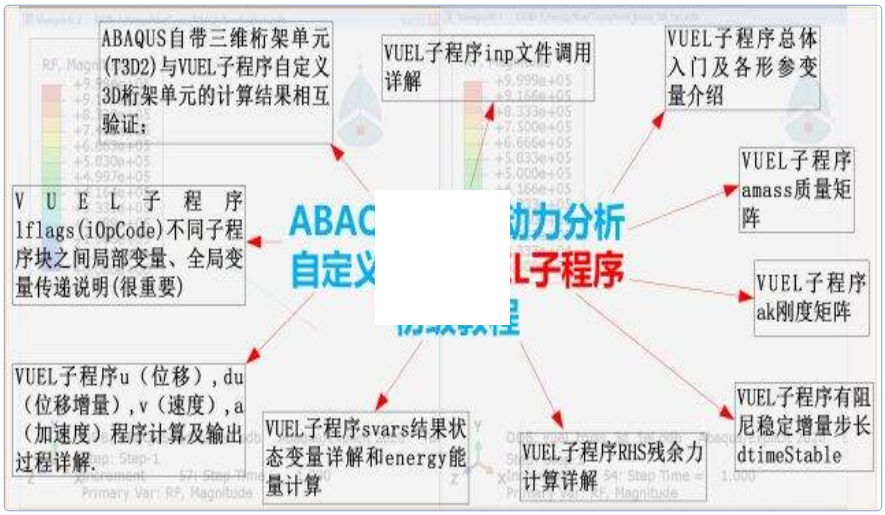

ABAQUS显示动力分析自定义单元VUEL子程序初级教程

ABAQUS Display Dynamic Analysis Custom Element VUEL Subroutine Basic Tutorial

共20章节 (更新至17) 4小时29分钟 Total 20 chapters (updated to 17) 4 hours 29 minutes

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ABAQUS VUEL显示动力分析自定义单元子程序初级实例教程:

ABAQUS VUEL Display Dynamic Analysis Custom Unit Subroutine Basic Tutorial:

1. VUEL子程序调用inp文件; 1. Calling the VUEL subroutine in the inp file;

2. VUEL子程序对应inp文件详解; 2. Detailed Explanation of the inp file corresponding to the VUEL subroutine;

3. VUEL子程序入门介绍及形参变量详解; Introduction to VUEL subroutine and detailed explanation of formal parameters and variables

4. VUEL子程序amass质量矩阵; VUEL subroutine amass mass matrix

5. VUEL子程序ak刚度矩阵; VUEL subroutine ak stiffness matrix

6. VUEL子程序有阻尼稳定增量步长dtimeStable;

VUEL subroutine dtimeStable for damped stable increment step

秋名山有限元 Qijingsha...
硕士 Master's Degree

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7. 工程应力应变与真实应力应变的转换关系； 7. The conversion relationship between engineering stress-strain and true stress-strain;

8. VUEL子程序RHS残余力计算详解； 8. Detailed explanation of RHS residual force calculation in VUEL subroutine;

9. VUEL子程序svars结果状态变量详解和energy能量计算；

9. Detailed explanation of svars result state variables and energy calculation in VUEL subroutine;

10. ABAQUS自带三维桁架单元(T3D2)与VUEL子程序自定义3D桁架单元的计算结果相互验证；

10. Mutual verification of the calculation results between ABAQUS built-in 3D truss element (T3D2) and VUEL subroutine customized 3D truss element;

11. VUEL子程序输出增量步时间、荷载步时间和总时间的区别联系；

The difference and relationship between the incremental step time, load step time, and total time output by the VUEL subroutine;

12. VUEL子程序lflags(iOpCode)不同子程序块之间局部变量、全局变量传递说明(很重要)；

Explanation of the passing of local and global variables between different subroutine blocks in the VUEL subroutine lflags(iOpCode) (very important);

13. VUEL子程序u（位移）,du（位移增量）,v（速度）,a（加速度）程序计算及输出过程详解.

Detailed explanation of the calculation and output process of u(displacement), du(displacement increment), v velocity, and a acceleration in the VUEL subroutine;

本课程涉及的ABAQUS VUEL子程序内容（显示动力分析）也可结合本人之前的ABAQUS UEL子程序（隐式分析）课程参考对比学习，点击下面超链接（蓝色文字）可看到该课程：

The content of the ABAQUS VUEL subroutine (displayed dynamic analysis) involved in this course can also be combined with the previous ABAQUS UEL subroutine (implicit analysis) course for reference and comparative study. Click the following hyperlink (blue text) to view the course:

ABAQUS UEL自定义单元子程序手把手实例研究（Fortran语言）

ABAQUS UEL Custom Element Subroutine Hands-on Example Study (Fortran Language)

ABAQUS UEL/UMAT子程序综合实例训练营

ABAQUS UEL/UMAT Subroutine Comprehensive Example Training Camp

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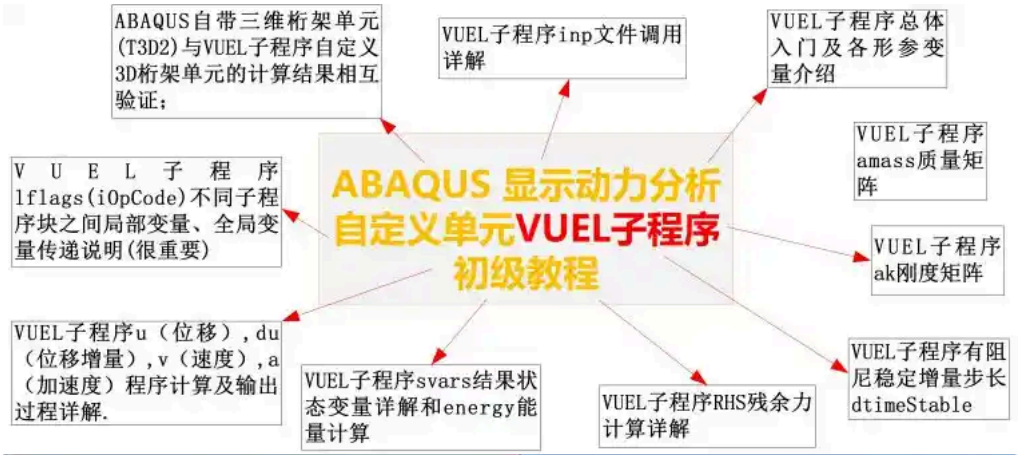

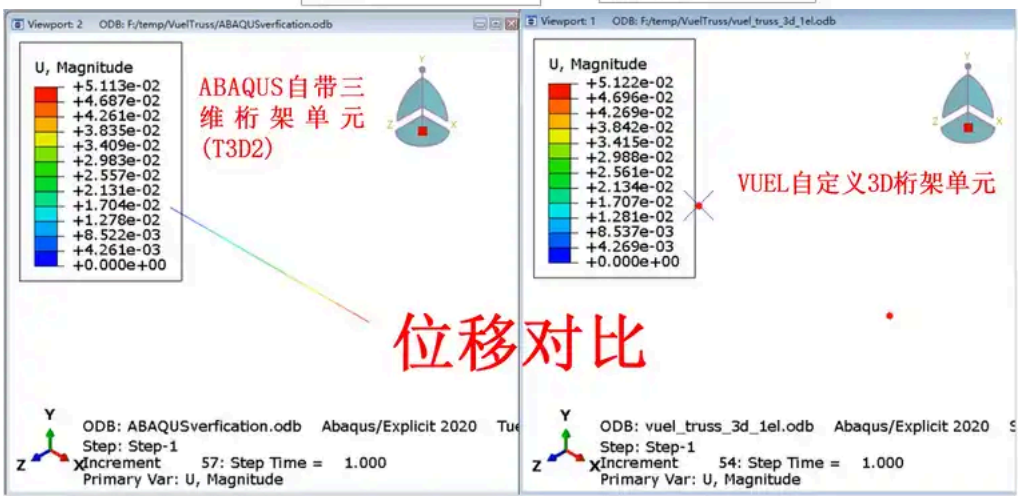

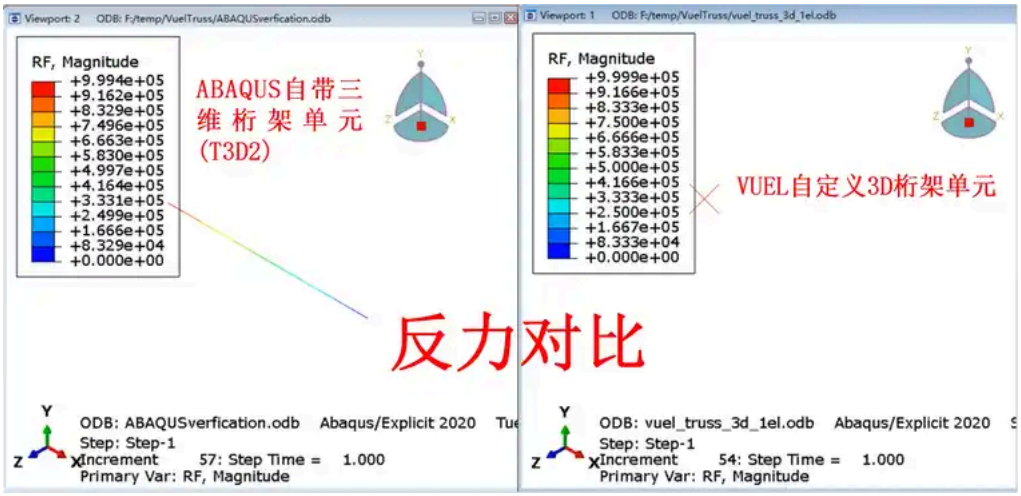

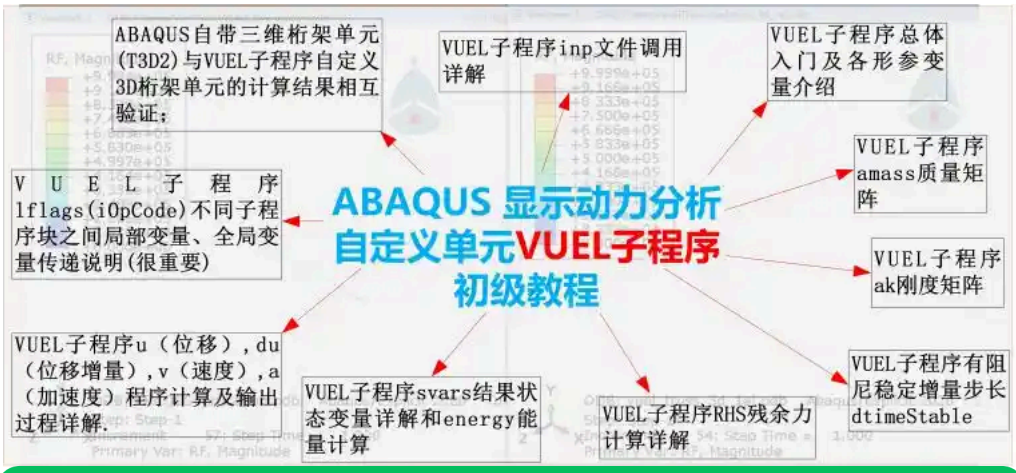

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章节2: VUEL子程序调用inp文件 Chapter 2: VUEL subroutine calls inp... 15分24秒 15 minutes and 24 seconds

章节3: VUEL子程序对应inp文件详解(一)... 15分37秒 15 minutes and 37 seconds

章节4: VUEL子程序对应inp文件详解(二)... 16分16秒 16 minutes and 16 seconds

章节5: VUEL子程序(一)-入门介绍及形参变量详解... 16分25秒 16 minutes and 25 seconds

章节6: VUEL子程序(二)-amass质量矩阵... 15分39秒 15 minutes and 39 seconds

章节7: VUEL子程序(三)-ak刚度矩阵 Chapter 7: VUEL Subprogram (Part Three... 16分39秒 16 minutes and 39 seconds

章节8: VUEL(四)-有阻尼稳定增量步长dtimeStable... 15分30秒 15 minutes and 30 seconds

章节9: VUEL(五)-工程应力应变与真实应力应变的转换关系... 17分16秒 17 minutes and 16 seconds

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秋名山有限元 Qiumingshan Finite Element

拖了几个月很久的一门课程终于更新了，花了不少时间

After dragging on for several months, this course has finally been updated; quite a bit of time was spent on it

2021年12月30日 December 30, 2021 评论 1 点赞 2 Comment 1 Like 2

菜鸟1号 Cainiao No. 1 回复 Reply 秋名山有限元 Finite element analysis of Mount Qiuming

请问还有没有后续视频呢，第12节都没有讲完 Are there any follow-up videos? The 12th section wasn't finished

2024年12月24日 December 24, 2024 评论 点赞 Comment and Like

任逸飞 Ren Yifei

秋老师，如果我要编的vuel具有3个平动自由度和6个额外自由度，这超过了vuel自由度1~6,8,11共8个自由度的限制，这应该怎么处理

Teacher Qiu, if the VUEL I am writing has 3 translational degrees of freedom and 6 additional degrees of freedom, this exceeds the limit of 8 degrees of freedom (1~6, 8, 11) for VUEL, how should this be handled?

2024年11月2日 November 2, 2024 评论 1 点赞 1 Comment 1 Likes 1

秋名山有限元 Qijingshan Finite Element 回复 Reply 任逸飞 Ren Yifei

感觉很复杂 It feels very complex

2024年11月2日 November 2, 2024 评论 点赞 Comment and Like

仿真小白123 Simulation Novice 123

不明觉厉，为秋老师点赞！ Impressed without knowing why, give a thumbs up to Teacher Qiu!

2021年12月31日 December 31, 2021 评论 1 点赞 1 Comment 1 Likes 1

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply 仿真小白123 Simulation Novice 123

谢谢支持！ Thank you for your support!

2021年12月31日 December 31, 2021 评论 点赞 1 Comment, Like 1

灿_2827 Can_2827

大佬您好，可以分享一下课程里面的INP文件和子程序吗

Hello expert, can you share the INP file and subroutine from the course?

1月14日 January 14 评论 5 点赞 Comment 5 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply 灿_2827 Can_2827

课程附件有 Course attachments are available

1月14日 January 14 评论 4 点赞 Comments 4 Likes

灿_2827 Càn_2827 回复 Reply 秋名山有限元 Finite element analysis of Mount Qiuming

我有这个报错是不是需要先下visual studio和vuel子程序呀

Do I need to download Visual Studio and the VUEL subroutine first before encountering this error?

1月16日 January 16th 评论 2 点赞 Comment 2 Likes

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玖點伍拾柒 9:57

你好，局部变量与全局变量传递有更新吗？ Have there been any updates on passing local and global variables?

2024年7月16日 July 16, 2024 评论 点赞 Comment and Like

人在江湖_0525 Person in the 江湖_0525

秋老师，这个vuel计算结果怎么在界面里显示的一个点？能显示形状吗？

Professor Qiu, how can I display the calculation result of this VUEL in the interface as a point? Can it display a shape?

2023年2月10日 February 10, 2023 评论 1 点赞 Comment 1 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply 人在江湖_0525 In the 江湖_0525

vuel只能显示节点，无法显示单元，参考可以通过umat来实现uel单元结果显示，应该vumat可以用来显示vuel的单元结果

VUEL can only display nodes, not elements. To display element results, you can refer to UMAT for UEL element results, and VUMAT should be used to display VUEL element results.

2023年2月11日 February 11, 2023 评论 点赞 1 Comment, Like 1

Glove831

编的VUEL,用2-8个单元测试没问题，超过8个单元就报错，老师遇到过吗？ *** Error: package.exe / rank 0 / thread 0 encountered a system exception 0xC0000005 (EXCEPTION_ACCESS_VIOLATION)

Have you encountered an error when using VUEL with 2-8 elements, and it works fine? But when exceeding 8 elements, an error occurs. Has the teacher encountered this? *** Error: package.exe / rank 0 / thread 0 encountered a system exception 0xC0000005 (EXCEPTION_ACCESS_VIOLATION)

2022年7月15日 July 15, 2022 评论 1 点赞 Comment 1 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply Glove831

vuel子程序跟inp的单元编号对应好 The VUEL subroutine corresponds to the element number in the inp file

2022年7月15日 July 15, 2022 评论 点赞 Comment and Like

YFL9

秋老师，inp文件中的*USER ELEMENT中的COORDINATES是什么意思，帮助文档讲的也不太理解，您能讲解一下吗

Professor Qiu, what does the COORDINATES in the *USER ELEMENT section of the inp file mean? The help document is not very understandable, could you explain it for me?

2022年7月6日 July 6, 2022 评论 2 点赞 Comment 2 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply YFL9

比如平面2个坐标，立体3个坐标 For example, 2 coordinates for a plane, 3 coordinates for a solid

2022年7月7日 July 7, 2022 评论 点赞 Comment and Like

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply YFL9

坐标个数吧 Coordinate number

2022年7月7日 July 7, 2022 评论 点赞 Comment and Like

YFL9

老师您好，请问老师，VUEL中的dtimeStable的值，不在F文件中计算，能在inp文件里面自己定义吗

Hello teacher, can the value of dtimeStable in VUEL not be calculated in the F file, but defined in the inp file instead?

2022年6月28日 June 28, 2022 评论 1 点赞 Comment 1 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply YFL9

你可以试试，我目前还是在vuel子程序中定义的dtimeStable

You can try, I am still defining dtimeStable in the VUEL subroutine

2022年6月28日 June 28, 2022 评论 点赞 Comment and Like

YFL9

请问以下，质量矩阵在VUEL中的作用是什么，如果不是三维单元，是一个平面二维的话，质量矩阵该怎么考虑呢？

What is the role of the mass matrix in VUEL, and how should the mass matrix be considered if it is not a three-dimensional element but a two-dimensional plane element?

2022年6月24日 June 24, 2022 评论 4 点赞 Comments 4 Likes

秋名山有限元 Qiu Ming Mountain Finite Element 回复 Reply YFL9

显式动力分析是动力分析，也就是要包含由质量决定的惯性力

Explicit dynamic analysis is a type of dynamic analysis that includes inertial forces determined by mass

2022年6月25日 June 25, 2022 评论 3 点赞 Comment 3 Likes

YFL9 回复 Reply 秋名山有限元 Finite element analysis of Mount Qiuming

老师，二维平面的话质量怎么考虑呢？ Teacher, how to consider mass in a two-dimensional plane?

2022年6月25日 June 25, 2022 评论 2 点赞 Comment 2 Likes

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