

# AN INTRODUCTION TO BLAST LOADING, STRUCTURAL RESPONSE AND DESIGN

By *Dr. Peter Smith*

*Reader in Protective Structures*

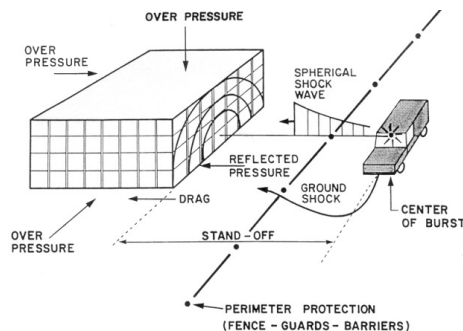
Cranfield University, Royal Military College of Science, Shrivenham, United Kingdom

## COURSE OBJECTIVE

The course that Dr. Peter Smith will be presenting draws on material from both the Masters programme and a number of shorter courses offered at the Royal Military College of Science. It will provide participants with a valuable overview of the general subject area and allow them an insight into the issues associated with load assessment, response analysis and factors that must be addressed in developing a successful blast resistant building design.

This course will cover:

- Blast effects on buildings: case histories of terrorist attacks and acts of war
- Blast loading produced by external and internal detonations
- Analysis of the response of target structures to blast loading
- Principles of design to resist the effects of explosive loading



## ABOUT THE SPEAKER

Dr. Peter Smith is a world-renowned expert in the field of blast loading and response of structures. He has led the unique Masters degree in Weapons Effects on Structures since 1987 and he has delivered courses in this area in the United States, Europe, Singapore and Australia. He has undertaken research and consultancy for a number of government organisations such as the UK's Ministry of Defence and Home Office as well as for commercial firms. He has also been awarded Engineering and Physical Sciences Research Council grants for experimental and numerical studies in the area of blast loading. He has published his work both in journals and at international conferences and is co-author of the books, "Blast and ballistic loading on structures" and "Blast effects on buildings".



**Date:** Wednesday 24 September 2003

**Time:** 8:30am - 5:00 pm

**Where:** Lecture theatre C2, 4<sup>th</sup> floor of Building 174 - Dept. of Civil & Env Engineering (Block C), Melway page 75A ref L9, University of Melbourne, Parkville.

**Cost:** \$440 (GST inclusive). This fee includes the course notes, lunch and refreshments.



**APTES**

[www.civag.unimelb.edu.au/seeg/aptes](http://www.civag.unimelb.edu.au/seeg/aptes)

Organised by the Advanced Protective Technology for Engineering Structures (APTES) Research Group  
Dept. of Civil & Env. Engineering, University of Melbourne

## SHORT COURSE

**AN INTRODUCTION TO BLAST LOADING, STRUCTURAL RESPONSE AND DESIGN**



**UNIVERSITY OF MELBOURNE**  
**Wednesday 24 September 2003**

## COURSE OUTLINE

- 8:30            **Registration**
- 8:45            **Introduction and announcements**
- 9:00-10:30    **Blast effects on buildings: case histories of terrorist attacks and acts of war**
- 10:30           **Break**
- 11:00-12:30   **Blast loading produced by external and internal detonations**
- 12:30           **LUNCH**



- 1:30-3:00     **Analysis of the response of target structures to blast loading**
- 3:00-3:30     **Break**
- 3:30-5:00     **Principles of design to resist the effects of explosive loading**
- 6:00 pm       **Dinner (optional)**

## GENERAL INFORMATION

### Enquiries

**A/Prof. Priyan Mendis or Mr. Tuan Ngo**  
 Department of Civil & Environmental Engineering  
 University of Melbourne, VIC 3010  
 Tel:     03 8344 7244  
 Fax:     03 8344 4616  
 E-mail: pamendis@unimelb.edu.au

**Venue:** Lecture theatre C2, 4th floor of Building 174  
 Dept. of Civil & Env. Engineering (Block C), Melway  
 page 75A ref L9, University of Melbourne, Parkville.

**Registration Fee:** \$440 (incl. GST) per person. The registration fee includes the course notes, lunch and refreshments.

**Dinner (special guest Dr. Peter Smith):** \$75 (incl. GST) per person and includes a 3 course meal at the University House. The dinner is an optional extra and is not included in the price of your registration. Partners are welcome.

### FURTHER TECHNICAL INFORMATION

**Please visit APTES website:**  
<http://www.civag.unimelb.edu.au/seeg/aptes>

### REGISTRATION FORM

NAME(s)	
COMPANY	
TITLE	
ADDRESS	

PHONE	
FAX	
EMAIL	

### PAYMENT SUMMARY

Registration fees ( @ \$440/person)            \$ .....

Dinner (optional, @ \$75/person)                \$ .....

<b>Grand Total</b>	<b>\$ .....</b>
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### METHOD OF PAYMENT (tick as appropriate)

Cheque payable to **UNIVERSITY OF MELBOURNE**

#### Credit Card Facilities:

Bankcard      Visa             Mastercard

#### Card Number

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Name on Card: .....

Expiry Date: ..... Signature:.....

### Registration Enquiries

Registration: Participants are encouraged to make registrations in advance (by Monday 8<sup>th</sup> Sep 2003) by using the attached registration form. Complete and return the registration form (or a copy) by mail or fax to:

**Ms. Bernadette Smith**  
 Department of Civil & Environmental Engineering  
 University of Melbourne, VIC 3010  
 Tel:     03 8344 6789  
 Fax:     03 8344 4616  
 E-mail: [b.smith@civag.unimelb.edu.au](mailto:b.smith@civag.unimelb.edu.au)