

- 1.
- 2.

- 2
- 3
- 4
- 5

- 1.
- 2.
- 3.

- 1
- 2
- 3
- 4
- 5

- 1
- 2
- 3
- 4

- 1
- 2

3
4

1.
2.

1.
2.
3.

1
2
3
4
5
6
7
8

p

1.
2.
3.
4.
5.
6.

1.
2.

1

2
3 n

1.
2. n

1.
2.

1.
2.

1
2

1
2

1.

4

1

1

1

1

Cauchy-Riemann

10

Cauchy-Riemann 2

Cauchy-Riemann

2

6

Cauchy-Riemann

Cauchy-Riemann

Cauchy Cauchy Cauchy
Liouville Morera

10

2

10

Laurent 3
Laurent Laurent
3 Weierstrass Picard Schwarz
2
Laurent
2
Laurent
Weierstrass Picard Schwarz
Laurent Weierstrass Picard Schwarz
Cauchy Liouville Cauchy Morera Cauchy

10

3
5
2
Rouche
Rouche

- 1 1988 5 2
- 2 1984 4 1
- 3 1979 2 1
- 4 John B.Conway, Functions of One Complex Variable, Springer-Verlag,New York,1978.

54

6
6
8
8
4
4

8

- 1.
 - 2.
- 4

- 1.
- 2.

- 8
- 4

- 1.
 - 2.
- 4

- 1.

- 10
- 2

- 1.
 - 2.
- 8

- 1.

- 4.

10

- 2
- 1. .
- 2. .
- 4
- 1. .
- 4
- 2. .
- 3. .

8

- 4
- 1. .
- 2. .
- 4
- 1. .

10

- 4
- 1. .
- 2. .
- 6
- 1. .

1
2

1993 8 .
1999 6 .

Matlab
Powerpoint

Tex Latex

1996

,

90

3

54

2

36

Euler

Runge-Kutta

10 .

2

Bellmann

Euler

2

Euler

Euler

Euler

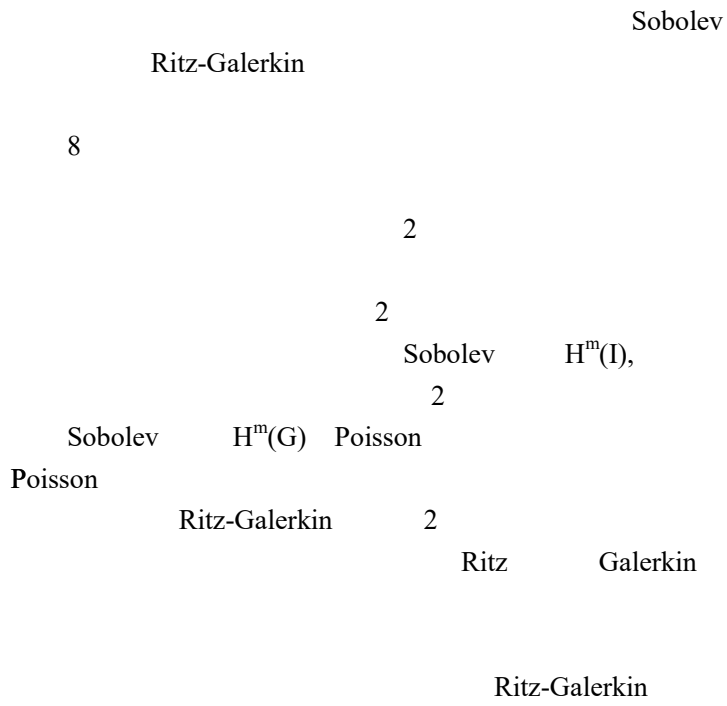
2

2

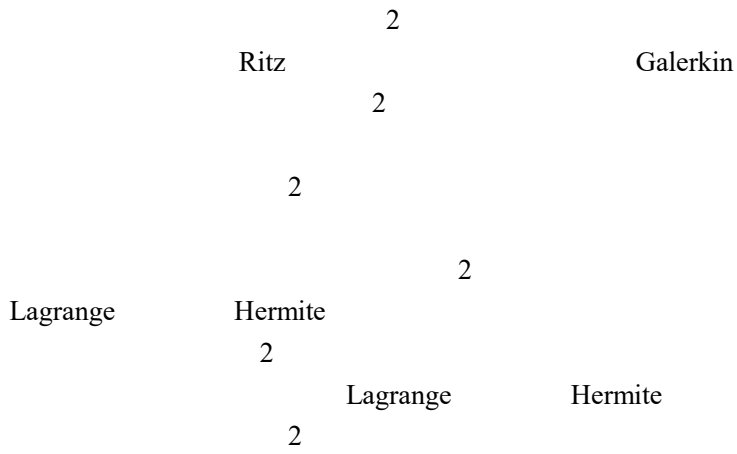
2

Euler

,



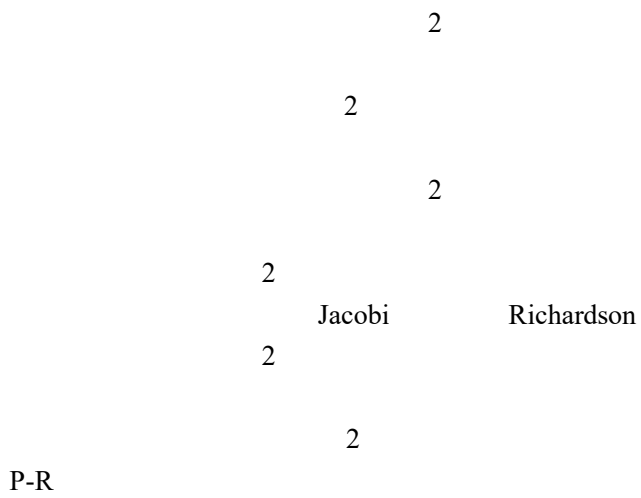
12



Jacobi

P-R

12



Jacobi

C-

1	Euler	2		
2	Runge-Kutta	2		
3	Ritz-Galerkin	2		
4		2		
5		2		
6		2		
7	Poisson	2		
8		2		
9	Jacobi	2		

1 A a

Euler

$$u' = -u, \quad u(0) = 1$$

[0 1] 0.1, 0.05, 0.01. t=1

PC

. ca G

Runge-Kutta

$$u' = -5u - 3, \quad u(0) = 1$$

[0 1] . t=1 <0.0001

PC

e C a e

Ritz-Galerkin

$$\begin{cases} -u'' = 2, & 0 < x < 1, \\ u(0) = 0, & u(1) = 1. \end{cases}$$

$$\varphi(x) = \sin(n\pi x), \quad n = 1, 2, \dots,$$

$L^2(0,1)$ 0.001.
PC

4

$$\begin{cases} \frac{\partial^2 u}{\partial x^2} + \frac{\partial^2 v}{\partial y^2} = -1, & (x, y) \in \Omega := [0, 1] \times [0, 1], \\ u|_{\partial\Omega} = 0 \end{cases}$$

PC

5

$$\begin{cases} \Delta u = -2, & x^2 + y^2 < 1, \\ u = -1 & x^2 + y^2 = 1. \end{cases}$$

PC

6

$$\begin{cases} -u'' + \frac{\pi}{4}u = 2\sin\frac{\pi}{2}, & 0 < x < 1, \\ u(0) = 0, & u'(1) = 0. \end{cases}$$

PC

7

L e

$$\begin{cases} \Delta u = -2, & -1 < x < 1, -1 < y < 1, \\ u(x, -1) = u(x, 1) = 0, & -1 < x < 1, \\ u(-1, y) = 1, & u(1, y) = 0, -1 < y < 1. \end{cases}$$

PC

]

π

π

π

Bayes

54

54

10

2 2 2
2 2

10

2 2 2
4 2

5

2 3

1 2009 3
2 1996 9
3 2002

1
2
3

8

12

8

12

50

[8]

2

[]

2

[]

[]

2

[]

4

[]

QR

[]

[10]

2

[]

2

[]

[]

[]

[]

1

2

1986

50

Vigenere

3

1

2

Vigenere

Shannon

Simmons

5

Shannon

1

2

3

4

Simmons

1

2

5

1

2

3

1

2

$2 = 2$

B-M

1

B-M
Blahut

1 Walsh
2
3
4
5

B-M

DES IDEA RC5

12

DES

1 DES
2 DES
3 DES

1 IDEA
2 RC5
3

1 -
2
3

DES IDEA

RC5

RSA

Merke-Hellman

McEliece

ElGmaml

12

RSA

1 RSA

2 RSA

3 RSA

1

2

ElGamal

1 ElGamal

2

3

1 Rabin

2 Merke-Hellman

3 McEliece

4

5

Merke-Hellman

Rabin McEliece

ElGamal

RSA

2

RSA

ElGamal

Fail-Stop

54

4

- 1.
- 2.

2

2

1. .

8

4

1. .

2. .

4

1. .

.

.

6

4

1. .

2. .

2

1. .

2. .

6

4

1.

2.

3.

2

1.

2.

12

4

1.

2.

3.

2

1.

2.

2

1.

2.

4

1.

2.

3.

6

- 1. 2 .
- 2. .

- 1. 4 .
- 2. .

6

- 1. 2 .
 - 2. ..
- 4

- 1. .
- 2. .

6

- 1. 2 .
 - 2. .
- 4

- 1. .
- 2. .

1

50

- 1
- 2
- 3

Warrier IPO

8

- 1
- 2 Warnier
- 3 IPO

Warnier IPO

Jackson Warnier

8

Jackson
Warnier

Jackson

Warnier

PAD

HIPO

8

1

2 PAD

3

4

5

PAD

HIPO

8

1

2

3

1

2

3

4

5

1

2

8

4

1

2
3

2002 9
2002 3

1
2
3
4

CASE

1.
2.
3.

:

1.
2.
3.
4

:

1 .

ARQ HDLC CSMA/CD
X.25 IP TCP
2 .

TCP/IP

EIA-232-D

TCP

3 .

X.25

TCP/IP

(

DNS

FTP

TELNET

SMTP

SNMP)

(

ISDN

ATM

)

:

:

OSI

OSI TCP/IP

—

:

OSI TCP/IP

—

()

EIA-232-D

:

:

()

EIA-232-D

:

ARQ HDLC
3

ARQ
ARQ

HDLC HDLC
:

ARQ
ARQ

HDLC

HDLC

MAC CSMA/CD

3

LLC

MAC

IEEE 802.3 CSMA/CD

CSMA/CD

802.3

802.3 MAC

802.3

:

IEEE 802.3 CSMA/CD

CSMA/CD

802.3

802.3 MAC

802.3

:

LLC

MAC

ATM

6 □ □

=M

IP

IP

IP

Internet

IP

IPV6

:

IP

IP

IP

:

Internet

TCP/IP

UDP TCP

6

TCP/IP

TCP

UDP

:

TCP/IP

:

UDP

TCP

:

TCP/IP

TCP/IP

DNS

FTP

TELNET

SMTP

TFTP

SNMP

DNS

FTP

TELNET

SMTP

TCP/IP

SNMP

TELNET

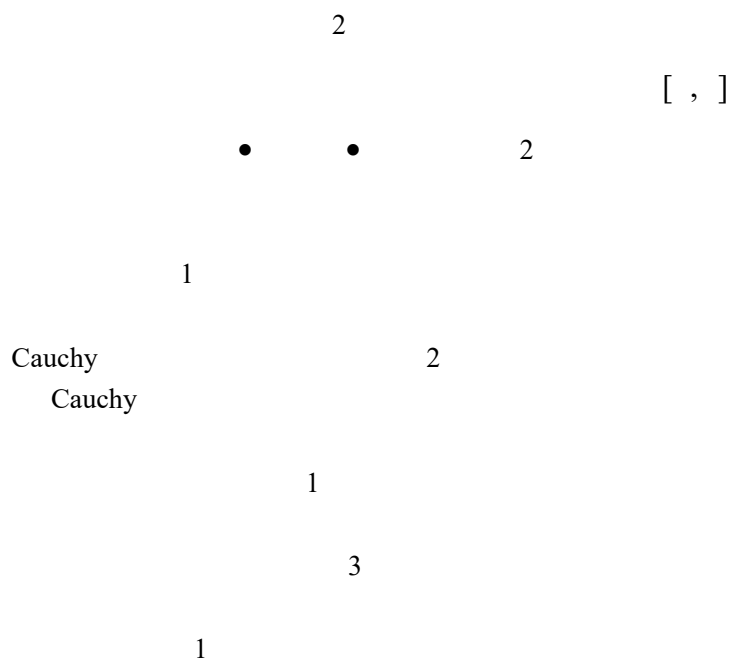
1

2

Hilbert Banach Banach
54

Cauchy
Banach

16



Banach 4

Banach [,] ∞

∞ [,]

Banach

[,] ∞ ∞ [,]

10

5

5

De a

Hilbert

Hilbert

16

2

Hilbert

3

Hilbert

Hilbert

5

Fourier

Bessel

Parseval

, Fourier

Gram-Schmidt

Hilbert

Hilbert 2
Riesz 2

Hilbert Bessel Parseval
Fourier , Riesz

d

Hahn-Banach Riesz

14

Hahn-Banach 2
[,] 2

Riesz

1

Baire , 3
2 Fourier

*

2

2

Baire Hahn-Banach Riesz

4

2

2

1

1983

2

1992

3

1985

photoshop

flash

1.

2.

3.

:

1.

2.

3.

4

ASP

VBScript

Dreamweaver CS3

CSS
Web

Fireworks CS3

Flash CS3

2

1.1

Internet TCP/IP

1.2

1.3

CI

3

2.1

2.2

2.3

2.4

2.5

CI

CI

2.6

2.7

3

3.1

3.2

XHTML

6

4.1 XHTML

4.2 XHTML

XHTML

4.3

.

4.5

4.6

4.7

4.8

4.9

CSS

3

5.1 CSS

CSS

5.2 CSS HTML

5.3

class

id

span

div

5.4

5.5 CSS

5.6 CSS

CSS

L R e

ASP

VBScript

5

6.1

6.2 VBScript

VBScript

6.3 VBScript

VBScript

6.4 VBScript

VBScript

6.5 VBScript

VBScript

6.6 VBScript

VBScript

6.7 VBScript

VBScript Sub Function

6.8 VBScript

VBScript

a a a

Dreamweaver

6

7.1 Dreamweaver

7.2 Dreamweaver CS3

Dreamweaver CS3

7.3

7.4

7.5

7.6

7.7

7.8

7.9

7.10

S a

Web

4

8.1

8.2 AP

AP

8.3

8.4 CSS

Dreamweaver CSS

CSS

8.5

Dreamweaver

2

2

10.1

JavaApplet

Flash

Flash

FlashPaper

10.2

Be a

Fireworks CS3

3

B d

Flash CS3

4

5

2

1

2006

2

2005

3

JSP

(2)

2013

- 1.
- 2.
- 3.
- 4.

- 1.
- 2.
- 3.

1.

- 1.
- 2.
- 3.
- 4.

- 1.
- 2.
- 3.
- 4.

3. ARMA

- 1
- 2
- 3
- 4

- 1
- 2
- 3
- 4

- 1
- 2

