



# 結構設計 Structural Design

結構分析軟體**PISA3D**之應用

陳沛清 博士

Pei-Ching Chen, Ph.D

Associate Professor

Department of Civil and Construction Engineering,  
National Taiwan University of Science and Technology, Taiwan

Adjunct Associate Researcher

National Center for Research on Earthquake Engineering

E-mail : [peichingchen@mail.ntust.edu.tw](mailto:peichingchen@mail.ntust.edu.tw)



# 結構分析軟體PISA3D之應用

課程助教 張原嘉 鍾國佑

**Graduate Student**

**Department of Civil and Construction Engineering,  
National Taiwan University of Science and Technology, Taiwan**

**E-mail :**

**[M11205314@mail.ntust.edu.tw](mailto:M11205314@mail.ntust.edu.tw)**

**[M11205335@mail.ntust.edu.tw](mailto:M11205335@mail.ntust.edu.tw)**



# 軟體安裝

## ■ 下載連結

### PISA3D

The latest PISA3D for free trial and academic applications (the maximum number of nodes is 200) can be downloaded from here:

[\[DOWNLOAD\]](#)

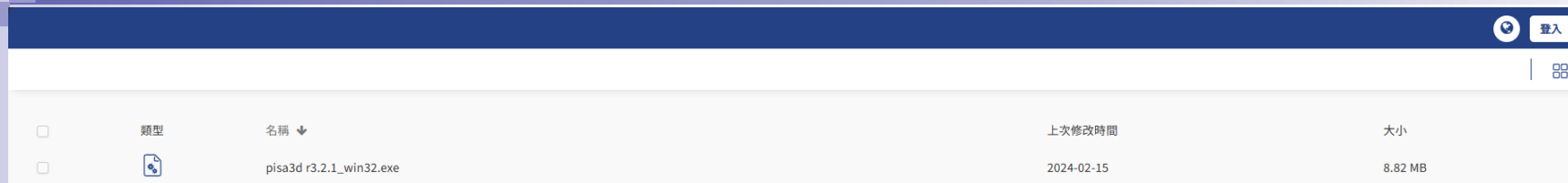
If you need the technical support of using PISA3D, please contact us via the e-mail:  
PISA3D@narlabs.org.tw



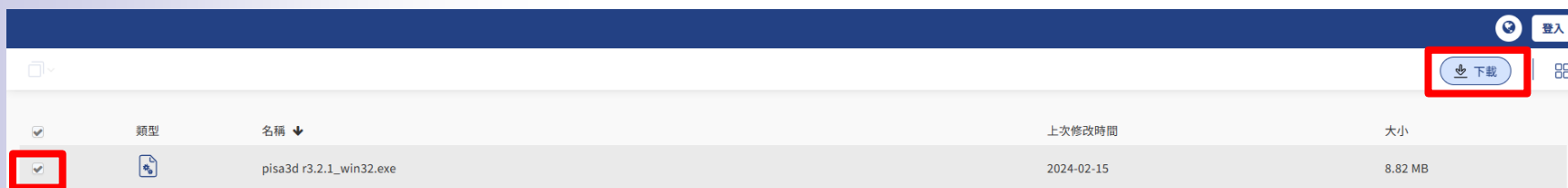


# 軟體安裝

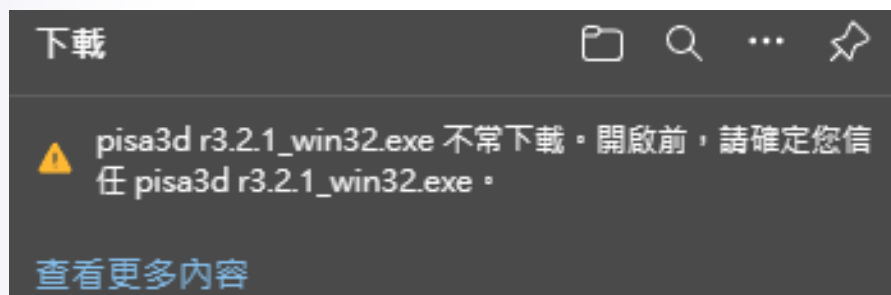
1.



2.

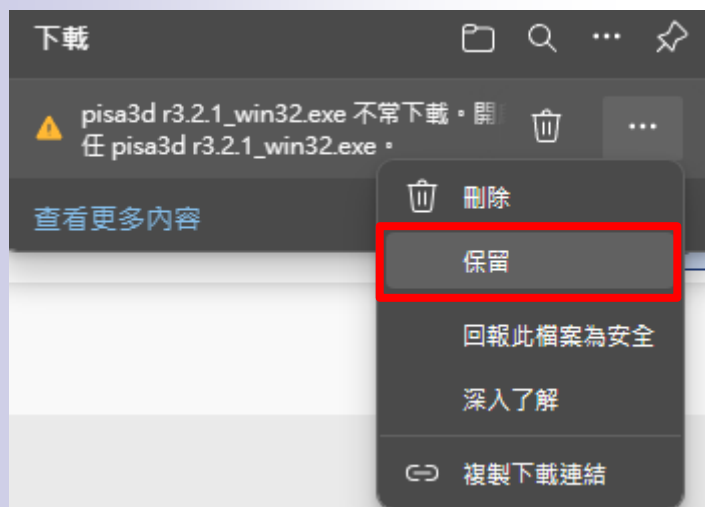


3.

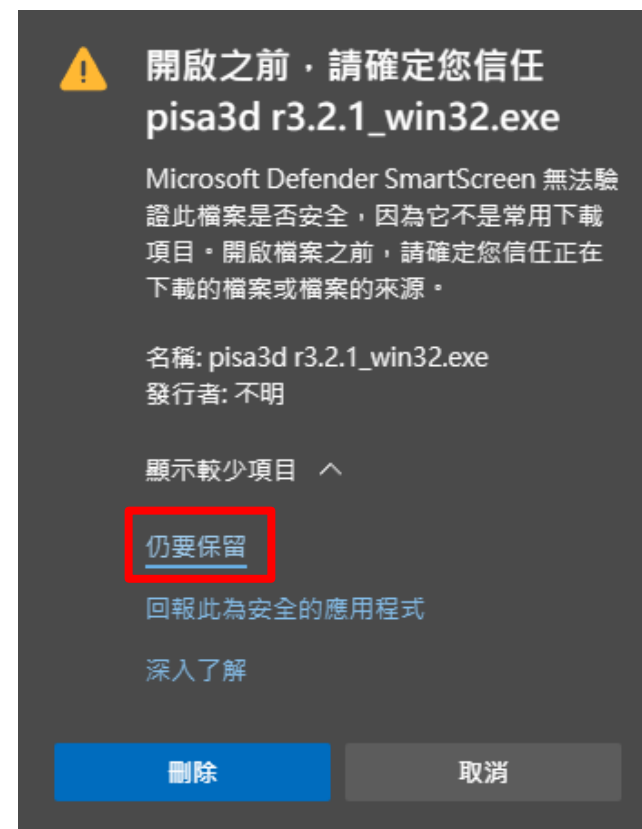




4.



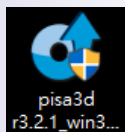
5.



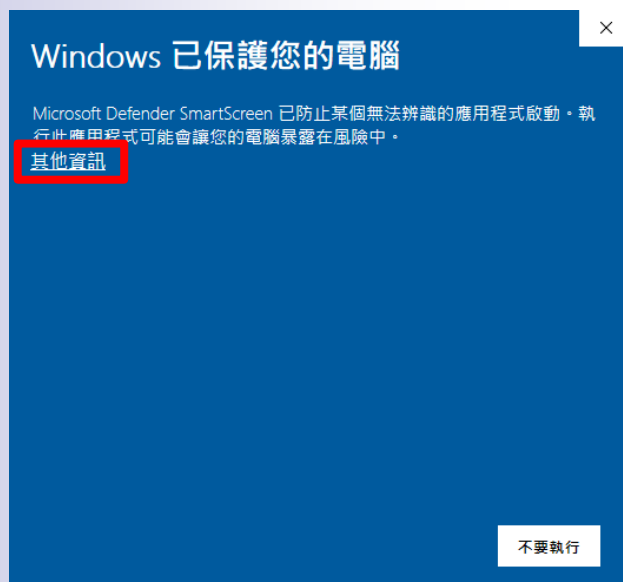


# 軟體安裝

## 6. ■ 執行



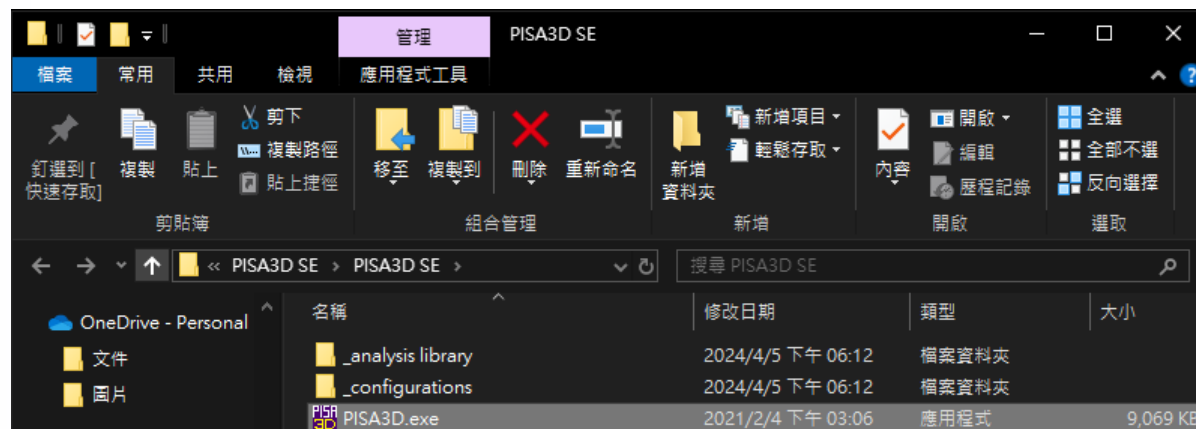
## 7. ■ 完成安裝





# 軟體安裝

## ■ 使用手冊



Example	2024/4/5 下午 06:12	檔案資料夾
GetYourID	2024/4/5 下午 06:12	檔案資料夾
Manual	2024/4/5 下午 06:12	檔案資料夾
PISA3D SE	2024/4/5 下午 06:12	檔案資料夾
Read Me	2024/4/5 下午 06:12	檔案資料夾



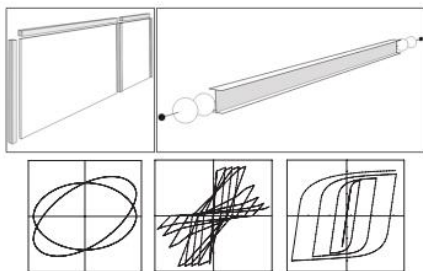




# 軟體安裝

## Platform of Inelastic Structural Analysis for 3D Systems

### PISA3D Standard Edition R3.2 User's Manual



Bo-Zhou Lin  
Yi-Jer Yu  
Ming-Chieh Chuang  
Keh-Chyuan Tsai

National Center for Research on Earthquake Engineering, Taiwan  
Department of Civil Engineering, National Taiwan University  
All rights reserved, March, 2011

### Table of Contents

<b>Introduction</b>	<b>I</b>	F04. Degrading Material	F-8
<b>Notes on Running Analysis</b>	<b>II</b>	F05. Bilinear-Elastic Material	F-12
<b>Contents of Output Files</b>	<b>IV</b>	F06. Bilinear02 Material	F-14
		F07. Fracture Material	F-16
		F08. Buckle Material	F-21
		F09. TensionOnlyBilinear Material	F-28
<b>PART A. Initial Setting Command</b>	<b>A-1</b>	<b>PART G. Element Definition Command</b>	<b>G-1</b>
A01. Analysis Platform Line	A-1	G01. Truss Element	G-1
A02. Analysis Title Line	A-1	G02. BeamColumn Element	G-5
A03. Force Unit Line	A-2	G03. Joint Element	G-12
A04. Length Unit Line	A-2	G04. Panel Element	G-16
		G05. Damper Element	G-22
		G06. BilinearDamper Element	G-27
<b>PART B. Analysis Method Command</b>	<b>B-1</b>	<b>PART H. Other Correlative Element Command</b>	<b>H-1</b>
B01. One-Step Nonlinear Static Analysis	B-1	H01. Frame Section Definition - BCSection Command	H-1
B02. Load Control Nonlinear Static Analysis	B-2	H02. Rigid End Zone Definition	H-3
B03. Displacement Control Nonlinear Static Analysis	B-3	H03. Interaction Surface Definition (Wide-Flange Steel Type)	H-5
B04. Modal Analysis	B-5	H04. Interaction Surface Definition (RC Column Type)	H-9
B05. Nonlinear Dynamic Analysis (Newmark Method)	B-6	H05. Element Load (Fixed End Force)	H-11
B06. Nonlinear Dynamic Analysis (OS Method)	B-8	H06. Element Load Case	H-13
		H07. Element Section Definition - BCSection02 Command	H-14
		H08. Element Section Definition - BCSection03 Command	H-16
<b>PART C. Analysis Control Setting Command</b>	<b>C-1</b>	<b>PART I. Output Setting Command</b>	<b>I-1</b>
C01. Geometric Nonlinear Effect	C-1	I01. Output Interval Setting Command	I-1
		I02. Output Nodal Absolute Responses	I-3
		I03. Output Nodal Relative Responses	I-4
		I04. Output element responses in a specified file	I-5
		I05. Output nodal responses in a specified file	I-6
<b>PART D. Node Data Command</b>	<b>D-1</b>	<b>PART J. End Input Command</b>	<b>J-1</b>
D01. Node Generation	D-1	J01. Termination of Input File	J-1
D02. Nodal Degree of Freedom Assign	D-2		
D03. Nodal Lump Mass Assign	D-4		
D04. Nodal Linear Spring	D-5		
D05. Constraint Definition (Rigid Diaphragm)	D-6		
<b>PART E. Load Pattern Command</b>	<b>E-1</b>		
E01. Nodal Load	E-1		
E02. Ground Acceleration Record	E-2		
<b>PART F. Material Definition Command</b>	<b>F-1</b>		
F01. Elastic Material	F-1		
F02. Bilinear Material	F-3		
F03. Hardening Material	F-5		