

- condition number, 353, 504
- conductor, 1092
- cone, 1544, *see* cone with apex 0
  - polyhedral cone, 1544, 1663
  - primitive cone, 1547
  - ray, 1545
- cone of feasible directions, 1730
- cone with apex 0, 1729
- cone with apex  $u$ , 1729
- conic, 855, 938, 941
- conjugate
  - of a complex number, 515
  - of a matrix, 531
  - of a vector, 937
- conjugate function, 1796, 1867
  - convex quadratic, 1798
  - exponential, 1797
  - Fenchel's inequality, 1796
  - log-determinant, 1798
  - log-sum-exp function, 1799
  - negative entropy, 1797
  - negative logarithm, 1797
  - norm function, 1798
  - norm squared, 1799
  - Young's inequality, 1796
- conjugate gradient method, 1705
  - error, 1714
  - Fletcher–Reeves, 1716
  - Polak–Ribière, 1716
  - residual, 1713
- conjugate vectors, 1706, 1709
- connected
  - arcwise, 1351
  - definition, 1343
  - locally, 1348
  - locally arcwise, 1351
  - set, 1343–1352
  - subset, 1343, 1346
- constant affine map, 823
- constrained local extremum
  - real-valued function, 1462
- constrained minimization problems, 1511
- constrained quadratic optimization
  - general case, 1520
  - on the sphere, 1524
- constraint, 1511
  - active, 1735
  - inactive, 1735
  - qualified, 1737
    - convex function, 1746
- constraints, 1552
- continuous
  - function, 348
  - linear map, 348
- continuous bilinear map, 1416
- continuous linear map, 1411
- contraction mapping, 1383, 1679
- contravariant, 127
- control points, 807
- converges weakly, 1671
- convex
  - combination, 817
  - extended real-valued function, 1822
  - hull, 817
  - set, 818
- convex combination, 1542
- convex function, 1473
  - strictly convex, 1474
- convex hull, 1543
  - definition, 1543
- convex set, 1473, 1542
  - dimension, 1542
  - extremal point, 1543
  - normal cone, 1833
  - normal vector, 1833
  - support function, 1844
  - supporting hyperplane, 1833
- convexity, 792
- coordinate system, 791
- coordinates in affine space, 815
- coordinates of  $x$  w.r.t. an affine frame
  - definition, 815
- coplanar points, 812
- Courant–Fishcer theorem, 636