Index

a priori estimate, 78
Banach algebras, 83
BMO, 67
bounded mean oscillation, 67
character of a representation, 89
compact groups, 85
convergence of Fourier series, 3
covering lemma, 32
Duality of BMO and $H_1$, 69
elliptic PDEs, 75
embedding theorems, 43
extension theorems, 47
Fejér sum, 4
Fourier coefficients, 2
Fourier series, 1, 7
Fourier transforms on $\mathbb{R}^d$, 13
fractional derivatives, 49
Gagliardo-Nirenberg-Sobolev inequality, 45
Generalized derivatives, 41
generalized functions, 50
Haar measure, 85
Hardy spaces, 53
Hardy-Littlewood maximal function, 8, 10
heat equation, 1
infinitesimal method, 96
inner and outer functions, 55
interpolation theorems, 21
John-Nirenberg theorem, 67
Marcinkiewicz, 21
maximal inequality, 8
maximum principle, 80
Peter-Weyl, 88
Plancherel-Parseval identities, 7
Poisson kernel, 10
Poisson maximal function, 10
Poisson representation formula, 54
Poisson sum, 9
positive definite functions, 17
prediction theory, 61
representations of a compact group, 88
representations of a group, 86
representations of SO(3), 96
representations of the permutation group, 93
Riemann-Lebesgue lemma, 2
Riesz kernels, 36
Riesz transforms, 30
Riesz-Thorin interpolation, 23
Schur’s lemma, 88
singular integrals on $\mathbb{R}^d$, 30
Sobolev spaces, 41
stationary Gaussian processes, 53
topological group, 85
trace theorems, 47
Vitali covering lemma, 8
weak type inequality, 24
Wiener’s theorem, 83
Young tableau, 93
Young’s inequality, 43
Young’s theorem, 16