## Symbol Table

Numbers in parentheses refer to chapters where the symbol is used as indicated.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>( b, b )</td>
<td>regression coefficient function(s) estimates</td>
</tr>
<tr>
<td>( c, c )</td>
<td>basis expansion coefficient(s)</td>
</tr>
<tr>
<td>( d )</td>
<td>discriminant of a second-order system; eigenvalue for a first-order system</td>
</tr>
<tr>
<td>( g )</td>
<td>forcing function</td>
</tr>
<tr>
<td>( h, h )</td>
<td>warping function(s)</td>
</tr>
<tr>
<td>( i, j, k, \ell )</td>
<td>indices</td>
</tr>
<tr>
<td>( I, J, K, m, n, N )</td>
<td>dimensions of vectors or matrices</td>
</tr>
<tr>
<td>( s, s )</td>
<td>value(s) on the domain of a function</td>
</tr>
<tr>
<td>( t, t )</td>
<td>value(s) on the domain of a function</td>
</tr>
<tr>
<td>( w, W )</td>
<td>log derivative of monotone or warping function</td>
</tr>
<tr>
<td>( x, x )</td>
<td>functional data observation(s)</td>
</tr>
<tr>
<td>( y, y )</td>
<td>functional data observation</td>
</tr>
<tr>
<td>( z, z )</td>
<td>covariate scalar or functional data observation(s)</td>
</tr>
<tr>
<td>( \alpha )</td>
<td>rate constant in an exponent (3); an intercept (9); forcing function (11)</td>
</tr>
<tr>
<td>( \beta, \beta )</td>
<td>regression coefficient function (scalar or vector)</td>
</tr>
<tr>
<td>( \gamma )</td>
<td>rate constant in an exponent</td>
</tr>
<tr>
<td>( \delta )</td>
<td>time shift (8, 10); statistical technique (10)</td>
</tr>
<tr>
<td>( \varepsilon )</td>
<td>error or residual</td>
</tr>
<tr>
<td>( \theta )</td>
<td>latent ability value (1); parameter (11)</td>
</tr>
<tr>
<td>( \lambda )</td>
<td>smoothing parameter value</td>
</tr>
<tr>
<td>( \mu )</td>
<td>mean function (9, 10, 1); eigenvalue (7)</td>
</tr>
<tr>
<td>( \nu )</td>
<td>eigenvalue (7)</td>
</tr>
<tr>
<td>( \xi )</td>
<td>weight function (6); exponential basis function (11)</td>
</tr>
<tr>
<td>( \eta )</td>
<td>weight function (7)</td>
</tr>
<tr>
<td>( \pi )</td>
<td>trigonometric constant</td>
</tr>
<tr>
<td>( \rho )</td>
<td>correlation (4, 6); probe functional (6, 7)</td>
</tr>
<tr>
<td>( \sigma, \Sigma )</td>
<td>standard deviation, variance, covariance</td>
</tr>
</tbody>
</table>
\( \phi, \phi \) basis function
\( \psi, \zeta \) basis function
\( \Theta \) matrix of basis function values
\( \Phi \) matrix of basis function values
\( \Psi \) matrix of basis function values


Index

alignment, see registration, see registration
amplitude variation, 16, 118, 119, 125
ANOVA
  amplitude and phase, 125
  functional regression, 147
Applied Psychology Unit, 14
argument names, 23
argument passing, 23
arithmetic, 48
assessing fit, 77
assignment operator, 22

B-spline, 35, 37, 44, 50, 52, 57, 152
baby's tibia data, 72
bases, 45
basis
  B-spline, see B-spline
  constant, see constant basis
  exponential, see exponential basis
  Fourier, see Fourier basis
  monomial, see monomial basis
  polygonal, see polygonal basis
  power, see power basis
  smooth.basis, 80
basis, 42
basis function coefficients, 30
basis function expansion, 30
basis function systems, 29
basisfd, 42
basisfd object, 29
Berkeley Growth Study, 1, 67, 73, 91, 119, 166, 179, see growth data
bifd, 57
biomechanics, 5, 13
bivariate functional data object, 56
boundary instability with splines, 38
break points, 33
bucket, 180
c(), 22
c2rMap, 93
Cambridge, 14
Canadian Weather data, 103
Canadian weather data, 10, 13, 17, 39, 46, 47, 52, 59, 67, 77, 83, 85, 94, 95, 99, 110, 132, 134, 135, 139, 145, 147, 168
canonical correlation analysis, 17, 88, 99, 110
cca.fd, 111, 114
CCA, see canonical correlation analysis
cca.fd, 111, 114
Chinese script, see handwriting
class, 24
climatic region, 147
coefficients, 45
compact support, 35
concurrent linear model, see functional regression
concurvity, 155
conditional covariance matrix, 87
confidence intervals, 92, 95
derivatives, 92
  functional regression, 140
confidence intervals for concurrent model, see functional regression
confidence limits for probe values, 95
confidence regions, 83
compact basis, 30, 39, 134, 137

203
constant basis function, 30
constrained smooth, 70
constructor functions, 42
container components, 41
continuous registration, 122
contour plot, 85
correlated residuals, 78
covariance function, 84
create, 30
create.fourier.basis, 32
cross-covariance function, 85
data display, 14
data interpolation, 12
data registration, 117, see registration
data representation, 12
degree of a spline, 33
degrees of freedom, 65
density estimation, 9, 74
density.fd, 74, 75
Depression, 3
deriv.fd, 56
derivative, 13
derivatives, see principal differential analysis,
see smoothing
use in FDA, 18
descriptive statistics, 16, 83
diet effect, 150
differential equation, 11, 64, 136, 179
differential operator, see linear differential
operator
discriminant, 181
division, 49
dynamics, 179

Edmonton, 10
eigen.pda, 192
eigenfunction, 99
empirical orthogonal functions, 40, 101
energy, 16, 88
eval.bifd, 85
exponential basis, 40
exponentiation, 49

fd, 57
fd object, see functional data object
“fda” script, see handwriting
devaluation, 49
fdPar class, 78
feature alignment, see registration: landmark
fit, 77
fixed point, 183
forcing function, 11
Fourier basis, 32

Fourier basis functions, 30
Fourier series, 13
Fperm.fd, 145
fRegress, see functional regression, 149,
169
fRegress.CV, 173
fRegress.stderr, 173
functional basis object, 31
methods, 40
functional contrast, 88
functional data, 1, 39
class, 45
fd, 45
functional data object, 45
bivariate, 56
labels, 46
methods, 48
functional F-test, 168
functional linear model, 17, see functional
regression
functional parameter, 9
functional parameter object, 39, 66, 133, 134,
137, 148, 185, 188
fdPar class, 78
functional principal components, see principal
components analysis
functional probe, 83, 87, 100
functional regression, 17, see principal
differential analysis, see regression
analysis
ANOVA, 147
bivariate regression coefficient function,
162, 165
concurrent linear model, 154
confidence intervals, 140
confidence intervals for concurrent model,
157
fRegress, 169
fRegress.CV, 173
fRegress.stderr, 173
functional response, 147
integral, 162, 163
linmod, 174
plotbeta, 174
principal components, 141
roughness penalty, 135, 138, 153
scalar response, 131
set up, 132
statistical tests, 143
y2cMap, 141
functional r-Test, 166
functions, 23, 45
gait data, 5, 12, 14, 39, 47, 99, 158
gait data: model for knee angle, 158
generalized cross-validation, 66
genetic functions, 25
goodness of fit, 77
goods index, 1, 3, 88
growth data, 1, 13, 15, 38, 47, 59–62, 66, 67, 87, 88, 91, 104, 117, 119, 122, 166, 179, 190, see Berkeley Growth Study

handwriting, 39
Chinese, 7, 126, 162
“fda” script, 7, 108, 187
harmonic acceleration, 12, 55, 136
harmonic acceleration operator, 55, see linear harmonic acceleration
harmonic process, 88
harmonics, 103
“Hat” matrix, 65
hazard rate, 163
hip angle, 5, 158
historical linear model, 163
http://www.functionaldata.org, see www.functionaldata.org
hydrolics, 180
I-splines, 35
index, 1, 3, 88
inner product, 93
inner product function, 93
inprod, 93
int2Lfd, 55
interchild variability, 16
interpolation, 12
kinetic energy, 89
knee angle, 5, 158
knot spacing, 37
knots, 34
Kodiak Island, 149
Kronecker product, 158

labels for functional data objects, 46
landmark, 118, 121, 123, 190
landmarkreg, 127
lattice package, 85
leak, 180
Lfd, 57, see linear differential operator
line continuation, 22
line termination, 22
linear differential equation, 194
linear differential operator, 11, 18, 55, 65, 68, 94, 140, 185
Lfd, 55
linear differential operators, 55
linear harmonic acceleration, 55, 56, 63, 64, 139, see harmonic acceleration operator
linear mapping, 93
linear model, see functional linear model
linmod, 174
lip data, 185, 187
list, 24
list object, 23, 47
log hazard rate, 163
logical variables, 22
M-spline, 35
manufacturing index, 1, 3, 88
Matlab and R syntax, 21
Matlab syntax, 21
mean, 49
mean.fd, 84
mental test, 9
methods, 25, 40, 48
midpubertal age, 15
midsurt, 2
mollusk, 150
monomial basis, 30, 39, 40
monomial basis functions, 30
monotone smooth, 71
Montreal, 10, 52
mortality, 163
Motion Analysis Laboratory, 5
multicollinearity, 155
multivariate function, 45
multivariate functional data, 5, 185, 187

nbasis, 31
neurophysiology, 13
Newton, 179
nondurable goods index, 1, 3–5, 88–90
nonfunctional data, 9
nonurable goods cycle, 90
normal equations, 156
normalizing constant, 74
number of spline basis function rule, 35
numerical precision, 38

object, 24
object-oriented programming, 24
oil refinery data, 4, 6, 34
order of a spline, 33
order of spline rule, 36
orthonormal, 101, 102

PCA, see principal components analysis
pca.fd, 103, 108
pca.fd function, 113
PDA, see principal differential analysis
pda.fd, 191
pda.overlay, 193
penalized negative log likelihood, 74
penalized sum of squares, see roughness
penalty
period, 21
permutation tests, 165
perspective plot, 85
PGS, see pubertal growth spurt
phase variation, 16, 118, 119, 125
phase-plane plot, 15, 83, 88, 91, 159, 160
pinch force data, 13
pinchforce, 13
plotbeta, 174
pointwise confidence intervals, 92
polygonal basis, 40
polynomial functions, 30
polynomial regression, 39
positive smooth, 70
potential energy, 89
power basis, 40
precipitation data, 12, 67, 71, 85, 94, 95, 99,
103, 110, 120, 132
predict, 50
pressure, 180
Prince Rupert, 10, 95
principal component scores, 102
principal components
functional regression, 141
principal components analysis, 3, 16, 17, 40,
88, 99, 133, 141
pca.fd, 102, 113
principal differential analysis, 179
eigen.pda, 192
lip data, 185
pda.fd, 185, 187, 191
pda.overlay, 193
registration, 190
probe score, 111
probe weight, 110
psychometrics, 9
pubertal growth spurt, 2, 92, 117, 118,
120–122, 190

R syntax, 21
rangeval, 31
refinery, 4, 34
region effect, 17, 147, 168
register.fd, 128
register.newfd, 193
registration, 3, 13, 14, 117
continuous, 122
landmark, 118, 121
landmarkreg, 121, 127

principal differential analysis, 190
register.fd, 122, 128
register.newfd, 193
regression analysis, 51, see functional
regression, see smoothing
regression splines, 60
regularization, 17
residual covariance matrix, 87
Resolute, 10
rgl package, 85
rotation matrix, 102
roughness penalties, 62
roughness penalty, 12
functional regression, 135, 138
roughness penalty matrix, 64
rounding errors, 38

scree plot, 102
seabird data, 149
seasonal variation, 88
semicolon, 22
Shelikof Strait, 149
shellfish, 150
singleton index, 24
smooth
constrained, 70
monotone, 71
positive, 70
smoothing, 12, 55, 59
density, 74
functional parameter object, 66
matrix, 65
parameter, 66
regression splines, 59
roughness penalty, see roughness penalty
good.basis, 80

spline basis, 33
spline basis functions, 30
spline function, 36
splines
regression, 59
stability, 183
statistical tests, see functional regression:
statistical tests
“statistics” script, see handwriting: Chinese
std.fd, 84
struct, 24
struct array, 22
subsec:datadisplay, 14
subsec:rangeoft, 38
sum, 49
sum of B-splines, 37
support of a spline, 35, 37
surface plot, 85
Swedish mortality data, 163

syntax, 21

temperature, 10, 32, 45, 63, 87, 94, 99, 110, 120, 132, 147, 168

test data, 9

tests

$F$-test, 168
$Fperm.fd$, 175

permutation, 165

t-test, 166

tperm.fd, 176

tibia, 72

time warping, see registration

total curvature, 63

transect, 149

tray 47, 4

truncated power basis, 35

Uganik, 149

underscore, 21

US nondurable goods manufacturing index, 1, 3, 88

Uyak, 149

var.fd, 84

variance-covariance surface, 84

VARIMAX, 102

varmx.pca.fd, 104, 108

vec2Lfd, 56

Vietnam War, 3

walking, see gait data

web site, 19

weight function, 87

World War II, 3

www.functionaldata.org, 19

y2cMap, 93, 141, see functional regression

y2rMap, 93
A Beginner's Guide to R

Alain F. Zuur, Elena N. Ieno, Erik H.W.G. Meesters, and Den Burg

The text covers how to download and install R, import and manage data, elementary plotting, an introduction to functions, advanced plotting, and common beginner mistakes.


2009. Approx. 215 p. Softcover (Use R)

Functional Data Analysis

J. Ramsay
B. W. Silverman


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Nonparametric Functional Data Analysis Theory and Practice

Frédéric Ferraty
Philippe Vieu


2006. XX, 268 p. 29 illus. Hardcover (Springer Series in Statistics)