

# Index

## Symbols

$\alpha$ -synuclein 213, 215, 216, 217, 218, 219  
 $\beta$ -amyloid deposits 118, 119  
 $\gamma$ -rays 145

## A

active touch 97  
Activities of Daily Living (ADL) 112, 113, 114, 245, 248, 250, 251, 255, 312, 314  
Activity of Daily Living (ADL) Index 192, 195, 197, 198  
aging rate 365, 366, 367, 370  
Akaike's information criterion (AIC) 186, 187, 188, 189  
Alzheimer disease (AD) 72, 73, 79-2, 86-90, 96, 97, 107-129, 132-143, 147, 148, 154, 156, 158-166, 184, 201-241, 364, 367  
Alzheimer disease Neuroimaging initiative (ADNI) 231, 232  
amyloid beta (A $\beta$ ) 125, 126, 127, 128, 129, 130, 131, 212, 213, 215, 219, 221, 222, 223, 224, 225, 226, 227, 229  
amyloid precursor protein (APP) 125, 126, 127, 130, 131, 207, 210, 213  
Amyloid  $\beta$  Imaging (A $\beta$  Imaging) 221, 222, 223, 224, 225, 226, 227, 229  
amyloid  $\beta$ -peptide 90, 97, 118, 119, 120, 121, 122  
analysis of variance (ANOVA) 83, 108, 109, 283  
anesthesia 198  
Apolipoprotein E (ApoE) 126, 127  
apoplexy 336  
apparent motion 11, 12, 13, 17

apraxia 141, 142, 143, 144  
arousal assist 182  
arterial wall impedance 326, 328, 334  
arterial walls 326, 328, 331, 334  
arteriosclerosis 327, 334  
audiovisual integration 80, 81, 82, 86, 87, 88  
auditory stimuli 80, 81, 82, 83, 86  
auditory verbal memory 99, 100  
average life expectancy 365, 366, 367, 368, 369, 370  
axonal alignment 200  
A $\beta$  fibrils 126, 128, 129  
A $\beta$  oligomer 126, 128, 129, 131

## B

BACE1 118, 119, 120, 121, 123, 124  
background brightness 75, 76, 77, 78, 79  
beamforming 9, 10, 11, 17  
beta-site amyloid cleaving enzyme (BACE) 125  
bilateral assistance rehabilitation 293, 295, 296, 302, 303, 305  
bilateral coordination rehabilitation 293, 296, 302, 303, 305  
bilateral coordination training 293, 296  
bimodal audiovisual 81, 82, 86  
binaural level 70  
binding potential (BP) 224, 225, 227  
biogenic information 193  
biological measurements 172, 180  
biomagnetic field 10, 15  
biomedical signal 329  
bismuth germinate (BGO) 146  
Bland-Altman plots 245, 247, 255  
blood-brain barrier (BBB) 226

- blood flow 193  
blood oxygenation level dependent (BOLD) 11  
blood pressure (BP) 193, 194, 326, 327, 328, 329, 330  
Bon-odori 262  
brain function 163  
brain imaging 236, 237, 238  
brain rehabilitation 258, 259, 260, 277, 278, 279
- C**
- Category Fluency Test (CFT) 100, 101, 102, 103  
central nervous system (CNS) 207, 208  
central neural systems 194  
cerebral amyloid angiopathy (CAA) 125, 238, 241  
cerebral blood flow (CBF) 148, 149, 154, 155, 232  
cerebral blood vessels 242  
cerebral blood volume (CBV) 239  
cerebral cortex 233  
cerebral metabolic rate of glucose (CMRglc) 221, 222  
cerebral metabolite rate of oxygen (CMRO<sub>2</sub>) 148, 149, 155  
cerebrovascular accident 318  
changes of the spectra 66, 70  
charge-coupled device (CCD) 239, 240  
Chinese character 38, 40, 41, 42, 43, 44  
Chinese logographs 38  
cholesterol homeostasis 207  
cholinergic neurotransmission 114  
cholinesterase inhibitor 112  
chronic stroke 307, 308, 310, 311  
chylomicrons 210  
classical music 257, 260, 261, 262, 264, 265, 266, 267, 269, 274, 278, 279  
Clinical Dementia Rating (CDR) 90, 184, 190  
cognitive decline 107, 108, 110  
cognitive deficits 89, 90, 97  
cognitive deterioration 110  
cognitive disorders 221, 222  
cognitive domains 213  
cognitive functional disorders 72  
cognitive function impairment 73
- cognitive functions 8, 112, 115, 356, 357, 358, 361, 363  
cognitive impairment (CI) 8, 107, 108, 109, 184, 185, 186  
cognitive process 88, 171  
cognitive science 320, 324  
coimagination method 356, 357, 358, 359, 363, 364  
coimagination program 357, 359, 361  
collagen 327, 334  
communication skills 192, 195, 196, 197  
Complementary and Alternative Medicines (CAM) 260  
conceptual apraxia 141, 142  
confocal laser scanning microscope 163  
constellation graphs 195  
Continuous Passive Motion (CPM) 313, 314, 318  
contracture 313, 314, 318  
contrast ratio 76, 77, 78, 79  
conversation digraphs 360  
Conversation Interactivity Measuring Method (CIMM) 356, 357, 359, 361, 362, 363, 364  
cortical areas 182  
cortical neuron 281, 283, 285  
corticobasal degeneration 142, 143, 144  
Cumulative Distribution Function (CDF) 80, 84, 85, 86, 88  
cyanoacrylate glue 237  
Cyclotron 155
- D**
- Degree of Required Care (DRC) 266  
degrees-of-freedom (DoF) 305, 313, 314  
dementia 65, 66, 69, 70, 108-115, 125, 127, 131, 141, 142, 143, 184, 189, 190, 192, 195-198, 221, 222, 223, 231, 233, 234, 241-261, 266, 268, 271, 272, 274-279, 356, 357, 362-370  
dementia patients 257, 258, 259, 260, 261, 266, 271, 272, 274, 275, 276, 279, 365, 367  
dementia with Lewy bodies (DLB) 201, 202, 212, 213, 214, 215, 216, 217  
deoxygenated hemoglobin (deoxyHb) 168

depopulated area 370  
 deterministic tractography 201  
 Diagnostic and Statistical Manual of Mental Disease, Fourth Edition (DSM-IV) 108, 111, 113  
 Diagnostic and Statistical Manual of Mental Disorders (DSM-IIIR) 126  
 diffusion tensor imaging (DTI) 199, 200, 201, 204, 205  
 distal interphalangeal (DIP) 313  
 distribution volume (DV) 221, 224, 225, 227, 230  
 distribution volume ratio (DVR) 221, 226  
 division of attention 356, 357, 358, 361, 363, 364  
 donepezil 107, 108, 110  
 dopamine 145, 146, 149, 150, 151, 153, 154, 155  
 dorsal motor nucleus (DMV) 163  
 dorso-dorsal (d-d) 157, 159  
 dorsolateral prefrontal cortex (DLPFC) 35, 36  
 driver's license 366, 367, 369, 370  
 driving simulators (DS) 173, 174  
 dynamic perimetry 73, 74, 75, 79

## E

early-stage dementia 344, 345, 350, 354  
 Edokomoriuta 257, 265, 266, 267, 271, 272, 273, 274, 275  
 EEG source localization 133, 134, 135, 136, 137, 138  
 elderly patients 184, 185, 187, 189, 191  
 electrocardiogram (ECG) 172, 173, 174, 182, 329  
 electroencephalogram (EEG) 132, 133, 134, 135, 137, 138, 139, 140, 174, 178  
 electromyogram (EMG) 335, 336, 337, 338, 339, 341, 342, 343  
 electron microscopes 163  
 electrooculograms (EOG) 173, 182  
 EMG signals 335, 338, 339, 341  
 endothelial cells 334  
 epi-illumination fluorescence microscope 163  
 episodic memory 356, 357, 359, 363, 364  
 equivalent current dipoles (ECDs) 10

ethnic music 261, 263, 278, 279  
 event-based prospective memory (PM) task 106  
 event-related potentials (ERP) 55, 56, 60, 63, 64, 156, 158, 159, 160, 161  
 executive function 99, 103, 106  
 extensor digitorum muscle 338  
 ex vivo systems 240

## F

face perception 55, 61, 62, 63, 64  
 false discovery rate (FDR) 40, 41  
 familial AD (FAD) 118  
 Fast Fourier Transform (FFT) 134, 135, 266, 271, 273  
 feedback loops 193  
 fingertip trajectory 321, 322, 323  
 finger trajectory 321, 323  
 finite impulse response (FIR) 329  
 first dorsal interosseus (FDI) 280, 282, 283  
 flexor digitorum profundus 337, 338  
 flexor digitorum superficialis 337, 338  
 fluorescein isothiocyanate (FITC) 237, 238  
 Foramen Magnum Stimulation (FMS) 282, 283, 286  
 forward stepwise (FSW) 186, 187, 188, 189  
 four-degree-of-freedom (4DOF) 319, 320, 321  
 frontal cortex 167, 168, 170  
 frontal lobe function 99, 103, 104, 106  
 frontal lobes 171  
 frontal plane 67, 68, 69, 70  
 frontotemporal dementia (FTD) 141, 142, 212, 213, 214, 215, 216  
 frontotemporal lobar degeneration (FTLD) 201  
 full kinetic analysis 221, 226, 229  
 full width at half maximum (FWHM) 10  
 Functional Independence Measure (FIM) 248, 249, 255  
 functional magnetic resonance imaging (fMRI) 9-20, 25, 36-40, 42-46, 48, 49, 52, 53, 54, 89, 97, 156-161, 168, 170, 222, 287, 288, 289, 291  
 functional near-infrared spectroscopy (fNIRS) 2, 6, 7  
 fundamental frequency 185, 190

## G

gadolinium orthosilicate (GSO) 146  
Gagaku 262, 263, 265, 267, 279  
generalized least squares (GLS) 9, 10, 11  
genotyping 126  
Geodesic electroencephalogram system 158, 159  
Gerstmann-Sträussler-Scheinker disease (GSS) 212, 213, 214, 215, 216, 217  
glial cytoplasmic inclusions (GCIs) 215, 216  
global assessment 115  
Global Deterioration Scale (GDS) 113  
global field power (GFP) 134, 135  
global motion 157  
global motion processing 157  
glucose metabolism 80, 81  
glycolipids 165  
glycoproteins 165  
glycosaminoglycans 165  
Goldmann perimeter 72, 73, 74, 79

## H

Han character 44  
Hand-Held Dynamometer (HHD) 245, 246, 249, 250, 251, 255  
hand-motor control 307  
haptic device 299, 300, 301, 302, 303, 305  
harmonic components 185  
heartbeat interval 174  
hemodynamics 170, 173, 182  
hemoglobin 171  
hexafluoroisopropanol (HFIP, Sigma) 127  
high magnetic field 287, 288, 291, 292  
high-spatial-frequency (HSF) 55, 57, 58, 59, 60, 61, 62  
hippocampus 206, 207, 208, 209, 210  
Hookean elastic spring 334  
horizontal motion (HO) 156, 157, 158, 159, 160  
horizontal plane 65, 66  
horseradish peroxidase (HRP) 128, 162, 163, 164, 165, 166  
Huperzine A 112, 113, 116

## I

ideational apraxia 141, 142  
ideomotor apraxia (IMA) 141, 142, 144  
inertial sensor 293, 295, 298, 299, 300, 301, 303, 305  
inferior frontal cortex (IFC) 38  
inferior parietal lobule (IPL) 156, 157, 159, 160, 161  
infinite impulse response (IIR) 329  
infrared rays 193  
In-Senpou 262, 264, 265  
Instrumental Activities of Daily Living (IADL) 346, 354, 355  
intellectual activity 346, 354, 355, 357, 363  
interactive communication 357, 358, 359, 364  
interactive conversation 356, 357  
interstimulus interval (ISI) 83  
intraclass correlation coefficient (ICC) 247, 248  
intraparietal sulcus (IPS) 11  
intravascular pressure 326, 327, 328, 329, 331, 333, 334  
intravital microscopy 236, 242  
Intrinsic optical signal (IOS) 236, 239, 240, 242  
in vitro experiment 327  
in vivo fluorescence imaging 237  
in vivo imaging 242  
in vivo systems 240  
in vivo tissue imaging 237  
involuntary attention 36

## J

Japanese and Caucasian Facial Expressions of Emotion (JACFEE) 57  
Japanese dementia patients 276  
Japanese music 257, 258, 259, 260, 261, 262, 263, 264, 265, 269, 272, 273, 274, 275, 276, 278, 279  
Japanese Music Therapy Association (JMTA) 260

## K

Kagomekagome 257, 265, 266, 267, 271, 272, 273, 274, 275

kinetic visual field 72, 73, 74, 75, 77, 78, 79  
 Kizoku 262, 263  
 knee extension strength 244, 246, 248, 249,  
   250, 251  
 Koto 262, 263  
 Kyoto 262, 264

## L

Largest Lyapunov Exponent (LLE) 192, 193,  
   194, 195, 196, 197  
 late components 55, 60, 61, 64  
 lateral geniculate nucleus 157  
 lateral geniculate nucleus (LGN) 19, 25, 26  
 Lawton's model 346, 354, 355  
 Letter Fluency Test (LFT) 100, 101, 102, 103  
 leukoaraiosis (LA) 1, 2, 3, 4, 5, 6, 7  
 Lewy body disease (DLB) 231, 234, 235  
 ligands 145, 146, 151, 153  
 limb kinetic apraxia (LKA) 141, 142, 144  
 line-of-response (LOR) 146  
 lipid-based regulatory mechanisms 209  
 lipoprotein disturbances 207  
 Lipoprotein lipase (LPL) 206, 207, 208, 209,  
   210  
 lipoproteins 207, 210  
 Logan graphical analysis (LGA) 221, 224, 225,  
   226, 227, 229  
 lower extremity function 244, 246, 249, 250  
 lower extremity functions of patients with  
   dementia 246  
 low-spatial-frequency (LSF) 55, 57, 58, 59, 60,  
   61, 62  
 lutetium oxyorthosilicate (LSO) 146

## M

macromolecules 166  
 magnetic isocenter 289, 291  
 magnetic materials 287, 288, 289  
 magnetic resonance imaging (MRI) 3, 4, 8, 89,  
   90, 91, 97, 158, 184, 201, 202, 205, 231,  
   235  
 Magnetocardiography (MCG) 14, 15, 17  
 Magnetoencephalography (MEG) 9, 10, 11, 12,  
   13, 15, 16, 17  
 magnetometer 9, 10, 13, 15, 16, 17  
 masking 66, 67, 69, 70, 71

master-slave system 312, 314, 315, 316, 318  
 mathematical models 192, 193, 194, 195  
 Maximal Lyapunov exponent (MLE) 182  
 Maximum Voluntary Muscle Contraction  
   (MVC) 280, 281, 282, 283, 284, 285,  
   286  
 mechanical impedance 326, 327, 334  
 medial temporal lobe (MTL) 38, 43  
 median plane 65, 67, 68, 69, 71  
 medical diagnostics 171  
 medical imaging 199  
 memantine 112, 113, 114, 115  
 memory clinic 143  
 Memory Impairment Screen (MIS) 184  
 memory training 110  
 mesh glove 308, 309, 310, 311  
 metacarpophalangeal (MP) 313  
 mild cognitive impairment (MCI) 98-106,  
   127, 129, 132, 133, 136-139, 143, 156,  
   158-161, 184, 213, 214, 215, 216, 219,  
   222-233, 350, 355, 356, 357, 364  
 mini-mental state examination (MMSE) 90,  
   100, 101, 102, 107, 108, 109, 110, 111,  
   112, 113, 114, 126, 133, 135, 138, 139,  
   184, 266, 268, 350, 351, 355  
 Ministry of Health, Labour and Welfare  
   (MHLW) 184  
 MMSE decline 108  
 MMSE score 107, 108, 109, 119, 126, 135,  
   138, 139  
 MMSE score decline 107, 108, 110  
 modal interpolation 2  
 modality-specific attention 80  
 molecular imaging 221, 228  
 Montreal Neurological Institute (MNI) 10, 49  
 motion patterns 158  
 motor cortex 280, 281, 282, 283, 285, 286, 308  
 motor disability 281, 285  
 motor disorders 312  
 Motor Evoked Potentials (MEPs) 280, 281,  
   282, 283, 286  
 motor recovery 308, 309, 310, 311  
 motor skills 171  
 movement disorder 312, 313, 318  
 mRNA 119, 124  
 multi-channel near-infrared spectroscopy  
   (MNIRS) 168, 170, 172, 173, 182

multi-photon 237  
multiple cognitive domains 213  
multiple system atrophy (MSA) 213, 214, 215, 217, 218  
music therapy 110, 257, 258, 259, 260, 261, 266, 267, 276, 277, 278, 279

**N**

nasal obstruction 169  
National Association for Music Therapy (NAMT) 260, 277  
National Institute of Neurological and Communicative Disorders and the Stroke-Alzheimer Disease and Related Disorders Association (NINCDS-ADRDA) 113, 126, 127, 133, 246, 253  
National Institutes of Health (NIH) 163  
near-infrared light spectroscopy (NIRS) 10, 16, 167, 168, 189, 222, 257, 260, 264, 267, 268, 269, 272, 273, 274, 279, 280, 281, 282, 283, 285, 286  
nervous systems 163, 166  
neural efferent signals 193  
neuroanatomy 54, 201, 205  
neurodegenerative disease 118, 124  
neurodegenerative disorder 125  
neurofibrillary tangles (NFTs) 213, 219  
neurofunctional disorders 336  
neuroimaging 1, 2, 26, 38, 43, 44, 54, 157, 199, 205, 222, 229, 230, 231, 235  
neurological impairments 293, 294  
neuroplasticity 293, 306  
Neuropsychiatric Inventory (NPI) 112, 113, 114  
neuropsychological decline 143  
neuroreceptor 146, 155  
neurorehabilitation 293, 295, 301, 305, 306  
neuroscience 53, 54, 230, 235  
neurotransmitter 151, 153, 154, 155, 162, 163, 164  
Newtonian damper 334  
Newton meters 321  
Nikon 164  
NIRS data 269  
noise covariance 11  
non-demented (ND) 119

non-linear methods 198  
normal cognitive abilities (NL) 184, 185, 186  
normosmic subjects 167, 168, 169, 170  
nuclear family 365, 370  
nucleus of the solitary tract (NST) 163, 164, 165, 166

**O**

odor stimulant 167, 169  
Okinawa 262, 264, 265, 266, 267, 269, 271  
olfactory activity 173, 181  
olfactory bulb 182  
olfactory cortex 182  
olfactory dysfunction 167, 168, 169, 170, 171  
olfactory function 167, 168, 169, 170, 171  
olfactory stimulation 169, 172, 173, 182  
olfactory tract 182  
oligomer hypothesis 126  
Optically Pumped Atomic Magnetometer (OPAM) 10, 13, 17  
optic flow (OF) 156, 157, 158, 159, 160, 161  
oxygenated hemoglobin (oxyHb) 168

**P**

parasympathetic values 196, 197  
Parkinson's disease (PD) 147, 149, 150, 154, 155, 167, 168, 169, 170, 214, 215, 231, 234, 235  
partially erased letters 8  
partial volume correction (PVC) 227  
parvocellular and magnocellular pathways 64  
passive touch 97  
periventricular hyperintensity (PVH) 4, 5  
Person-Centered Care 344, 345, 355  
PET data 145, 148, 150, 152  
PET images 151, 155  
PET scanner 146, 151  
PET scanning 145, 146  
pharmacokinetics 145, 147, 152  
photoelectric plethysmography sensors 194  
Photoplethysmography (PPG) 329, 334  
pinch and grasp 309, 311  
Pittsburgh compound-B (PiB) 125, 128  
planning function 356, 357, 358, 361, 363, 364  
plaque aggregates 165  
plethysmograms 192, 193, 194, 195, 197, 198

plethysmograph 182  
 polyvinylidene difluoride (PVDF) 128  
 positive predictive value 249, 255  
 positron 146, 153, 154, 155,  
 positron emission tomography (PET) 10, 19,  
     22, 26, 38, 133, 139, 140-155, 168, 170,  
     212-235  
 positron-emitting isotope 145  
 post-synaptic signal transduction 166  
 pre-AD 132, 133  
 presynaptic morphology 207  
 presynaptic neuron 155, 211  
 principal component analysis (PCA) 11, 17,  
     187, 188, 191  
 prion 213, 214, 215, 216, 218, 219  
 Prospective Memory (PM) 98, 99, 100, 101,  
     102, 103, 104, 106  
 protein misfolding diseases 212, 214, 217, 219  
 proteoglycans 165  
 proximal interpharangeal (PIP) 313

**Q**

quality of life (QOL) 260  
 questionnaires 257, 266, 267, 271, 272, 273

**R**

radio-knife 194  
 radioligand 145, 146, 147, 148, 150, 151, 152,  
     153  
 range of motion (ROM) 295, 303, 308, 309,  
     313, 314  
 Raven's Colored Progressive Matrices (RCPM)  
     100, 101, 102, 103  
 reaction products (RP) 163, 164  
 regional cerebral blood flow (rCBF) 114, 221,  
     222, 280, 281, 282, 286  
 regions of interest (ROIs) 215, 224, 227  
 reliability 244, 245, 246, 247, 248, 249, 251,  
     252, 254, 255  
 remembering the content 98, 99, 101, 103, 106  
 remembering to remember 98, 99, 101, 102,  
     103, 106  
 reminiscence therapy 110  
 Required Care (RC) 266, 268, 272, 273  
 Requiring Support (RS) 266, 268  
 retinotopic 26

retrospective memory 99, 102, 103, 104, 106  
 Revised Hasegawa's Dementia Scale (HDS-R)  
     183, 184, 185, 187, 188, 189, 190  
 Rey's auditory verbal learning test (RAVLT)  
     100, 101, 102, 103, 105  
 Rivermead Behavioral Memory Test (RBMT)  
     98, 99, 103, 104, 105  
 robot-aided rehabilitation 312, 318  
 robotic interface 313

**S**

selective attention 36  
 self-controlled rehabilitation therapy 312  
 semantic information 46  
 Senile Dementia of the Alzheimer Type (SDAT)  
     88  
 senile plaques (SPs) 213, 219  
 short term memory 345, 346, 355  
 short-time Fourier transform (STFT) 185  
 signal to noise ratios (SNR) 287, 289, 291, 292  
 single photon emission computed tomography  
     (SPECT) 114, 126, 132, 133, 139, 232  
 small interfering RNA (siRNA) 162, 163, 164,  
     166  
 smooth muscle 329, 331, 332, 334,  
 social living 345  
 social network 357, 363, 364  
 social role 346, 355  
 sound localization 65, 66, 68, 69, 71  
 spatial filtering 9  
 spatial frequencies 55, 56, 57, 58, 61, 62  
 spatial integration 36  
 speech prosody-based cognitive impairment  
     rating (SPCIR) 183, 187, 188, 191  
 spinal cord injury 307  
 spinal premotor center 310, 311  
 spin-exchange relaxation-free (SERF) 13  
 sporadic Creutzfeldt-Jakob disease (sCJD)  
     212, 213, 214, 215, 217, 219  
 standard deviation (SD) 12, 57, 245, 246, 247,  
     248, 249, 255  
 standardized Low Resolution Electromagnetic  
     Tomography (sLORETA) 132, 134, 138,  
     139, 140  
 standard uptake value (SUV) 148, 215, 217,  
     221, 223, 225, 226, 227

static visual field 73, 79  
Statistical Parametric Mapping 2 (SPM2) 40  
statistical parametric mapping (SPM 10, 16  
stimulus complexity 80, 81, 82, 86  
strength assessments 247  
structural imaging 237  
Super-Aging Society 279  
Superconducting Quantum Interference De-  
vices (SQUIDs) 10, 13, 17  
superior parietal lobule (SPL) 157, 159  
surface electromyogram (surface EMG) 335,  
336, 337, 338, 339, 341, 342  
surface EMG 312, 315, 316, 317, 318  
Syamisen 262  
sympathetic values 197  
synapses 206, 208, 209, 210, 211  
syntactic information 46

**T**

tactile display device 292  
tactile sense 287, 288, 289, 292  
tau 213, 218, 219  
terminal diseases 210  
Test of Upper Limb Apraxia (TULIA) 142, 144  
time-activity curve (TAC) 224, 225, 226, 227  
time-based prospective memory (PM) task 106  
time difference 66, 69, 70  
tool knowledge 141, 144  
topographic image pattern 180  
total hemoglobin (totalHb) 167, 168, 169, 170  
total vesicles (TV) 208, 209  
Touryanse 257, 265, 266, 267, 271, 272, 273,  
274, 275  
tracer technique 221  
tractography 199, 200, 201, 202, 203, 204, 205  
traffic accident 370  
Transcranial Magnetic Stimulation (TMS) 280,  
281, 282, 283, 284, 285, 286  
transmembrane aspartic proteases 118  
Transmission Control Protocol (TCP) 329  
transmission electron microscopy (TEM) 208,  
209  
triacylglycerols 210  
T&T olfactometry 169, 170, 171  
two-photon 236, 237, 241, 242  
Two-photon laser scanning microscopy  
(TPLSM) 236, 237, 238

two-photon microscopy 236, 242

**U**

ulnar epicondyle 338  
ultrasonic motor 288, 289, 290, 291, 292

**V**

V1: (BA17) 26  
V2 (BA18) 26  
V3 (BA19) 26  
V5/MT 19, 22, 27  
vascular dementia (VaD) 202, 205  
vascular impedance 334  
ventro-dorsal (v-d) 157, 159, 160  
vertical plane 65, 66, 67, 70, 71  
virtual force model 293, 296, 297, 301, 303  
virtual object 296, 298, 299, 300, 301, 302  
virtual reality (VR) 293, 295, 305, 306  
viscoelastic 326, 327, 328, 329, 330, 331, 334,  
viscoelastic model 326, 327, 328, 329, 330  
viscoelastic parameter 326  
viscous damping 300  
Visual Basic 6 (VB6) 321  
visual cortex (V1) 27, 157, 161  
visual field 72, 73, 74, 75, 77, 78, 79  
visual interpolation 1, 3, 8  
visual interpolation ability (VIA) 1, 2, 3, 4, 5,  
6, 7  
visual motion 157  
visual space recognition 73  
visual stimuli 158  
Voigt model 334,  
voltage-sensitive dye (VSD) 236, 240, 241  
voluntary activation (VA) 283, 286  
voluntary attention 36  
voxel-based morphometry (VBM) 140  
voxel-based specific regional analysis system  
developed for the study of Alzheimer's  
disease (VSRAD) 134, 136, 138, 139,  
140

**W**

welfare engineering 344  
wheat germ agglutinin (WGA) 162, 163, 164,  
165, 166  
white matter 8

white matter hyperintensity (WMH) 4  
word priming effect 54  
Word Stem Completion (WSC) 45, 46, 47, 48

**Y**

Yonanuki-Senpou 262, 264  
You-Senpou 262, 264, 265

**Z**

Zokugaku 262, 263, 265  
Zyun-Hougaku 262