

2020

2020

15

1.3

4

6

1.

-

1

/

80%

40%

1/10

30000

2000

2.

75%

3.

:

50%

4.

:

GNSS

PPP

RTK

GNSS

/

:

GNSS

70%~80%

90%

0.001

GNSS

1%

1

1.5

28dB

5%

5.

ABAQUS Ansys 8 1

6.

NURBS

NURBS

10%

CAM

10%

10%

NURBS

1

CAD-CAM-CNC

5

2

7.

:

:

8

500

36

15%

20%

8.

5

2

85%

3D

97%

9.

PDE

3D

3D/4D

95%

15%

10.

1-2

40%

3

TB

3

TB

0.05

8%

11.

Hurst

Hurst

AI

5%

3%

12.

-

1.5

85%

-

7%

13.

95

5-10

95%

14.

$$O(n^c)$$

$$c>1 \qquad c=1$$

15.