

[06_01]九州大学大型計算機センター広報表紙奥付等

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バージョン：
権利関係：

ライブラリプログラム登録一覧表

1. 九州大学作成

(昭和48年2月1日現在)

1.1 九大センターで開発または収集されたプログラムで以下のような形式と意味をもっています。

形式 $A_9/A_9/A_9/A_9 \times \times \times \times \times \times$
 ① ② ③ ④

A : 英字, 9 : 数字, × : 英字または数字

意味 ①……分類コードを示す。

②……作成別を示す。QC : センターで開発収集 QU : 利用者提供

③……用途を示す。 A : ALGOL F : FORTRAN Z : その他 (応用プログラム等)

④……プログラム名 (サブルーチン名、手続き名、エレメント名)

プログラムライブラリ分類コード表

A プログラムによる算術演算	1.実数 2.複素数 3.BCD演算 4.級数	I 入力	1.2進 2.8進 3.10進 4.BCD 5.紙テープ 6.補助記憶 9.複合入力
B 初等関数	1.三角関数 2.双曲線関数 3.指数関数および対数関数 4.平方根、立方根など 5.べき級数 6.その他	J 出力	0.一般 1.2進 2.8進 3.10進 4.BCD 5.アナログ 6.プロット 7.複合出力
C 多項式および特殊関数	1.多項式の値 2.多項式の零点 3.特殊関数の値 4.連立非線型代数方程式 5.連立超越方程式 6.ベッセル関数 7.関数の極小化	K 内部情報伝達	1.ドラムの読み書き 2.磁心より磁心、ドラムよりドラムなど
D 関数に対する演算および微分方程式の解	0.積分方程式の数値解 1.数値積分 2.常微分方程式の数値解 3.偏微分方程式の数値解 4.数値微分 5.階差方程式の数値解 6.関数の変換	L アセンブラ、コンパイラなど	1.アセンブラ 2.コンパイラ 3.モニタ関係
E 内挿および外挿	1.表索引と内挿 2.曲線のあてはめ 3.スムージング (平滑化) 4.階差	M 特殊情報処理	1.分類 2.内部変換 (固定より浮動様式へなど) 3.照合およびませあわせ
F 行列、ベクトルおよび連立一次方程式に対する演算	1.行列演算 2.固有値と固有ベクトル 3.行列式 4.連立一次方程式	N デバッグングルーチン	1.トレーシングトラッピング 2.ダンプ 3.サーチ 4.ブレークポイント印刷
G 統計解析および確率	1.データ解析 2.相関および回帰解析 3.時系列 4.分散分析 5.乱数発生 6.多変量解析 7.密度関数分布関数、パーセント点 8.順列、組合わせの発生置換 9.その他	O シミュレーション	
H オペレーションリサーチおよびリニアプログラミング	1.リニアプログラミング 2.ゲームの理論 3.PERT/CPMの基本ルーチン 4.予測関係 5.DYNAMO	P 計算機診断プログラム	
		Q サービスプログラム	1.破算、帰零プログラム 2.チェックサムプログラム 3.磁気テープ 4.時計 9.その他
		Y 特定分野に対する開発プログラム	3.原子核 4.原子分子
		Z その他	

1.2 表の説明

1) ファイル名 表中ファイル名とあるのは登録されているファイルの名前を示します。

ファイル名とLIEDで使うファイル定義名は以下の通りです。

	ファイル名	ファイル定義名	内容	形式
P	QS.PLIB.RB	P.LIB	利用者提供・センター開発ライブラリの内基本的なルーチン	RB
PT	QS.PLIB.TEST	P.TEST	試用期間中ライブラリの内基本的なルーチン	RB
A1	QS.ALIB.RB1	_____	利用者提供応用プログラム (原子核コード関係)	RB
A2	QS.ALIB.RB2	_____	" (DYSTALプログラム群)	RB
AE	QS.ALIB.EB	_____	"	EB

2) 登録番号の前に*印がついているものは試用期間中のライブラリ、**印のあるものは新規登録で試用期間中のライブラリであることを示します。

登録番号	IDコード	題 目	ファイル名	登録番号	IDコード	題 目	ファイル名
4	C2/QU/F/SANJ1	3-DEGREE ALGERRAIC EQUATION WITH COMPLEX NUMBER COEFFICIENT	P			HERMITIAN MATRIX (@R METHOD)	
57	C2/QC/F/GRAEFS	ALGEBRAIC EQUATION OF HIGHER ORDER (GRAEFFE MODIFY METHOD)	P	**66	F2/QC/F/TDBLS	EIGENVALUE OF TRIDIAGONAL MATRIX (BISECTION METHOD)	PT
58	C2/QC/F/GRAEFD	ALGEBRAIC EQUATION OF HIGHER ORDER (GRAEFFE MODIFY METHOD)	P	**69	F2/QC/F/TDBLD	EIGENVALUE OF TRIDIAGONAL MATRIX (BISECTION METHOD)	PT
7	C3/QU/F/CNDS	CUMULATIVE NORMAL DYSTRIIBUTION FUNCTION	P	**70	F2/QC/F/TDBUS	EIGENVALUE OF TRIDIAGONAL MATRIX (BISECTION METHOD)	PT
8	C3/QU/F/RNDS	INVERSE FUNCTION OF CUMULATIVE NORMAL DISTRIBUTION FUNCTION	P	**71	F2/QC/F/TDBUD	EIGENVALUE OF TRIDIAGONAL MATRIX (BISECTION METHOD)	PT
16	C3/QU/F/GAMMAD	GAMMA FUNCTION	P	**72	F2/QC/F/TDQRS	EIGENVALUES OF TRIDIAGONAL MATRIX (@R METHOD)	PT
17	C3/QU/F/PRESNL	GENERALIZED FRESNEL INTEGRAL	P	**73	F2/QC/F/TDQRD	EIGENVALUES OF TRIDIAGONAL MATRIX (@R METHOD)	PT
22	C3/QU/F/DRPGMA	RECIPROCAL OF GAMMA FUNCTION	P				
59	C3/QU/F/DERF	EPORR FUNCTION	P	**74	F2/QC/F/SBTRS	TRIDIAGONALIZATION OF REAL SYMMETRIC BAND MATRIX	PT
*65	C3/QU/F/BETA	BETA FUNCTION	PT	**75	F2/QC/F/SBTRD	TRIDIAGONALIZATION OF REAL SYMMETRIC BAND MATRIX	PT
*66	C3/QU/F/FBET	INCOMPLETE BETA FUNCTION	PT	**76	F2/QC/F/SBVCS	EIGENVECTOR OF REAL SYMMETRIC BAND MATRIX	PI
34	C7/QU/F/POWELL	MINIMIZATION OF A FUNCTION	P	**77	F2/QC/F/SBVCD	EIGENVECTOR OF REAL SYMMETRIC BAND MATRIX	PT
15	D1/QU/F/HOMBER	KOMBERG'S INTEGRATION WITH ERROR CONTROL	P	**78	F2/QC/F/SBRDS	REDUCTION OF SYMMETRIC EIGENPROBLEM ABX= X	PT
18	D1/QU/F/CGJW	COEFFICIENTS OF GAUSS-JACOBI QUADRATURE FORMULA	P	**79	F2/QC/F/SBRDD	REDUCTION OF SYMMETRIC EIGENPROBLEM ABX= X	PT
19	D1/QU/F/CGLW	COEFFICIENTS OF GAUSS-LACUERRE QUADRATURE FORMULA	P	**80	F2/QU/F/SHWS	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (@R METHOD)	PT
20	D1/QU/F/ROMBGS	NUMERICAL INTEGRATION USING KOMBERG'S ALGORITHM	P	**81	F2/QU/F/SHWD	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (@R METHOD)	PT
21	D1/QU/F/ROMBGD	NUMERICAL INTEGRATION USING KOMBERG'S ALGORITHM	P	**82	F2/QU/F/HHQOS	EIGENVALUE OF HERMITIAN MATRIX (@R METHOD)	PT
*67	D2/QU/F/TRAMS	ORDINARY DIFFERENTIAL EQUATION (TRAPEZOIDAL RULE WITH AUTOMATIC MODIFICATION)	PT	**83	F2/QU/F/HHQOD	EIGENVALUE OF HERMITIAN MATRIX (@R METHOD)	PT
23	D6/QC/F/FFTCS	FAST FOURIER TRANSFORM (COMPLEX TRANSFORM)	P	**84	F2/QU/F/HHQOS	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (@R METHOD)	PT
24	D6/QC/F/FFTRS	FAST FOURIER TRANSFORM(REAL TRANSFORM)	P	**85	F2/QU/F/HHQD	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (@R METHOD)	PI
1	F2/QU/F/HER4	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX	P	3	F4/QU/F/SWPMLE	INVERSE MATRIX AND LINEAR EQUATION (USING DISK OR MT)	P
11	F2/QU/F/SQRS	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (QR METHOD)	P	9	F4/QU/F/GSRENS	LINEAR EQUATION (GAUSS-SEIDEL METHOD)	P
12	F2/QU/F/SQRD	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (QR METHOD)	P	10	F4/QU/F/GSREND	LINEAR EQUATION (GAUSS-SEIDEL METHOD)	P
30	F2/QU/F/SQRSOS	EIGENVALUE OF SYMMETRIC MATRIX (@R METHOD)	P	46	G1/QU/Z/CNTGTB	ANALYSIS OF 2*2 CONTINGENCY TABLE	AE
31	F2/QU/F/SQRDOD	EIGENVALUE OF SYMMETRIC MATRIX (@R METHOD)	P	35	G5/QC/F/KUNIRN	UNIFORM RANDOM NUMBER GENERATOR	P
32	F2/QU/F/HQRS	EIGENVALUE OF HERMITIAN MATRIX (@R METHOD)	P	60	G6/QU/Z/MMRA	NORMAL MULTIVARIATE MULTIPLE REGRESSION ANALYSIS INVOLVING MULTIPLICITY OF POPULATIONS (MMRA)	AE
33	F2/QU/F/HQRD	EIGENVALUE OF HERMITIAN MATRIX (@R METHOD)	P	45	G9/QU/Z/EIYOO	STATISTICAL ANALYSIS OF NUTRITIONAL SURVEY DATA (EIYOO)	AE
43	F2/QU/F/HQRS	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATPIX (QR METHOD)	P	55	H1/QC/Z/MINIMX	MINIMAX SOLUTION TO OVERDETERMINED LINEAR SYSTEMS (MINIMAX)	AE
44	F2/QU/F/HQRD	EIGENVALUES AND EIGENVECTORS OF	P				

56	H1/QC/F/MINMAX	MINIMAX SOLUTION TO OVERDETERMINED LINEAR SYSTEMS	P	26	Y3/QC/Z/AA02	DWBA ANALYSIS OF DIRECT NUCLEAR REACTION 1 (DWBA1)	AE
6	H3/QU/Z/SUCPM	CALCULATION OF CPM (SUCPM)	AE	27	Y3/QC/L/DB01	CLERSCH-GORDAN COEFFICIENT	A1
49	I5/QC/F/PTK	INPUT FOR PTK	P	28	Y3/QC/L/DB02	RACAH COEFFICIENT	A1
51	I6/QC/F/FRDWT	READ/WRITE ROUTINE FOR GENERAL FILE	P	29	Y3/QC/L/DB03	NINE-J SYMBOL	A1
54	I6/QU/F/FLDATA	READ/WRITE ROUTINE FOR D.T. FILE WITH ALGOL-H TYPE FORMAT	P	36	Y3/QC/Z/AA03	DWBA ANALYSIS OF DIRECT NUCLEAR REACTION 2 (DWBA2)	AE
2	I9/QU/F/INLIST	INPUT, NON-FORMAT	P	37	Y3/QC/Z/BA02	NUCLEON-NUCLEON SCATTERING BY R-SPACE POTENTIAL (NNS)	AE
53	I9/QU/F/INDATA	READ ROUTINE WITH ALGOL-H TYPE FORMAT	P	38	Y3/QC/L/CA01	VARIABLE METRIC METHOD FOR MINIMIZATION	A1
13	J0/QU/F/MPCTS	PRINT OF COMPLEX MATRIX	P	39	Y3/QC/Z/DA02	BCS EQUATION	A1
14	J0/QU/F/MXPTS	PRINT OF REAL MATRIX	P	40	Y3/QC/Z/DA03	RANDOM PHASE APPROXIMATION (RPA)	AE
42	J0/QU/F/RFFORM	OUTPUT WITHOUT FORMAT	P	41	Y3/QC/Z/DB05	MATRIX ELEMENTS OF TENSOR FORCE BETWEEN HARMONIC OSCILLATOR WAVE FUNCTIONS	A1
47	J0/QC/F/GPAPH	PRINT OF GRAPH	P	*64	Y4/QC/Z/AD05	MOLECULAR INTEGRALS OF CGTO (MICGTO)	AE
48	J0/QC/F/QDLIST	PRINT OF INPUT DATA	P	5	Z1/QU/Z/DYSTAT	DYSTAT-DYNAMIC STORAGE ALLOCATION LANGUAGE IN FORTRAN	A2
52	J0/QC/F/LETTER	PRINT OF LETTER	P				
61	K2/QC/F/NBITOP	BIT OPERATION FUNCTION FOR FORTRAN USER	P				
62	Q9/QC/Z/CONTRL	CONTROL (CONTROL)	AE				
63	Q9/QC/Z/EDITOR	EDITOR (EDITOR)	AE				
25	Y3/QC/Z/AA01	ELASTIC SCATTERING ANALYSIS WITH NUCLEAR OPTICAL MODEL (ELASTC)	AE				

2. 富士通作成 SSL FORTRAN

これらのプログラムは、SYS1. FSSLIB のファイルに登録されています。LIED で使うファイル定義名はF.SSL です。

最新のマニュアルは、FACOM230-60 SSL (科学用サブルーチンライブラリ) 使用方法説明書FORTAN編第6版 (資料番号230/60-301~309-001-6) です。

分類コード	呼び出し名	題	目	分類コード	呼び出し名	題	目
B.	一般, 特殊関数			B/031/S	@KKFEES	COMPLETE ELLIPTIC INTEGRALS OF THE FIRST AND THE SECOND KIND	
B/001/S	CELI1S	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST KIND		B/031/D	@KKFED	COMPLETE ELLIPTIC INTEGRALS OF THE FIRST AND THE SECOND KIND	
B/002/S	CELI2S	COMPLETE ELLIPTIC INTEGRAL OF THE SECOND KIND		B/032/S	THETAS	ELLIPTIC FUNCTION, THETA FUNCTION	
B/003/D	EXPGD	EXPONENTIAL INTEGRAL 1		B/032/D	THETA D	ELLIPTIC FUNCTION, THETA FUNCTION	
B/004/S	GAMANS	GAMMA FUNCTION		B/033/S	FJABIS	ELLIPTIC FUNCTION, JACOBI'S E-FUNCTION	
B/005/S	GAMA1S	GAMMA FUNCTION		B/033/D	EJARID	ELLIPTIC FUNCTION, JACOBI'S E-FUNCTION	
B/008/S	LNKAIS	LOG(N!)		C.	微積分		
B/008/D	LNKAID	LOG(N!)		C/001/S	DIFLAS	NUMERICAL DIFFERENTIATION (LAGRANGE'S INTERPOLATION)	
B/009/D	FRESID	FRESNEL'S INTEGRAL		C/001/D	DIFLAD	NUMERICAL DIFFERENTIATION (LAGRANGE'S INTERPOLATION)	
B/010/D	SID	SINE INTEGRAL		C/002/S	SIMPS	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE)	
B/011/D	CID	COSINE INTEGRAL		C/002/D	SIMPD	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE)	
B/012/D	BESJCD	BESSEL FUNCTION J0(X)		C/003/S	GAUSSS	NUMERICAL INTEGRATION (GAUSSIAN FORMULA)	
B/013/D	BESJ1D	BESSEL FUNCTION J1(X)		C/003/D	GAUSSD	NUMERICAL INTEGRATION (GAUSSIAN FORMULA)	
B/014/D	BESYCD	BESSEL FUNCTION Y0(X)		C/004/D	GAS3D	NUMERICAL INTEGRATION (3-POINT GAUSSIAN FORMULA)	
B/015/D	BESY1D	BESSEL FUNCTION Y1(X)		C/005/D	GAS4D	NUMERICAL INTEGRATION (4-POINT GAUSSIAN FORMULA)	
B/016/D	BES1CD	BESSEL FUNCTION I0(X)		C/006/D	GAS5D	NUMERICAL INTEGRATION (5-POINT GAUSSIAN FORMULA)	
B/017/D	BES11D	BESSEL FUNCTION I1(X)		C/007/D	GAS6D	NUMERICAL INTEGRATION (6-POINT GAUSSIAN FORMULA)	
B/018/D	BESKCD	BESSEL FUNCTION K0(X)		C/008/D	GAS7D	NUMERICAL INTEGRATION (7-POINT GAUSSIAN FORMULA)	
B/019/D	BESK1D	BESSEL FUNCTION K1(X)		C/009/D	GAS8D	NUMERICAL INTEGRATION (8-POINT GAUSSIAN FORMULA)	
B/020/D	LEGD	LEGENDRE'S POLYNOMIAL		C/010/D	GAS9D	NUMERICAL INTEGRATION (9-POINT GAUSSIAN FORMULA)	
B/021/S	BEK1S	POWER SERIES		C/011/D	GAS10D	NUMERICAL INTEGRATION (10-POINT GAUSSIAN FORMULA)	
B/021/D	BEK1D	POWER SERIES		C/012/D	GAS12D	NUMERICAL INTEGRATION (12-POINT GAUSSIAN FORMULA)	
B/022/S	BESJNS	BESSEL FUNCTION JN(X)		C/013/D	GAS16D	NUMERICAL INTEGRATION (16-POINT GAUSSIAN FORMULA)	
B/022/D	BESJND	BESSEL FUNCTION JN(X)		C/014/D	GAS24D	NUMERICAL INTEGRATION (24-POINT GAUSSIAN FORMULA)	
B/023/S	BESYNS	BESSEL FUNCTION YN(X)		C/015/D	GAS32D	NUMERICAL INTEGRATION (32-POINT GAUSSIAN FORMULA)	
B/023/D	BESYND	BESSEL FUNCTION YN(X)		C/016/S	SIMPLS	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE, DIGITAL INPUT 1)	
B/024/S	BESINS	BESSEL FUNCTION IN(X)					
B/024/D	BESIND	BESSEL FUNCTION IN(X)					
B/025/S	BESKNS	BESSEL FUNCTION KN(X)					
B/025/D	BESKND	BESSEL FUNCTION KN(X)					
B/026/S	CEP12S	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST AND SECOND KINDS					
B/026/D	CEP12D	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST AND SECOND KINDS					
B/027/S	EXPG2S	EXPONENTIAL INTEGRAL 2					
B/027/D	EXPG2D	EXPONENTIAL INTEGRAL 2					
B/028/S	HERMIS	HERMITE POLYNOMIALS					
B/028/D	HERMID	HERMITE POLYNOMIALS					
B/029/S	LAGUFS	LAGUERRE POLYNOMIALS					
B/029/D	LAGUFD	LAGUERRE POLYNOMIALS					
B/030/S	JACBIS	JACOBI POLYNOMIALS					
B/030/D	JACBID	JACOBI POLYNOMIALS					

C/016/D SIMP1D NUMERICAL INTEGRATION
(SIMPSON'S 1/3 RULE, DIGITAL INPUT 1)

C/017/S GSL4S NUMERICAL INTEGRATION
(4-POINT GAUSS-LAGUERRE FORMULA)

C/018/S GSL5S NUMERICAL INTEGRATION
(5-POINT GAUSS-LAGUERRE FORMULA)

C/019/S GSL6S NUMERICAL INTEGRATION
(6-POINT GAUSS-LAGUERRE FORMULA)

C/020/S GSL7S NUMERICAL INTEGRATION
(7-POINT GAUSS-LAGUERRE FORMULA)

C/021/S GSL8S NUMERICAL INTEGRATION
(8-POINT GAUSS-LAGUERRE FORMULA)

C/022/S GSL9S NUMERICAL INTEGRATION
(9-POINT GAUSS-LAGUERRE FORMULA)

C/023/S GSL10S NUMERICAL INTEGRATION
(10-POINT GAUSS-LAGUERRE FORMULA)

C/023/D GSL10D NUMERICAL INTEGRATION
(10-POINT GAUSS-LAGUERRE FORMULA)

C/024/S GSL11S NUMERICAL INTEGRATION
(11-POINT GAUSS-LAGUERRE FORMULA)

C/024/D GSL11D NUMERICAL INTEGRATION
(11-POINT GAUSS-LAGUERRE FORMULA)

C/025/S GSL12S NUMERICAL INTEGRATION
(12-POINT GAUSS-LAGUERRE FORMULA)

C/025/D GSL12D NUMERICAL INTEGRATION
(12-POINT GAUSS-LAGUERRE FORMULA)

C/026/S GSL13S NUMERICAL INTEGRATION
(13-POINT GAUSS-LAGUERRE FORMULA)

C/026/D GSL13D NUMERICAL INTEGRATION
(13-POINT GAUSS-LAGUERRE FORMULA)

C/027/S GSL14S NUMERICAL INTEGRATION
(14-POINT GAUSS-LAGUERRE FORMULA)

C/027/D GSL14D NUMERICAL INTEGRATION
(14-POINT GAUSS-LAGUERRE FORMULA)

C/028/S GSL15S NUMERICAL INTEGRATION
(15-POINT GAUSS-LAGUERRE FORMULA)

C/028/D GSL15D NUMERICAL INTEGRATION
(15-POINT GAUSS-LAGUERRE FORMULA)

C/029/D GSL16D NUMERICAL INTEGRATION
(16-POINT GAUSS-LAGUERRE FORMULA)

C/030/D GSL17D NUMERICAL INTEGRATION
(17-POINT GAUSS-LAGUERRE FORMULA)

C/031/D GSL18D NUMERICAL INTEGRATION
(18-POINT GAUSS-LAGUERRE FORMULA)

C/032/D GSL19D NUMERICAL INTEGRATION
(19-POINT GAUSS-LAGUERRE FORMULA)

C/033/D GSL20D NUMERICAL INTEGRATION
(20-POINT GAUSS-LAGUERRE FORMULA)

C/034/D GSL21D NUMERICAL INTEGRATION
(21-POINT GAUSS-LAGUERRE FORMULA)

C/035/D GSL22D NUMERICAL INTEGRATION
(22-POINT GAUSS-LAGUERRE FORMULA)

C/036/D GSL23D NUMERICAL INTEGRATION
(23-POINT GAUSS-LAGUERRE FORMULA)

C/037/D GSL24D NUMERICAL INTEGRATION
(24-POINT GAUSS-LAGUERRE FORMULA)

C/038/D GSL25D NUMERICAL INTEGRATION
(25-POINT GAUSS-LAGUERRE FORMULA)

C/039/D GSL26D NUMERICAL INTEGRATION
(26-POINT GAUSS-LAGUERRE FORMULA)

C/040/S GSH7S NUMERICAL INTEGRATION
(7-POINT GAUSS-HERMITE FORMULA)

C/041/S GSH8S NUMERICAL INTEGRATION
(8-POINT GAUSS-HERMITE FORMULA)

C/042/S GSH9S NUMERICAL INTEGRATION
(9-POINT GAUSS-HERMITE FORMULA)

C/043/S GSH10S NUMERICAL INTEGRATION
(10-POINT GAUSS-HERMITE FORMULA)

C/043/D GSH10D NUMERICAL INTEGRATION
(10-POINT GAUSS-HERMITE FORMULA)

C/044/S GSH11S NUMERICAL INTEGRATION
(11-POINT GAUSS-HERMITE FORMULA)

C/044/D GSH11D NUMERICAL INTEGRATION
(11-POINT GAUSS-HERMITE FORMULA)

C/045/S GSH12S NUMERICAL INTEGRATION
(12-POINT GAUSS-HERMITE FORMULA)

C/045/D GSH12D NUMERICAL INTEGRATION
(12-POINT GAUSS-HERMITE FORMULA)

C/046/S GSH13S NUMERICAL INTEGRATION
(13-POINT GAUSS-HERMITE FORMULA)

C/046/D GSH13D NUMERICAL INTEGRATION
(13-POINT GAUSS-HERMITE FORMULA)

C/047/S GSH14S NUMERICAL INTEGRATION
(14-POINT GAUSS-HERMITE FORMULA)

C/047/D GSH14D NUMERICAL INTEGRATION
(14-POINT GAUSS-HERMITE FORMULA)

C/048/S GSH15S NUMERICAL INTEGRATION
(15-POINT GAUSS-HERMITE FORMULA)

C/048/D GSH15D NUMERICAL INTEGRATION
(15-POINT GAUSS-HERMITE FORMULA)

C/049/D GSH16D NUMERICAL INTEGRATION
(16-POINT GAUSS-HERMITE FORMULA)

C/050/D GSH17D NUMERICAL INTEGRATION
(17-POINT GAUSS-HERMITE FORMULA)

C/051/D GSH18D NUMERICAL INTEGRATION
(18-POINT GAUSS-HERMITE FORMULA)

C/052/D GSH19D NUMERICAL INTEGRATION
(19-POINT GAUSS-HERMITE FORMULA)

C/053/D GSH20D NUMERICAL INTEGRATION
(20-POINT GAUSS-HERMITE FORMULA)

C/054/D GSH21D	NUMERICAL INTEGRATION (21-POINT GAUSS-HERMITE FORMULA)	D/003/S BAIRIS	ALGEBRAIC EQUATION (BAIRSTOW'S METHOD)
C/055/D GSH22D	NUMERICAL INTEGRATION (22-POINT GAUSS-HERMITE FORMULA)	D/003/D BAIRD	ALGEBRAIC EQUATION (BAIRSTOW'S METHOD)
C/056/D GSH23D	NUMERICAL INTEGRATION (23-POINT GAUSS-HERMITE FORMULA)	D/004/S REGFLS	ALGEBRAIC EQUATION (REGULA-FALSI METHOD)
C/057/D GSH24D	NUMERICAL INTEGRATION (24-POINT GAUSS-HERMITE FORMULA)	D/004/D REGFLD	ALGEBRAIC EQUATION (REGULA-FALSI METHOD)
C/058/D GSH25D	NUMERICAL INTEGRATION (25-POINT GAUSS-HERMITE FORMULA)	D/005/S CNWTRS	ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS (NEWTON-RAPHSON METHOD)
C/059/D GSH26D	NUMERICAL INTEGRATION (26-POINT GAUSS-HERMITE FORMULA)	D/005/D CNWTND	ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS (NEWTON-RAPHSON METHOD)
C/060/D GSH27D	NUMERICAL INTEGRATION (27-POINT GAUSS-HERMITE FORMULA)	D/006/S JAKATS	ALGEBRAIC EQUATION (JARRATT'S MODIFIED METHOD)
C/061/D GSH28D	NUMERICAL INTEGRATION (28-POINT GAUSS-HERMITE FORMULA)	D/006/D JAKATD	ALGEBRAIC EQUATION (JARRATT'S MODIFIED METHOD)
C/062/D GSH29D	NUMERICAL INTEGRATION (29-POINT GAUSS-HERMITE FORMULA)	D/007/S CJARTS	ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS (JARRATT'S METHOD)
C/063/D GSH30D	NUMERICAL INTEGRATION (30-POINT GAUSS-HERMITE FORMULA)	D/007/D CJARTD	ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS (JARRATT'S METHOD)
C/064/D GSH31D	NUMERICAL INTEGRATION (31-POINT GAUSS-HERMITE FORMULA)	D/008/S TRNCS	TRANSCENDENTAL EQUATION WITH COMPLEX COEFFICIENTS
C/065/S SIMP2S	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE, DIGITAL INPUT WITH NON-EQUAL INTERVALS)	D/008/D CIRNCD	TRANSCENDENTAL EQUATION WITH COMPLEX COEFFICIENTS
C/065/D SIMP2D	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE, DIGITAL INPUT WITH NON-EQUAL INTERVALS)	D/009/S NONLES	NON-LINEAR EQUATIONS
C/066/S SIMPFS	NUMERICAL INTEGRATION IN HALF INFINITE INTERVAL (SIMPSON'S 1/3 RULE)	D/009/D NONLED	NON-LINEAR EQUATIONS
C/066/D SIMPFD	NUMERICAL INTEGRATION IN HALF INFINITE INTERVAL (SIMPSON'S 1/3 RULE)	E. 連立一次方程式	
C/067/S MSIMPS	NUMERICAL INTEGRATION (DOUBLE INTERVAL, SIMPSON'S 1/3 RULE)	F/001/S GAUSES	LINEAR EQUATIONS (GAUSS-SEIDEL METHOD)
C/067/D MSIMPD	NUMERICAL INTEGRATION (DOUBLE INTERVAL, SIMPSON'S 1/3 RULE)	E/001/D GAUSFD	LINEAR EQUATIONS (GAUSS-SEIDEL METHOD)
C/068/S MGAUSS	NUMERICAL INTEGRATION (DOUBLE INTERVAL, GAUSS-LEGENDER FORMULA)	E/002/S GAUFLS	LINEAR EQUATIONS (GAUSS ELIMINATION METHOD)
C/068/D MGAUSD	NUMERICAL INTEGRATION (DOUBLE INTERVAL, GAUSS-LEGENDER FORMULA)	F/002/D GAUFLD	LINEAR EQUATIONS (GAUSS ELIMINATION METHOD)
D. 代数方程式		F/003/S SWEEPS	LINEAR EQUATIONS (SWEEP OUT METHOD)
D/001/S CARDNS	ALGEBRAIC EQUATION OF DEGREE 3 (CARDANO'S METHOD)	F/003/D SWEFPD	LINEAR EQUATIONS (SWEEP OUT METHOD)
D/001/D CARDND	ALGEBRAIC EQUATION OF DEGREE 3 (CARDANO'S METHOD)	F/004/S CSWEPS	LINEAR EQUATIONS WITH COMPLEX COEFFICIENTS (SWEEP OUT METHOD)
D/002/S FERRAS	ALGEBRAIC EQUATION OF DEGREE 4 (FERRARI'S METHOD)	F/004/D CSWFPD	LINEAR EQUATIONS WITH COMPLEX COEFFICIENTS (SWEEP OUT METHOD)
D/002/D FERRAD	ALGEBRAIC EQUATION OF DEGREE 4 (FERRARI'S METHOD)	F/005/S TRIDGS	TRIDIAGONAL EQUATIONS (GAUSS'S ELIMINATION METHOD)
		E/006/S SIMFWS	LINEAR EQUATIONS AND DETERMINANTS (SWEEP OUT METHOD)
		E/006/D SIMFWD	LINEAR EQUATIONS AND DETERMINANTS (SWEEP OUT METHOD)
		F/007/S LA2QRS	THE SOLUTION OF SYSTEM OF NON-LINEAR EQUATIONS
		F/007/D LA2QRD	THE SOLUTION OF SYSTEM OF NON-LINEAR EQUATIONS
		F. 常微分方程式	
		F/001/S RKGS	ORDINARY DIFFERENTIAL EQUATION (RUNGF-KUTTA- GILL METHOD)
		F/001/D RKGD	ORDINARY DIFFERENTIAL EQUATION (RUNGF-KUTTA- GILL METHOD)

F/002/S	SRKGS	SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS (RUNGE-KUTTA-GILL METHOD)	G/016/S	EVECS	EIGENVECTORS OF REAL MATRIX (SWEEP OUT METHOD)
F/002/D	SRKGD	SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS (RUNGE-KUTTA-GILL METHOD)	G/016/D	EVECD	EIGENVECTORS OF REAL MATRIX (SWEEP OUT METHOD)
F/003/S	SRKG2S	SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS (RUNGE-KUTTA-GILL METHOD) WITH CHANGING INTERVAL AUTOMATICALLY	G/017/S	HOUSS	EIGENVALUES OF REAL SYMMETRIC MATRIX (HOUSFOLDER METHOD)
F/003/D	SRKG2D	SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS (RUNGE-KUTTA-GILL METHOD) WITH CHANGING INTERVAL AUTOMATICALLY	G/017/D	HOUSD	EIGENVALUES OF REAL SYMMETRIC MATRIX (HOUSFOLDER METHOD)
F/004/S	HAMPCS	SYSTEM OF SIMULTANEOUS ORDINARY DIFFERENTIAL EQUATIONS (HAMMING'S METHOD)	G/018/S	HESQRS	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (QR METHOD)
F/004/D	HAMPCD	SYSTEM OF SIMULTANEOUS ORDINARY DIFFERENTIAL EQUATIONS (HAMMING'S METHOD)	G/018/D	HESQRD	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (QR METHOD)
G. 行列			G/019/S	HOUS2S	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (HOUSFOLDER METHOD)
G/001/S	MADD	MATRIX ADDITION	G/019/D	HOUS2D	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (HOUSFOLDER METHOD)
G/001/D	MADD	MATRIX ADDITION	G/020/S	QREGNS	EIGENVALUES OF REAL MATRIX (QR METHOD)
G/002/S	MSUBS	MATRIX SUBTRACTION	G/020/D	QREGND	EIGENVALUES OF REAL MATRIX (QR METHOD)
G/002/D	MSUBD	MATRIX SUBTRACTION	G/021/S	GAVFCS	EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)
G/003/S	MMUL1S	MATRIX MULTIPLICATION 1	G/021/D	GAVFCD	EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)
G/003/D	MMUL1D	MATRIX MULTIPLICATION 1	G/022/S	MINV2S	INVERSE MATRIX
G/004/S	MMUL2S	MATRIX MULTIPLICATION 2	G/022/D	MINV2D	INVERSE MATRIX
G/004/D	MMUL2D	MATRIX MULTIPLICATION 2	G/023/S	GAVF2S	RIGHT HAND SIDE AND LEFT HAND SIDE EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)
G/005/S	MTRNS	MATRIX TRANSPOSITION	G/023/D	GAVF2D	RIGHT HAND SIDE AND LEFT HAND SIDE EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)
G/005/D	MTRNSD	MATRIX TRANSPOSITION	G/024/S	CHSQRS	EIGENVALUES AND EIGENVECTORS OF COMPLEX MATRIX (QR METHOD)
G/006/S	MUNITS	UNIT MATRIX	G/024/D	CHSQRD	EIGENVALUES AND EIGENVECTORS OF COMPLEX MATRIX (QR METHOD)
G/006/D	MUNITD	UNIT MATRIX	G/025/S	THJACS	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (THRESHOLD JACOBI METHOD)
G/007/S	MPRTS	MATRIX PRINT	G/025/D	THJACD	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (THRESHOLD JACOBI METHOD)
G/007/D	MPRTD	MATRIX PRINT	G/026/S	HMTQRS	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (QR METHOD)
G/008/S	MDETS	DETERMINANT	G/026/D	HMTQRD	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (QR METHOD)
G/008/D	MDETD	DETERMINANT	G/027/S	GEIGNS	THE GENERALIZED SYMMETRIC EIGENVALUE PROBLEMS, AX=LAMDA*BX (QR METHOD, INVERSE ITERATION)
G/009/S	MINVS	MATRIX INVERSION (SWEEP OUT METHOD)	G/027/D	GEIGND	THE GENERALIZED SYMMETRIC EIGENVALUE PROBLEMS, AX=LAMDA*BX (QR METHOD, INVERSE ITERATION)
G/009/D	MINVD	MATRIX INVERSION (SWEEP OUT METHOD)	H. フーリエ級数		
G/010/S	JACOBS	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (THRESHOLD-JACOBI METHOD)	H/001/D	COFOD	COSINE ANALYSIS OF FOURIER SERIES
G/010/D	JACORD	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (THRESHOLD-JACOBI METHOD)	H/002/D	SIFOD	SINE ANALYSIS OF FOURIER SERIES
G/013/S	HERMTS	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX			
G/013/D	HERMTD	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX			
G/014/S	DABAS	EIGENVALUES OF REAL MATRIX (DANILEVSKII'S METHOD)			
G/014/D	DABAD	EIGENVALUES OF REAL MATRIX (DANILEVSKII'S METHOD)			
G/015/S	DANEWS	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (DANILEVSKII'S METHOD)			
G/015/D	DANEWD	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (DANILEVSKII'S METHOD)			

H/003/D COASSD COSINE ASSEMBLY OF FOURIER SERIES
H/004/D SIASSD SINE ASSEMBLY OF FOURIER SERIES
H/005/S FFTS FAST FOURIER TRANSFORM
H/005/D FFTD FAST FOURIER TRANSFORM

I. 関数近似

I/001/D LSTSQD POLYNOMIAL APPROXIMATION BY LEAST SQUARE
I/002/D BSTAPD BEST APPROXIMATION
I/003/S LAGS LAGRANGE'S INTERPOLATION
I/003/D LAGD LAGRANGE'S INTERPOLATION
I/005/S CHEBS TCHEBYSHEV APPROXIMATION (COMPUTE THE
TCHEBYSHEV COEFFICIENTS)
I/005/D CHEBD TCHEBYSHEV APPROXIMATION (COMPUTE THE
TCHEBYSHEV COEFFICIENTS)
I/006/S TINTS TCHEBYSHEV APPROXIMATION (COMPUTE THE
FUNCTION VALUE BY USING TCHEBYSHEV
COEFFICIENTS)
I/006/D TINTD TCHEBYSHEV APPROXIMATION (COMPUTE THE
FUNCTION VALUE BY USING TCHEBYSHEV
COEFFICIENTS)

I/007/S SPLINS SPLINE INTERPOLATION
I/007/D SPLIND SPLINE INTERPOLATION
I/008/S CHRAPS RATIONAL APPROXIMATION BY CHERYSHEV'S
POLYNOMIAL
I/008/D CHRAPD RATIONAL APPROXIMATION BY CHERYSHEV'S
POLYNOMIAL
I/009/S CHRCFS BEST APPROXIMATION BY CHERYSHEV'S POLYNOMIAL,
DISCRETE DATA
I/009/D CHRCFD BEST APPROXIMATION BY CHERYSHEV'S POLYNOMIAL,
DISCRETE DATA
I/010/S CONFES RATIONAL APPROXIMATION BY CONTINUED FRACTION,
DISCRETE DATA
I/010/D CONFED RATIONAL APPROXIMATION BY CONTINUED FRACTION,

DISCRETE DATA

J. 偏微分方程式

J/001/S ELPDES PARTIAL DIFFERENTIAL EQUATION OF ELLIPTIC
TYPE
J/002/S PAPDES PARTIAL DIFFERENTIAL EQUATION OF PARABOLIC
TYPE
J/002/D PAPDED PARTIAL DIFFERENTIAL EQUATION OF PARABOLIC
TYPE
J/003/S HYPDES PARTIAL DIFFERENTIAL EQUATION OF HYPERBOLIC
TYPE
J/003/D HYPDED PARTIAL DIFFERENTIAL EQUATION OF HYPERBOLIC
TYPE

K. 積分方程式

K/001/S INEV2S VOLTERRA'S INTEGRAL EQUATION OF SECOND KIND
K/001/D INEV2D VOLTERRA'S INTEGRAL EQUATION OF SECOND KIND

Z. その他

Z/001/S PUADD5 ADDITION OF POLYNOMIALS
Z/001/D PUADD4 ADDITION OF POLYNOMIALS
Z/002/S PUSUB5 SUBTRACTION OF POLYNOMIALS
Z/002/D PUSUB4 SUBTRACTION OF POLYNOMIALS
Z/003/S PUMUL5 MULTIPLICATION OF POLYNOMIALS
Z/003/D PUMUL4 MULTIPLICATION OF POLYNOMIALS
Z/004/S PUDIV5 DIVISION OF POLYNOMIALS
Z/004/D PUDIV4 DIVISION OF POLYNOMIALS
Z/006/S NORRNS NORMAL RANDOM NUMBERS
Z/007/S POISNS POISSON RANDOM NUMBERS
Z/009/S CUMPS BINOMIAL COEFFICIENTS
Z/009/D CUMPD BINOMIAL COEFFICIENTS
Z/010/S DAVIDS MINIMIZATION OF FUNCTION DERIVATIVE
Z/010/D DAVIDD MINIMIZATION OF FUNCTION DERIVATIVE

3. 富士通作成 SSL ALGOL

これらのプログラムは、SYS1. ASSLIB のファイルに登録されています。LIED で使うファイル定義名はA. SSLです。

最新のマニュアルは、FACOM 230-60 SSL (科学用サブルーチンライブラリ) 使用方法解説書ALGOL編第4版 (資料番号230/60-301~309-002-4) です。

分類コード	呼び出し名	題	目	分類コード	呼び出し名	題	目
B. 一般、特殊関数				C/002/A	SIMP A	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE)	
B/001/A	CEI.11A	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST KIND		C/002/B	SIMP B	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE)	
B/002/A	CEI.12A	COMPLETE ELLIPTIC INTEGRAL OF THE SECOND KIND		C/003/A	GAUSS A	NUMERICAL INTEGRATION (GAUSSIAN FORMULA)	
B/003/B	EXPGB	EXPONENTIAL INTEGRAL 1		C/003/B	GAUSS B	NUMERICAL INTEGRATION (GAUSSIAN FORMULA)	
B/004/A	GAMANA	GAMMA FUNCTION		C/004/B	GAS3B	NUMERICAL INTEGRATION (3-POINT GAUSSIAN FORMULA)	
B/005/A	GAMA1A	GAMMA FUNCTION		C/005/B	GAS4B	NUMERICAL INTEGRATION (4-POINT GAUSSIAN FORMULA)	
B/008/A	LNKATA	LOG(N!)		C/006/B	GAS5B	NUMERICAL INTEGRATION (5-POINT GAUSSIAN FORMULA)	
B/008/B	LNKA1B	LOG(N!)		C/007/B	GAS6B	NUMERICAL INTEGRATION (6-POINT GAUSSIAN FORMULA)	
B/009/B	FRESB	FRESNEL'S INTEGRAL		C/008/B	GAS7B	NUMERICAL INTEGRATION (7-POINT GAUSSIAN FORMULA)	
B/010/B	SIB	SINE INTEGRAL		C/009/B	GAS8B	NUMERICAL INTEGRATION (8-POINT GAUSSIAN FORMULA)	
B/011/B	CIB	COSINE INTEGRAL		C/010/B	GAS9B	NUMERICAL INTEGRATION (9-POINT GAUSSIAN FORMULA)	
B/012/B	BESJOB	BESSEL FUNCTION J0(X)		C/011/B	GAS10B	NUMERICAL INTEGRATION (10-POINT GAUSSIAN FORMULA)	
B/013/B	BESJ1B	BESSEL FUNCTION J1(X)		C/012/B	GAS12B	NUMERICAL INTEGRATION (12-POINT GAUSSIAN FORMULA)	
B/014/B	BESYOB	BESSEL FUNCTION Y0(X)		C/013/B	GAS16B	NUMERICAL INTEGRATION (16-POINT GAUSSIAN FORMULA)	
B/015/B	BESY1B	BESSEL FUNCTION Y1(X)		C/014/B	GAS24B	NUMERICAL INTEGRATION (24-POINT GAUSSIAN FORMULA)	
B/016/B	BESIOB	BESSEL FUNCTION I0(X)		C/015/B	GAS32B	NUMERICAL INTEGRATION (32-POINT GAUSSIAN FORMULA)	
B/017/B	BESI1B	BESSEL FUNCTION I1(X)		C/016/A	SIMP1A	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE, DIGITAL INPUT 1)	
B/018/B	BESKOB	BESSEL FUNCTION K0(X)		C/016/B	SIMP1B	NUMERICAL INTEGRATION (SIMPSON'S 1/3 RULE, DIGITAL INPUT 1)	
B/019/B	BESK1B	BESSEL FUNCTION K1(X)		C/017/A	GSL4A	NUMERICAL INTEGRATION (4-POINT GAUSS-LAGUERRE FORMULA)	
B/020/B	LEGDB	LEGENDRE'S POLYNOMIAL		C/018/A	GSL5A	NUMERICAL INTEGRATION (5-POINT GAUSS-LAGUERRE FORMULA)	
B/021/A	BEK1A	POWER SERIES		C/019/A	GSL6A	NUMERICAL INTEGRATION (6-POINT GAUSS-LAGUERRE FORMULA)	
B/021/B	BEK1B	POWER SERIES		C/020/A	GSL7A	NUMERICAL INTEGRATION (7-POINT GAUSS-LAGUERRE FORMULA)	
B/022/A	BESJNA	BESSEL FUNCTION JN(X)		C/021/A	GSL8A	NUMERICAL INTEGRATION (8-POINT GAUSS-LAGUERRE FORMULA)	
B/022/B	BESJNB	BESSEL FUNCTION JN(X)		C/022/A	GSL9A	NUMERICAL INTEGRATION (9-POINT GAUSS-LAGUERRE FORMULA)	
B/023/A	BESYNA	BESSEL FUNCTION YN(X)					
B/023/B	BESYNB	BESSEL FUNCTION YN(X)					
B/024/A	BESINA	BESSEL FUNCTION IN(X)					
B/024/B	BESINB	BESSEL FUNCTION IN(X)					
B/025/A	BESKNA	BESSEL FUNCTION KN(X)					
B/025/B	BESKNB	BESSEL FUNCTION KN(X)					
B/026/A	CEP12A	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST AND SECOND KINDS					
B/026/B	CEP12B	COMPLETE ELLIPTIC INTEGRAL OF THE FIRST AND SECOND KINDS					
B/027/A	EXP62A	EXPONENTIAL INTEGRAL 2					
B/027/B	EXP62B	EXPONENTIAL INTEGRAL 2					
C. 微積分							
C/001/A	DIFLAA	NUMERICAL DIFFERENTIATION (LAGRANGE'S INTERPOLATION)					
C/001/B	DIFLAB	NUMERICAL DIFFERENTIATION (LAGRANGE'S INTERPOLATION)					

C/023/A GSL10A NUMERICAL INTEGRATION
 (10-POINT GAUSS-LAGUERRE FORMULA)
 C/023/B GSL10B NUMERICAL INTEGRATION
 (10-POINT GAUSS-LAGUERRE FORMULA)
 C/024/A GSL11A NUMERICAL INTEGRATION
 (11-POINT GAUSS-LAGUERRE FORMULA)
 C/024/B GSL11B NUMERICAL INTEGRATION
 (11-POINT GAUSS-LAGUERRE FORMULA)
 C/025/A GSL12A NUMERICAL INTEGRATION
 (12-POINT GAUSS-LAGUERRE FORMULA)
 C/025/B GSL12B NUMERICAL INTEGRATION
 (12-POINT GAUSS-LAGUERRE FORMULA)
 C/026/A GSL13A NUMERICAL INTEGRATION
 (13-POINT GAUSS-LAGUERRE FORMULA)
 C/026/B GSL13B NUMERICAL INTEGRATION
 (13-POINT GAUSS-LAGUERRE FORMULA)
 C/027/A GSL14A NUMERICAL INTEGRATION
 (14-POINT GAUSS-LAGUERRE FORMULA)
 C/027/B GSL14B NUMERICAL INTEGRATION
 (14-POINT GAUSS-LAGUERRE FORMULA)
 C/028/A GSL15A NUMERICAL INTEGRATION
 (15-POINT GAUSS-LAGUERRE FORMULA)
 C/028/B GSL15B NUMERICAL INTEGRATION
 (15-POINT GAUSS-LAGUERRE FORMULA)
 C/029/B GSL16B NUMERICAL INTEGRATION
 (16-POINT GAUSS-LAGUERRE FORMULA)
 C/030/B GSL17B NUMERICAL INTEGRATION
 (17-POINT GAUSS-LAGUERRE FORMULA)
 C/031/B GSL18B NUMERICAL INTEGRATION
 (18-POINT GAUSS-LAGUERRE FORMULA)
 C/032/B GSL19B NUMERICAL INTEGRATION
 (19-POINT GAUSS-LAGUERRE FORMULA)
 C/033/B GSL20B NUMERICAL INTEGRATION
 (20-POINT GAUSS-LAGUERRE FORMULA)
 C/034/B GSL21B NUMERICAL INTEGRATION
 (21-POINT GAUSS-LAGUERRE FORMULA)
 C/035/B GSL22B NUMERICAL INTEGRATION
 (22-POINT GAUSS-LAGUERRE FORMULA)
 C/036/B GSL23B NUMERICAL INTEGRATION
 (23-POINT GAUSS-LAGUERRE FORMULA)
 C/037/B GSL24B NUMERICAL INTEGRATION
 (24-POINT GAUSS-LAGUERRE FORMULA)
 C/038/B GSL25B NUMERICAL INTEGRATION
 (25-POINT GAUSS-LAGUERRE FORMULA)
 C/039/B GSL26B NUMERICAL INTEGRATION
 (26-POINT GAUSS-LAGUERRE FORMULA)
 C/040/A GSH7A NUMERICAL INTEGRATION
 (7-POINT GAUSS-HERMITE FORMULA)
 C/041/A GSH8A NUMERICAL INTEGRATION
 (8-POINT GAUSS-HERMITE FORMULA)

C/042/A GSH9A NUMERICAL INTEGRATION
 (9-POINT GAUSS-HERMITE FORMULA)
 C/043/A GSH10A NUMERICAL INTEGRATION
 (10-POINT GAUSS-HERMITE FORMULA)
 C/043/B GSH10B NUMERICAL INTEGRATION
 (10-POINT GAUSS-HERMITE FORMULA)
 C/044/A GSH11A NUMERICAL INTEGRATION
 (11-POINT GAUSS-HERMITE FORMULA)
 C/044/B GSH11B NUMERICAL INTEGRATION
 (11-POINT GAUSS-HERMITE FORMULA)
 C/045/A GSH12A NUMERICAL INTEGRATION
 (12-POINT GAUSS-HERMITE FORMULA)
 C/045/B GSH12B NUMERICAL INTEGRATION
 (12-POINT GAUSS-HERMITE FORMULA)
 C/046/A GSH13A NUMERICAL INTEGRATION
 (13-POINT GAUSS-HERMITE FORMULA)
 C/046/B GSH13B NUMERICAL INTEGRATION
 (13-POINT GAUSS-HERMITE FORMULA)
 C/047/A GSH14A NUMERICAL INTEGRATION
 (14-POINT GAUSS-HERMITE FORMULA)
 C/047/B GSH14B NUMERICAL INTEGRATION
 (14-POINT GAUSS-HERMITE FORMULA)
 C/048/A GSH15A NUMERICAL INTEGRATION
 (15-POINT GAUSS-HERMITE FORMULA)
 C/048/B GSH15B NUMERICAL INTEGRATION
 (15-POINT GAUSS-HERMITE FORMULA)
 C/049/B GSH16B NUMERICAL INTEGRATION
 (16-POINT GAUSS-HERMITE FORMULA)
 C/050/B GSH17B NUMERICAL INTEGRATION
 (17-POINT GAUSS-HERMITE FORMULA)
 C/051/B GSH18B NUMERICAL INTEGRATION
 (18-POINT GAUSS-HERMITE FORMULA)
 C/052/B GSH19B NUMERICAL INTEGRATION
 (19-POINT GAUSS-HERMITE FORMULA)
 C/053/B GSH20B NUMERICAL INTEGRATION
 (20-POINT GAUSS-HERMITE FORMULA)
 C/054/B GSH21B NUMERICAL INTEGRATION
 (21-POINT GAUSS-HERMITE FORMULA)
 C/055/B GSH22B NUMERICAL INTEGRATION
 (22-POINT GAUSS-HERMITE FORMULA)
 C/056/B GSH23B NUMERICAL INTEGRATION
 (23-POINT GAUSS-HERMITE FORMULA)
 C/057/B GSH24B NUMERICAL INTEGRATION
 (24-POINT GAUSS-HERMITE FORMULA)
 C/058/B GSH25B NUMERICAL INTEGRATION
 (25-POINT GAUSS-HERMITE FORMULA)
 C/059/B GSH26B NUMERICAL INTEGRATION
 (26-POINT GAUSS-HERMITE FORMULA)
 C/060/B GSH27B NUMERICAL INTEGRATION
 (27-POINT GAUSS-HERMITE FORMULA)

C/061/B GSH28B NUMERICAL INTEGRATION
(28-POINT GAUSS-HERMITE FORMULA)
C/062/B GSH29B NUMERICAL INTEGRATION
(29-POINT GAUSS-HERMITE FORMULA)
C/063/B GSH30B NUMERICAL INTEGRATION
(30-POINT GAUSS-HERMITE FORMULA)
C/064/B GSH31B NUMERICAL INTEGRATION
(31-POINT GAUSS-HERMITE FORMULA)

D. 代数方程式

D/001/A CARDNA ALGEBRAIC EQUATION OF DEGREE 3 (CARDANO'S
METHOD)
D/001/B CARDNB ALGEBRAIC EQUATION OF DEGREE 3 (CARDANO'S
METHOD)
D/002/A FERRAA ALGEBRAIC EQUATION OF DEGREE 4 (FERRARI'S
METHOD)
D/002/B FERRAB ALGEBRAIC EQUATION OF DEGREE 4 (FERRARI'S
METHOD)
D/003/A BAIRIA ALGEBRAIC EQUATION (BAIRSTOW'S METHOD)
D/003/B BAIRIB ALGEBRAIC EQUATION (BAIRSTOW'S METHOD)
D/004/A REGFLA ALGEBRAIC EQUATION (REGULA-FALSI METHOD)
D/004/B REGFLB ALGEBRAIC EQUATION (REGULA-FALSI METHOD)
D/005/A CNWTNA ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS
(NEWTON-RAPHSON METHOD)
D/005/B CNWTNB ALGEBRAIC EQUATION WITH COMPLEX COEFFICIENTS
(NEWTON-RAPHSON METHOD)
D/006/A JARATA ALGEBRAIC EQUATION (JARRATT'S MODIFIED
METHOD)
D/006/B JARATB ALGEBRAIC EQUATION (JARRATT'S MODIFIED
METHOD)

E. 連立一次方程式

E/001/A GAUSEA LINEAR EQUATIONS (GAUSS-SEIDEL METHOD)
E/001/B GAUSEB LINEAR EQUATIONS (GAUSS-SEIDEL METHOD)
E/002/A GAUELA LINEAR EQUATIONS (GAUSS ELIMINATION METHOD)
E/002/B GAUELB LINEAR EQUATIONS (GAUSS ELIMINATION METHOD)
E/003/A SWEEPA LINEAR EQUATIONS (SWEEP OUT METHOD)
E/003/B SWEEPB LINEAR EQUATIONS (SWEEP OUT METHOD)
E/004/A CSWEPA LINEAR EQUATIONS WITH COMPLEX COEFFICIENTS
(SWEEP OUT METHOD)
E/004/B CSWEPB LINEAR EQUATIONS WITH COMPLEX COEFFICIENTS
(SWEEP OUT METHOD)
E/005/A TRIDGA TRIDIAGONAL EQUATIONS (GAUSS'S ELIMINATION
METHOD)
E/006/A SIMEQA LINEAR EQUATIONS AND DETERMINANTS (SWEEP OUT
METHOD)
E/006/B SIMEQB LINEAR EQUATIONS AND DETERMINANTS (SWEEP OUT
METHOD)

F. 常微分方程式

F/001/A RKGA ORDINARY DIFFERENTIAL EQUATION (RUNGE-KUTTA-
GILL METHOD)
F/001/B RKGB ORDINARY DIFFERENTIAL EQUATION (RUNGE-KUTTA-
GILL METHOD)
F/002/A SRKGA SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS
(RUNGE-KUTTA-GILL METHOD)
F/002/B SRKGB SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS
(RUNGE-KUTTA-GILL METHOD)
F/003/A SRKG2A SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS
(RUNGE-KUTTA-GILL METHOD, WITH CHANGING
INTERVAL AUTOMATICALLY)
F/003/B SRKG2B SYSTEM OF ORDINARY DIFFERENTIAL EQUATIONS
(RUNGE-KUTTA-GILL METHOD, WITH CHANGING
INTERVAL AUTOMATICALLY)
F/004/A HAMPCA SYSTEM OF SIMULTANEOUS ORDINARY DIFFERENTIAL
EQUATIONS (HAMMING'S METHOD)
F/004/B HAMPCB SYSTEM OF SIMULTANEOUS ORDINARY DIFFERENTIAL
EQUATIONS (HAMMING'S METHOD)

G. 行列

G/001/A MADDA MATRIX ADDITION
G/001/B MADDB MATRIX ADDITION
G/002/A MSUBA MATRIX SUBTRACTION
G/002/B MSUBB MATRIX SUBTRACTION
G/003/A MMUL1A MATRIX MULTIPLICATION 1
G/003/B MMUL1B MATRIX MULTIPLICATION 1
G/004/A MMUL2A MATRIX MULTIPLICATION 2
G/004/B MMUL2B MATRIX MULTIPLICATION 2
G/005/A MTRNSA MATRIX TRANSPOSITION
G/005/B MTRNSB MATRIX TRANSPOSITION
G/006/A MUNITA UNIT MATRIX
G/006/B MUNITB UNIT MATRIX
G/007/A MPRTA MATRIX PRINT
G/007/B MPRTB MATRIX PRINT
G/008/A MDETA DETERMINANT
G/008/B MDETB DETERMINANT
G/009/A MINVA MATRIX INVERSION (SWEEP OUT METHOD)
G/009/B MINVB MATRIX INVERSION (SWEEP OUT METHOD)
G/010/A JACORA EIGENVALUES AND EIGENVECTORS OF REAL
SYMMETRIC MATRIX (THRESHOLD-JACOBI METHOD)
G/010/B JACORB EIGENVALUES AND EIGENVECTORS OF REAL
SYMMETRIC MATRIX (THRESHOLD-JACOBI METHOD)
G/013/A HERMTA EIGENVALUES AND EIGENVECTORS OF HERMITIAN
MATRIX
G/013/B HERMTB EIGENVALUES AND EIGENVECTORS OF HERMITIAN
MATRIX
G/014/A DABAA EIGENVALUES OF REAL MATRIX (DANILEVSKII'S
METHOD)

G/014/B DABAR.	EIGENVALUES OF REAL MATRIX (DANILEVSKII'S METHOD)		
G/015/A DANEWA	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (DANILEVSKII'S METHOD)		
G/015/B DANEWB	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (DANILEVSKII'S METHOD)		
G/016/A EVECA	EIGENVECTORS OF REAL MATRIX (SWEEP OUT METHOD)		
G/016/B EVFCH	EIGENVECTORS OF REAL MATRIX (SWEEP OUT METHOD)		
G/017/A HOUSA	EIGENVALUES OF REAL SYMMETRIC MATRIX (HOUSEHOLDER METHOD)		
G/017/B HOUSB	EIGENVALUES OF REAL SYMMETRIC MATRIX (HOUSEHOLDER METHOD)		
G/018/A HESQRA	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (QR METHOD)		
G/018/B HESQRB	EIGENVALUES AND EIGENVECTORS OF REAL MATRIX (QR METHOD)		
G/019/A HOUS2A	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (HOUSEHOLDER METHOD)		
G/019/B HOUS2B	EIGENVALUES AND EIGENVECTORS OF REAL SYMMETRIC MATRIX (HOUSEHOLDER METHOD)		
G/020/A WRFGNA	EIGENVALUES OF REAL MATRIX (QR METHOD)		
G/020/B WREGNB	EIGENVALUES OF REAL MATRIX (QR METHOD)		
G/021/A GAVECA	EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)		
G/021/B GAVECB	EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)		
G/022/A MINV2A	INVERSE MATRIX		
G/022/B MINV2B	INVERSE MATRIX		
G/023/A GAVE2A	RIGHT HAND SIDE AND LEFT HAND SIDE EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)		
G/023/B GAVE2B	RIGHT HAND SIDE AND LEFT HAND SIDE EIGENVECTORS OF REAL MATRIX (INVERSE ITERATION METHOD)		
G/025/A THJACA	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (THRESHOLD JACOBI METHOD)		
G/025/B THJACB	EIGENVALUES AND EIGENVECTORS OF HERMITIAN MATRIX (THRESHOLD JACOBI METHOD)		
H. フーリエ級数			
H/001/B COFOR	COSINE ANALYSIS OF FOURIER SERIES		
H/002/B SIFOB	SINE ANALYSIS OF FOURIER SERIES		
H/003/B COASSB	COSINE ASSEMBLY OF FOURIER SERIES		
H/004/B SIASSB	SINE ASSEMBLY OF FOURIER SERIES		
H/005/A FFTA	FAST FOURIER TRANSFORM		
H/005/B FFTB	FAST FOURIER TRANSFORM		
I. 関数近似			
I/001/B LSTSQB	POLYNOMIAL APPROXIMATION BY LEAST SQUARE BEST APPROXIMATION		
I/002/B BSTAPB	BEST APPROXIMATION		
I/003/A LAGA	LAGRANGE'S INTERPOLATION		
I/003/B LAGR	LAGRANGE'S INTERPOLATION		
I/005/A CHEBA	TCHEBYSHEV APPROXIMATION (COMPUTE THE TCHEBYSHEV COEFFICIENTS)		
I/005/B CHERB	TCHEBYSHEV APPROXIMATION (COMPUTE THE TCHEBYSHEV COEFFICIENTS)		
I/006/A TINTA	TCHEBYSHEV APPROXIMATION (COMPUTE THE FUNCTION VALUE BY USING TCHEBYSHEV COEFFICIENTS)		
I/006/B TINTB	TCHEBYSHEV APPROXIMATION (COMPUTE THE FUNCTION VALUE BY USING TCHEBYSHEV COEFFICIENTS)		
I/007/A SPLINA	SPLINE INTERPOLATION		
I/007/B SPLINB	SPLINE INTERPOLATION		
J. 偏微分方程式			
J/001/A ELPDEA	PARTIAL DIFFERENTIAL EQUATION OF ELLIPTIC TYPE		
J/002/A PAPDEA	PARTIAL DIFFERENTIAL EQUATION OF PARABOLIC TYPE		
J/002/B PAPDEB	PARTIAL DIFFERENTIAL EQUATION OF PARABOLIC TYPE		
J/003/A HYPDEA	PARTIAL DIFFERENTIAL EQUATION OF HYPERBOLIC TYPE		
J/003/B HYPDEB	PARTIAL DIFFERENTIAL EQUATION OF HYPERBOLIC TYPE		
K. 積分方程式			
K/001/A INEV2A	VOLTERRA'S INTEGRAL EQUATION OF SECOND KIND		
K/001/B INEV2B	VOLTERRA'S INTEGRAL EQUATION OF SECOND KIND		
Z. その他			
Z/001/A POADD	ADDITION OF POLYNOMIALS		
Z/001/B PGADDE	ADDITION OF POLYNOMIALS		
Z/002/A POSUB	SUBTRACTION OF POLYNOMIALS		
Z/002/B POSUBB	SUBTRACTION OF POLYNOMIALS		
Z/003/A POMUL	MULTIPLICATION OF POLYNOMIALS		
Z/003/B POMULB	MULTIPLICATION OF POLYNOMIALS		
Z/004/A PODIVA	DIVISION OF POLYNOMIALS		
Z/004/B PODIVB	DIVISION OF POLYNOMIALS		
Z/006/A NORRNA	NORMAL RANDOM NUMBERS		
Z/007/A PCISNA	POISSON RANDOM NUMBERS		
Z/009/A COMBA	BINOMIAL COEFFICIENTS		
Z/009/B COMBB	BINOMIAL COEFFICIENTS		