

Integral n./adj. Integrate v. integration n.

integrable adj. Integrator n. 积分器

definite integral 定积分, indefinite integral 不定积分.

integral calculus 积分学

line integral of the first kind = Scalar line integral

line integral of the second kind = Vector line integral

vector valued function integral

(smooth) simple oriented closed plane curve

Simple closed orientable surface.

sphere, torus

eigenvalue, eigenvector,

similarity transformation, similarity matrix.

Quadratic form, Homogeneous quadratic form.

Positive definite quadratic form.

Linear independence, Linear dependence,

Orthogonal matrix,

Singular value decomposition (SVD)

Standard orthogonal basis.

rank, determinant, square matrix

be denoted as. untermatrix/submatrix

Null space

nonsingular matrix.

Projection matrix, Symmetric matrix

Skew-Symmetric matrix

Adjugate matrix = Adjoint matrix.

Least squares method.

transpose matrix, inverse matrix

the transpose of the matrix, the inverse of the matrix

radiant energy, Lower triangular matrix, upper triangular matrix

Date / /

gradient, divergence, curl, flux, circulation.
/grædɪənt/ /dɪvɜːrɡəns/ /kɜːrl/ /flʌks/ /sɜːkjuːləreɪʃn/

diagonal matrix, ~~diag~~ $\text{diag}\{x_{11}, x_{22}, \dots, x_{nn}\}$.
/daɪəɡənl/ /maٹریکس/

conjugate transpose matrix

$SO(N)$ 群: N 维么模实正交矩阵群.

Special ~~Orthogonal~~ N . (group).

$SU(N)$ 群: N 维么模么正矩阵群.

Special Unitary N . (group).

么模. 么正.

Unitary matrix 么正矩阵.

Unitary transformation 么正变换.

矩阵的迹: trace of a matrix.

矩阵直积: Kronecker Product.

矩阵直和: Direct Sum.

Unitary, Trace, Kronecker, Direct Sum.

Algebraic Cofactor 代数余子式
/ælˈgebrɪk/ /kəfɔːtər/

Minor 余子式

generator 生成元

adjoint representation 伴随表示.

polarization 偏振.

interference 干涉.

diffraction 衍射.

photoelectric effect 光电效应.

/geɪdʒ/ gauge field 规范场.

micro canonical ensemble

canonical ensemble

grand canonical ensemble.

entanglement 纠缠.

Carnot cycle 卡诺循环.

convert v. conversion n. 转换, 转化.

phenomena 现象.

dilation 延迟.

Lorentz contraction 洛伦兹收缩.

Principle of Relativity 相对性原理.

Universality of the speed of light 光速不变原理.

the metric tensor 度规张量.

perfect fluid 理想流体.

(连续, 不可压缩, 无黏性,
不导热).

inertial observer observation

synchronized /'sɪŋkrənaɪzd/ 同步的.

'Euclidean

/juːlɪliən/

construct 建造, 创造, 建立, 构想.

'curvature 曲率.

/kər'veitʃər/

bibliography 参考文献(目录).

Date / /

inertial reference frame

abbreviate: reference frame, frame.

simultaneous /saɪməl'teɪniəs/ adj. 同时的.

calligraphic /kælɪgraːfɪk/ 花体的.

postulate(s) 公设, 假定

locus 轨迹

'calibrate v. 校正, 调适

/kælɪbreɪt/

hyperbola 双曲线

(复) hyperbolae / hyperbolas.

invariant hyperbolae.

parameter /pærəmɛtər/ 参数, 变量

subscript, superscript,

summation

Einstein summation convention.

bar, index

(barred and unbarred) indices.

basis vectors

dummy index (indices) 假指标.

momentarily comoving reference frame (MCRF).

tetrad /'tetraed/

mutually 互相地,

/juːlɪtsjuːl/

orthonormal 标准正交的.

/ɔːnəl/ . normalized

arrow, tilde /'tɪlde/

/'ærənəl/ arbitrary /'ɑːrbɪtrəri/

axiom(s), postulate(s) 公理, 公设.

对偶. dual vector space.

/'du:əl/

array /'ə'rei/.

analogous /ə'næləgəs/ 类似的.

antisymmetric

square bracket

correspondence 关联

invertible

skeptical 不相信的, 怀疑的

be swept under the rug 被掩盖起来

/'ka:ləm/. column vectors, row vectors.

encounter /rəʊ/

dualism

dethrone /di:'θroun/ 废除, 厥免

equal status(s) status /'steɪtəs/

argument(s).

a contrary way

be permitted by

* M-times contravariant and N-times covariant tensors.

duality

notion 概念

notation

index raising and lowering

tensor contraction 缩并

Date / /

vice versa /vaɪs'vɜ:sə/ 反之亦然.

pseudo - Riemannian 伪黎曼

/'su:dou/ /ri'ma:nɪən/.

spinor space 自旋空间.

validity /və'lɪdəti/ n. 正确性, 真实性, 有效性

stipend /'staɪpend/ 薪资.

paradox(es) 谍论

propagator /'præ:peɪtər/ 传播子

quantization 量子化.

phase space 相位空间.

configuration space 位形空间

renormalization 重整化.

path integral 路径积分.

Feynman diagram 费曼图

figure, graph

erythrocyte 红细胞

homeostasis 体内平衡

organelle 细胞器

cell membrane 细胞膜

cytoplasm 细胞质

nucleus 细胞核

nuclear envelope 核膜

rough endoplasmic reticulum 粗糙型内质网.

Golgi apparatus 高尔基体

ribosome 核糖体

mitochondria 线粒体

lysosome 溶酶体