

Index

- μ -reach, 77
- q (uadrant)-tame, 25, 30, 32
- Artin algebra, 17, 193
- complex
 - α -, 83
 - i -Delaunay, 83
 - (Victoris-)Rips, 89, 139
 - Čech, 81, 139
 - nerve, 81
 - sparse Rips, 150
 - weighted Rips, 112
 - witness, 90, 139
- correspondence, 143
- Coxeter functors, 179
- decorated
 - multiset, 25
 - number, 21
 - persistence diagram, 22
 - point, 22
- diamond, 179, 182
 - Mayer-Vietoris, 38
 - principle, 178, 183
- dimension
 - doubling, 87
- distance
 - bottleneck, 50
 - distance-like function, 78
 - Gromov-Hausdorff, 134, 143
 - Hausdorff, 69
 - interleaving, 52
 - power, 111
 - to compact set, 69
 - to measure, 110
 - witnessed k -, 112
- duality
 - EP, 36
- elder rule, 120
- elder rule, 6, 31
- endomorphism ring, 171
- filter, 31
- filtered space, 30
- filtration, 29
 - relative, 34
 - right-, 184
 - sublevel-sets, 31
 - superlevel-sets, 31
 - truncated, 147
- interleaving, 52
 - multiplicative, 87
 - sublevel-sets, 52
 - weak, 55
- interpolation lemma, 57
- interval, 20
 - (in)decomposable, 21
 - decomposition, 20
 - module, 20
 - representation, 17, 175
 - rule, 21
- local endomorphism ring, 171
- medial axis, 71
- morphism
 - of degree ε , 53
 - of representations, 15
- Morse-type function, 37
- multivalued map, 142
- natural images, 106
- nerve, 81
 - lemma, 81
 - persistent, 82
- observable category, 28, 63
- offset, 69
- outliers, 110
- partial matching, 50
- path, 192
 - algebra, 17, 192
- persistence
 - barcode, 22, 26
 - diagram, 22, 26
 - (d_1, d_2) -separated, 123

- extended, 34
 - hierarchy, 2, 47, 116
 - kernels, images, cokernels, 39
 - measure, 23
 - module, 20
 - streamlined, 183
 - zigzag, 36
- persistent
 - (co-)homology, 30, 32, 34
 - (co-)homology group, 30
- poset representation, 19, 194
- pyramid, 37, 185
 - theorem, 39
- quiver, 14, 168
 - A_n -type, 14, 169
 - \tilde{A}_n -type, 173
 - N, Z , 18, 194
 - algebra, 17, 192
 - category, 19, 194
 - Dynkin, 16, 169
 - Euclidean, 173
 - linear L_n , 14, 180
 - poset, 19, 194
 - tame, 17, 174, 191
 - wild, 17, 174, 191
 - with relations, 19, 195
- quiver representation, 14, 168
 - (in-)decomposable, 16, 170
 - category, 15, 168
 - classification, 16, 170
 - dimension, 170
 - dimension vector, 170
 - direct sum, 15
 - interval, 17, 175
 - morphism, 15, 169
 - kernel, image, cokernel, 16
 - shift, 53
 - pointwise finite-dimensional, 18
 - trivial, 15
- reach, 72
- reflection, 175
 - functor, 176
 - functors theorem, 178
- root, 174
- sampling
 - ε -sample, 136
 - furthest-point, 97
 - subsampling, 95
- signatures
 - persistence-based, 138
- snapping
 - lemma, 55
 - principle, 54
- Sparse Voronoi Refinement, 93
- subrepresentation, 16, 168
- symmetry
 - EP, 36
- theorem
 - converse stability, 49
 - Crawley-Boevey, 19, 195
 - Gabriel, 17
 - Gabriel I, 171
 - Gabriel II, 174
 - interval decomposition, 20
 - isometry, 49
 - Kac, 191
 - Krull-Remak-Schmidt, 16, 171
 - pyramid, 39
 - reflection functors, 178
 - stability, 49, 61, 63
 - Webb, 18, 194
- time of appearance, 34, 39
- Tits form, 172
- ToMATo, 118
- topological feature, 30
- totally bounded space, 136
- undecorated
 - persistence diagram, 22
- weak feature size, 75
- zigzag, 36
 - image Rips (iR-ZZ), 98
 - level-sets, 37
 - manipulations, 99
 - module, 20
 - Morozov (M-ZZ), 98
 - oscillating Rips (oR-ZZ), 98