

21st Abaqus UK Regional User Meeting 2007

**Daventry, United Kingdom
14 – 15 November 2007**

ISBN: 978-1-62993-232-3

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2007) by Dassault Systèmes SIMULIA Corporation
All rights reserved.

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact Dassault Systèmes SIMULIA Corporation
at the address below.

Dassault Systèmes SIMULIA Corporation
Rising Sun Mills
166 Valley Street
Providence RI 02909-2499

Phone: (401) 276-4400
Fax: (401) 276-4408

Simulia.info@3ds.com

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

SESSION 1

Application of the Theta Projection Method to Creep Modelling using Abaqus	1
<i>W. Harrison, W. Evans</i>	
Use of ABAQUS for the Simulation of Impact upon Composites for Aerospace Applications	16
<i>L. Vaughn, R. Lawrence, R. Dennis</i>	
Finite Element Modelling Of Volumetric And Shear Ductile Micro- And Macro-Fracture Processes Under Quasi-Static Loading	54
<i>L. Pajic, A. Lukyanov</i>	

SESSION 2

Modelling the Thermoforming of Polymers Using ABAQUS/Standard	65
<i>C. O'Connor, P. Martin, G. Menary, E. McConville</i>	
Using Abaqus To Provide A Flexible Solution To A Traditional Multibody Simulation Analysis At Jaguar Land Rover.....	80
<i>D. Boon, P. Randle, C. Taylor</i>	
Shock Response of a Submerged Shell: Comparison of Acoustic and ALE Formulations.....	95
<i>M. Hutchings, J. Cipolla</i>	

SESSION 3

Modelling the Fabrication of a Pressure Vessel Toroidal Seal.....	115
<i>N. Leggatt, S. Gould, R. Kane, R. Dennis, P. Hurrell</i>	
3-D Modelling of the Levelling Process.....	131
<i>M. Trull</i>	
Use of ABAQUS for the Simulation of Manufacturing Processes	143
<i>D. Bray, M. Cott, S. Phillips, R. Dennis, C. Truman, A. Stiles</i>	

SESSION 4

Using Abaqus To Explore Form And Function In Living And Extinct Animals	158
<i>E. Rayfield, S. Jasinoski, M. Young</i>	
Calculation On Temperature Distribution Of A Rubber Spring Using User Subroutines.....	173
<i>R. Luo</i>	

SESSION 5

Integration of Abaqus Standard in the design and simulation of the Pelamis Wave Energy Converter.....	180
<i>J. Benzie</i>	
Parametric Modelling Of Large Wind Turbine Blades.....	193
<i>P. Bonnet, G. Dutton</i>	
Using Abaqus Cracktip Submodels To Investigate Finger Tooth Cracking In Large 500MW Generator Rotors.....	208
<i>T. Ing, A. Morris, B. Johnson</i>	
Author Index	