



Research Network for a
Secure Australia
Protecting Australian Infrastructure

International Visit

Dr. Tim A. Rose, Cranfield University, UK

Sponsored by: Research Network for a Secure Australia

Details:

6 – 11 March	:	The University of Melbourne
12- 15 March	:	The University of Wollongong.
16 -18 March	:	Canberra
19-21 March	:	The University of Wollongong
22-26 March	:	Sydney (see seminar Attached)



Australia (New South Wales) Division
Session 2005-06

Seminar
On

CHARACTERISATION OF LOADS ON BUILDINGS SUBJECTED TO HIGH EXPLOSIVE BLAST

Thursday 23rd March 2006
5:30pm for 6:00pm

Vibe Hotel North Sydney
88 Alfred Street, Milsons Point

~~Speaker~~

Dr Timothy A. Rose
Cranfield University, Royal Military College of Science, United Kingdom

~~~ ABOUT THE SEMINAR ~~~

Abstract

This seminar will consider blast wave effects important to structural engineers involved in the assessment and design of buildings vulnerable to attack from explosions. It will consider the development of blast waves from free-air and surface explosions and the effect that reflection and oblique reflection has on the resulting waves. Means of establishing loads on solitary buildings, where expansion waves from the edges can significantly affect the reflected pressures, will be considered, and buildings which form part of a city street, where numerous reflections can form large coalesced waves, will also be discussed. The use of Computational Fluid Dynamics (CFD) solutions will be introduced as a means to treat arrays of buildings and problems of more general complexity. A number of case histories will be presented to illustrate all of the above aspects. No specialist background knowledge is required as the discussion will be conducted at an engineering level.

Dr Timothy A. Rose, *PhD*

Timothy Rose has been a researcher in the Engineering Systems Department, Cranfield University, United Kingdom, for twenty years. During that time he has worked on a variety of projects in the field of blast, ballistic and impact loading. He is the author of the blast simulation program, Air3d, which is widely used for building design and blast hazard assessment by investigators from around the world. Most recently, he has been instrumental in a project to develop an adaptive mesh CFD blast program which will provide more efficient use of computational resources and allow the structural engineer to treat complex three-dimensional problems on a desktop computer in a reasonable timeframe. Dr Rose is visiting Australia as part of the international collaborative activities organised by the Research Network for a Secure Australia.



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