

Index

- A -representation of $\pi_1(X, \bar{x})$, 185
- ℓ -adic Galois representation, 159
- ℓ -adic coefficient ring, 184
- p -elementary group, 147
- étale covering, 169
- étale fundamental group, 169

- absolutely irreducible, 141
- admissible action, 179
- Artin character, 149
- Artin-Schreier extension, 119

- bounded ramification of a sheaf, 206
- Brauer's Theorem, 147
- break, 131, 165
 - multiplicity, 165
- break decomposition, 165

- canonical extension, 204
- character, 142
- class function, 142
- class field theory, 131
- cohomology with compact support, 190
- cohomology with support, 191
- complete discretely valued field, 111
- complexity of a divisor, 210
- constant lisse sheaf, 183
- constant sheaf, 177
- constructable sheaf, 181
- constructible \mathbb{Q}_ℓ -sheaves, 183
- constructible R -sheaf, 182
- covering
 - étale, 169
 - Galois, 170
 - tame, 173

- decomposition group, 118
- Dedekind domain, 110
- different, 114
- direct image, 178
- directed set, 105
- Dirichlet density, 215
- discrete valuation on K , 109
- discrete valuation ring, 110
- discretely valued field, 110
- discriminant, 114
- discriminant in higher dimensions, 207
- divisorial compactification, 205

- étale algebra, 168
- étale cohomology, 190
- étale morphism, 168
- étale neighborhood, 176
- étale presheaf, 176
- étale sheaf, 177
- extension by zero, 180

- free lisse A -sheaf, 185

- Frobenius reciprocity, 147
- Frobenius class at a point, 215

- \mathbb{G}_a , 177
- Galois correspondence, 109
- Galois representation
 - ℓ -adic, 159
 - reduction, 160
- geometric point, 169, 176
- \mathbb{G}_m , 177
- Grothendieck ring, 138
- Grothendieck-Ogg Shafarevich theorem, 195

- Herbrand's theorem, 123
- higher units, 120
- Hilbert's Theorem 90, 130

- indecomposable representation, 138
- induced
 - class function, 146
 - representation, 136
- inertia group, 118
- inverse image, 179
- irreducible
 - character, 142
 - representation, 137
 - skeleton sheaf, 214

- jump, 131

- Kähler differentials, 117

- Lang isogeny, 189
- Lefschetz trace formula, 193
- lisse \mathbb{Q}_ℓ -sheaf, 183
- lisse sheaf, 182
- local Artin map, 131
- local reciprocity map, 131
- locally constant sheaf, 180

- Maschke's Theorem, 138
- maximal semi-simple quotient, 154
- monodromy group of a lisse sheaf, 204
- multiplicity of a break, 165

- norm, 113, 127

- Poincaré duality, 192
- pro- p -completion, 107
- pro- p -group, 107
- profinite group, 107
- profinite completion, 107
- projective system, 106
- projective cover, 154
- projective limit, 105
- purity, 193

- ramification filtration

- lower numbering, 119
- upper numbering, 126
- upper numbering, 120
- ramification index, 111
- ramification subgroup, 119
- rank of a free lisse sheaf, 185
- reduction of Galois representation, 160
- representation
 - augmentation, 137
 - dual, 137
 - induced, 136
 - regular, 137
 - restriction, 136
- residue field, 110
- restriction
 - class function, 146
- Schur's Lemma, 139
- semi-simple representation, 137
- semi-simplification, 214
- sheaf with G -action, 179
- simple representation, 137
- skeleton sheaf, 214
- special lisse sheaf on \mathbb{G}_m , 204
- splitting field, 141
- strictly normal crossings, 174
- Swan character, 149
- Swan conductor of a lisse sheaf on a curve,
 - 206
- Swan conductor, 166
- Swan representation, 136
- tame fundamental group, 174
- tame lisse sheaf, 211
- tame ramification, 122
- Tate twist, 184
- totally ramified, 111, 113
- trace, 113
- trivial lisse sheaf, 183
- uniformizer, 110
- unramified, 112, 113
- Weil group, 212
- Weil sheaf, 213
- wild inertia group, 159, 162
- wild ramification, 122