Shawl, David, 23
 Shazam, 17
 sheet music, 13, 38
 Shimon, 86, 91, 92, 93
 Short Term Memory, 91
 short-time Fourier transform, 176
 side-chaining, 131
 signal energy, 167
 signaling, 57, 58, 59, 65
 signal processing, 52, 53, 54, 55, 70, 71, 127, 130, 159, 174
 signal processing algorithm, 127
 signal processors, 49, 51
 signal segmentation, 167
 signature, 39, 42, 51, 54, 68, 133
 signature patterns, 39
 Silverman, Tom, 6, 17
 Sinatra, Frank, 51
 sine wave, 189, 196, 197, 199, 201
 sine wave sonification, 189
 Sinfonia, 252
 singer, 19, 44, 46, 47, 51, 52, 54, 55, 56, 57, 58, 60, 61, 64, 65, 66, 67, 72, 238
 sinusoid, 170, 171, 172
 Sirbu, Ana, 19
 Sirbu, Radu, 19
 Skinner, B. F., 62
 Smart Board, 250
 SmartMusic, 244, 252
 smart phone, 185, 186, 188, 189, 190
 Smart Thing, 185, 186, 189, 190, 191, 192, 193
 social activity, 43, 60, 65
 social awareness, 90, 92, 95
 social behavior, 92, 95
 social bond, 65
 social cohesion, 64, 69
 social construct, 65
 social interaction, 43, 46, 51, 56, 61, 65, 72
 social media, 240
 social musical collaborator, 92
 Social Sciences and Humanities Research Council of Canada, 72
 soft synths, 71
 Software Architecture for Immersipresence, 100
 software synthesizes, 71
 solar panel, 186
 solo instrument, 239
 solo performance, 154
 SoMax, 134, 152
 songfulness, 44
 Song Reader, 38
 songwriter, 18, 19, 55, 64
 sonic features, 41, 43, 47, 62, 68
 sonic feedback, 186, 193
 sonic interface, 185
 sound art, 130
 sound engineer, 20, 31
 SoundExchange, 6
 SoundHound, 17
 sound libraries, 245
 Sound Meter, 246, 247
 Soundpainting, 119
 sound quality, 32, 39, 41, 49, 72
 sound quality assessment, 41
 Soundscape, 130
 sound source, 33, 56
 sound synthesis, 34, 36
 Sparkfun, 190

sparse coding, 179, 180
 spatial dislocation, 87
 Spatial Dislocation, 86
 Spector, Phil, 41
 spectral centroid, 161, 162
 spectral envelope, 161, 162, 163, 164, 165
 spectral flatness, 161
 SpectralGL, 15
 spectral spread, 161
 spectrograph manipulation, 82
 speech, 45, 46, 61, 89, 160, 161, 166, 177
 speech interface, 188
 Spheeris, Penelope, 25
 spontaneity, 123
 spontaneous exclamations, 54
 Spotify, 23
 Squeak, 2
 Staalhemel, 83
 Standuino, 202
 Star Trek, 13
 Star Trek in the 20th Century Club, 13
 static harmony, 130
 statistical model, 133, 157,
 statistical music modeling, 128
 statistical regularities, 160
 Stewart, Thomas R., 50
 STFT *See* short-time Fourier transform, 176
 stochastic procedure, 132
 stochastic process, 103
 stochastic system, 123
 straight tone, 238
 Stravinsky, Igor, 115, 137
 striatum, 128
 string quartet, 132
 structural disturbance, 63
 structural improvisation, 119, 123
 Structural Layer, 134
 subtractive synthesizer, 161
 suicide note, 62
 Supercollider, 71
 super stimulus, 66
 Surges, Greg, 17, 153
 surprisal, 145
 surround sound, 53, 69
 surveillance, 159
 Swanson, Stephanie, 26
 Sweatsonics, 189
 swing, 173
 Swingle, Elizabeth, 14
 symbolic chord sequence, 179
 symphonic orchestra, 240, 243
 synchronicity, 161
 synchronization, 86
 synthesizer, 186, 189, 193, 202, 249
 synthetic harmony, 131
 synthetic instrument, 71

T

tactile interface, 81
 Takahashi, M., 90
 talea, 128
 tangible interface, 84, 94
 Tarumi, H., 90
 Tatar, D., 80
 techno, 21, 131
 teleological component, 122
 television, 9, 140
 Temple, Shirley, 57
 Temporal Dislocation, 87
 temporal ordering, 166
 temporal structure, 166
 temporal variation, 161
 ten-hand piano, 86
 tenor clef, 241
 theremin, 83, 189
 theta band, 206, 211
 Thom, B., 103
 Thompson, Walter, 119
 Thompson, W. F., 89
 thresholding, 170
 Thurmond, Dennis, 100, 105, 106
 Tiesto, 25
 timbral improvisation, 153
 timbre, 34, 44, 46, 51, 52, 54, 55, 56, 58, 160,
 161, 174, 177, 179
 time-domain signal, 163, 167
 Tinbergen, N., 66
 Toast, Michael DJ, 26
 Toft, R., 52
 Tommy Boy Records, 6
 tonal analysis, 174
 tonal harmonic language, 130
 tonality, 174
 tone-deaf, 245
 tone transition, 111
 totalism, 121
 touch-interface, 94
 touchscreen interface, 188
 T-Pain, 20
 tracking, 20
 transient, 167
 transient noise, 170, 177
 Transition Network, 133
 treble clef, 241
 tremolo, 167
 Trevarthen, C., 64
 Tudor, David, 122
 tuneblocks, 120
 Tuomenoksa, Mark, 14
 Turkish music, 174
 twelve-tone, 129
 twisted pair, 4
 Twitter, 185

U

U2, 47
 uncompressed complexity, 138
 Universal Mastering Studios, 21
 Universal Serial Bus *See* USB, 249
 Università degli Studi di Milano, 205
 University of California in San Diego, 127
 University of Illinois, 132
 USB, 249
 user experience, 207
 user interface, 86, 242
 USSachevsky Memorial Festival, 108
 U.S.S. Enterprise, 14

V

valence, 187, 208, 209, 210, 211, 212, 214,
 215, 217, 225, 227, 233
 Variable Markov Models, 135
 Varni, G., 86, 89, 90, 92
 verbal channel, 85, 93
 Vercoe, Barry, 71
 Verplank, Bill, 80, 81
 VGA *See* video graphics array, 241
 vibrato, 167, 238
 video game, 132
 video graphics array, 241
 Viewpoints Research Institute, 11
 vinyl record, 239
 virtual conductor, 83, 87, 88, 93
 virtual control surfaces, 36
 virtual improviser, 134
 virtual musician, 94
 virtual orchestra, 83, 88, 92
 virtuosity, 89, 93
 Visconti, Tony, 54
 Visions Fugitives, 144, 147, 148, 150, 151
 visual channel, 85
 visual feedback, 86
 visual interface, 100, 102, 103, 105, 106, 107,
 116
 visual learner, 245
 visual stimulus, 211, 212, 214, 215, 234
 VMM *See* Variable Markov Model, 135
 vocal communication, 46, 57, 68
 vocal expression, 46, 48
 vocal performance, 30, 44, 46, 49, 55, 57, 64,
 65, 67, 69
 vocal persona, 55, 57, 65, 72
 vocal recording, 20, 29
 voice shaping technologies, 71
 Voice, The, 9
 Von Mallasz, Sándor, 26

Voyager, 101, 103, 123, 134
 vX.O, 202

W

Walker, Evelyn G., 62
 Walker, W. F., 103
 Ward, K. P. N., 83
 Waterhouse, Matt, 26
 Watson Fellowship, 15
 Wave Field Synthesis, 5
 Wayfaring Swarms installation, 83
 Way to Eden, The, 14
 Webber, Peter R., 250
 webcast, 9
 webinar, 250
 Webster, Peter R., 238, 240
 Weinberg, G., 90, 91, 103
 Western historic music, 246
 Western music, 130, 138
 Western musical styles, 41
 Western music notation, 34
 Western pop music, 178
 Western tonal harmony, 34, 38, 43
 Western tonal music, 174
 whispers, 53
 White, Jack, 55
 Wifi Washing Machine, 185
 Wiley, R., 62
 Will, DJ, 26
 will.i.am, 13, 16
 Wilson, Brian, 44
 Winehouse, Amy, 64
 Winnie the Pooh and the Honey Tree, 14
 Wittgenstein, Ludwig, 47, 64
 W., Kristine, 6
 WoMax, 102
 Woodbury University, 15
 Wukovitz, Stephanie, 14
 Wyar, Bob, 14

X

X, Princess, 19, 25
 Xenakis, Iannis, 129, 130, 132

Y

Young, La Monte, 38
 YouTube, 1, 9, 23, 120, 253
 Yuldashev, Bakhodir, 23

Z

ZiZi, 186, 187
 Zorn, John, 119, 121