PRESIDENT’S FOREWORD

The European Federation of Explosives Engineers invites you to attend the 4th EFEE World Conference on Explosives and Blasting, which will be held in Vienna, Austria, on the 9 - 11 September 2007 at the Hilton Vienna Hotel.

The 2007 Conference follows the successful events organised by EFEE, held in Munich, Germany in 2000, Prague in the Czech Republic in 2003 and Brighton, England in 2005.

EFEE are changing the format for the Vienna Conference with registration, workshops and the welcome reception taking place on Sunday, followed by the presentations and the exhibition on Monday and Tuesday.

65 papers have been submitted for presentation, including papers on fragmentation, vibrations, detonators, demolition and health & safety. There will also be a simultaneous translation service for English/German and German/English. This year’s conference is expected to attract between 400-500 professionals from the International Blasting Community. Over 50 Nations worldwide will be represented making the 4th EFEE World Conference the ideal forum to network and research emerging markets.

The Conference will attract explosives users, manufacturers of explosives, accessories and drilling equipment, researchers and professionals involved in all aspects of explosives, development and usage.

One feature of the EFEE Conferences is the exhibition, where many of the World’s major producers will be displaying their products, equipment, blasting tools and techniques.

There will also be a strong emphasis on environmental consideration and health and safety requirements covering all facets of explosives engineering.

This year we have 50 exhibitions booths. Companies represented include: Austin Powder, Instantel, Lubrizol, MREL and Orica.

Vienna is one of the most beautiful and picturesque cities in Europe. Established since the 13th century it is filled with romantic history, wonderful architecture and classical music. Vienna also has a wealth of fine restaurants and coffee shops for you to immerse yourself in the sweet life of Vienna.

The Conference gives delegates an excellent opportunity to view the latest innovations and technologies, and provides a great opportunity for networking, developing international business links or just catching up with old friends.

I look forward to seeing you in Vienna.

Roger

Roger Holmberg
EFEE President
Committee Members:

**Technical Committee**
Peter Moser, Austria (Chairman)
Finn Ouchterlony, Sweden
Gerhard Reichholf, Switzerland
Jose Sanchidrián, Spain
Jerry Wallace, USA

**Conference Committee**
Heinz Berger, (Chairman)
Mark Hatt
Roger Holmberg
Donald Jonson
Jørgen Schneider
James Tyler

Registration:
The conference registration includes admission to all technical sessions, the exhibition, a copy of the printed proceedings and admission to the welcome drinks reception.

The registration fee is €642 inc vat for “early bird registrations” (All participants including authors are expected to pay the full registration fee). This fee can be reduced to €555 for all delegates representing a registered company providing that we can validate that your company is legitimate. To enable us to do this we will need your VAT number if your company is registered within the European Union. If your company is outside the European Union (e.g Australia, USA) we will need your VAT number and proof of your company registration faxing to 00 44 1509 234 911. (Please note if we are not able to validate your company details we will have to charge the full delegate fee of €642)

To take advantage of the “early bird” registration, please register before the 14th July using one of the following methods:

**Preferred method:** On-line at [www.efee.eu](http://www.efee.eu)
Click on: “VAT registered delegate” if you are representing a VAT registered company
“Non-VAT registered delegate” if you are not from a VAT registered company

**By Fax:** complete the registration form and fax back to 00 44 1509 234 911

**By Post:** complete the registration form and post to EFEE, Hoton Hills Barn, 82 Loughborough Rd, Hoton, Leics, LE12 5SF, UK

Schedule of Events:

**9th September Sunday**
12.00 – 23.00  Exhibition set up
12.00 – 18.00  Conference registration
14.00 – 17.00  Vibration & Demolition Workshop
18.00 – 19.30  Welcome drinks reception & opening speeches

**10th September Monday**
07.30 – 12.00  Conference Registration
08.30 – 17.00  Technical Sessions
09.00 – 17.00  Exhibition
19.30 – till late  Gala Dinner

**11th September Tuesday**
09.00 – 17.00  Technical Sessions
09.00 – 17.00  Exhibition
17.00  Conference Closed

Workshop: Vibration and Demolition
There will be a workshop offered on Sunday afternoon from 14.00hrs to 17.00hrs on European vibration standards and practice and explosive demolition. The workshop will cost €120 for non EFEE members and €60 for EFEE members. The workshop will be conducted in the English language only.

**Part 1: Vibration and Airblast Standards**
Germany & Austria:  Rolf Schillinger, BlastCom GmbH
Sweden:  Donald Jonson & Roger Holmberg,
    Orica Mining Services / Nitro Consult
UK:  Robert A Farnfield, Exchem Explosives

Each presenter will present the current vibration and airblast standards for their country and the scientific basis for these standards. There will also be examples of infrastructure projects where it is visualized how the vibration and airblast standards are applied, how blasters comply with the limits and how the limits have affected the blasting operations. Following the presentations there will be an open discussion.

**Part 2: Demolition**
Denmark:  Jørgen Schneider,
    Orica Mining Services
UK:  Mark Hatt, WJ Hatt Ltd.

In this part of the workshop there will be two 30 minutes presentations about typical procedures of demolition blastings for high rise buildings, complicated structures, steel cutting, chimneys and miniblasting. Views on Safety and Public relations are also discussed. Following the presentations there will be an open discussion.
Exhibitors:
A 1000sq m trade exhibition is being held in conjunction with the conference. Exhibits will provide an ideal opportunity for users of explosives, consultants, suppliers and manufacturers to demonstrate their latest developments to a wide cross section of the industry. Please email efee@tylerevents.co.uk for further information on exhibiting.

Please visit www.efee.eu for a full list of exhibitors, below is the current list.

3M, AP Deutschland, Advance Explosive Demo, Austin Powder, B Carr, Croda, Expancel, Filipac, Instantel, ISEE, Lubrizol, Maxam Europe, MREL, Mocap Ltd, NOMIS, Orica, Potters Europe, Proyectos Mineros, Sandvik, Tread, Valeron, Vibrock White Industrial

Accommodation:
Accommodation will be at the Hilton Vienna Am Stadtpark, this is located in the centre of the city adjacent to the popular Citypark “Stadtpark”. St. Stephen’s Cathedral, the Vienna State Opera and the shopping districts are only a 10 minute walk away.

The group bedroom rate is €180.00 Single Occupancy and €190.00 Double Occupancy Bed & Breakfast. Accommodation reservations can be made with your conference registration at: http://www.efee.eu

Although we will make a reservation for your accommodation payment must be made on departure. Bedroom reservations are made on a first come first served basis. We would therefore recommend you complete your registration as soon as possible.

Welcome Drinks Reception:
This will be held on the Sunday evening from 6.00pm at the Hilton Vienna and will mark the opening of the conference. The cost of attending is included in your delegate fee and additional tickets can be purchased for your partner.

Gala Dinner:
The Gala dinner will be held on Monday evening the 10th September in the Klimt Ballroom at the Hilton Vienna. This will be followed by Viennese entertainment. This event is always a highlight of the conference so please book early to avoid disappointment.

Vienna Information:
There is much to see: From Gothic St. Stephen’s Cathedral to the Imperial Palace to the Art Nouveau splendor of the Secession, from the magnificent baroque palace Schönbrunn to the Museum of Fine Arts to modern architecture at the MuseumsQuartier. Visit the Spanish Riding School in Vienna with its famous Lipizzan ballet that can be experienced live in the baroque ambiance of the Imperial Palace. Admire riding skills of the highest order – from pirouettes to caprioles.

Further information regarding Vienna can be found at www.efee.eu or www.wien.info. On this site it is possible to book individual sightseeing tours, the opera, the Spanish Riding School or visit many other attractions.
We would like to personally thank our sponsors for their continued support in enabling us to enhance this event.

**Gold Sponsors**

Logos to be supplied

**Silver Sponsors**

AP Deutschland, Maxam Europe, Nomis, Proyectors Mineros, Potters Europe, Sandvik, Tread, Vibrock, Proyectos Mineros ICAM.
Technical Papers

Here is a sample of more than 60 papers scheduled for presentation. The Conference will attract explosives users, manufacturers of explosives, accessories and drilling equipment, researchers and professionals involved in all aspects of explosives, development and usage.

Blast fragmentation

- Monitoring the blast fragmentation at Altk copper mine
- Optical sizing of blasted rock: Lessons Learned
- Strength and Micro-structural Characteristics of Rocks and enhanced Fragmentation in Blasting
- Desktop evaluations of the Hybrid Stress Blasting Model (HSBM)
- Blasting against confinement, fragmentation and swelling in model scale
- Cavity expansion energy applied to rock blasting
- 3D Stereophotogrammetry for blast design and control
- Prediction and assessment of fragmentation during ring
- On the influence of powder factor on excavators productivity
- Fragmentation energy in quarry blasting

Blast vibration

- Prediction of ground vibration in some Iran's iron mines with ANFIS method
- Blast Induced Micro-meter Response of Cracks in Concrete Block Structures
- Assessment of Safe Ground and Structure Vibrations from Blasting
- An example of preliminary seismic survey to evaluate the feasibility of blasting works in proximity of a sensitive monument
- Introducing a Uniform Vibration Management System for Underground Mines Adjacent to Open Cut Operations
- Safe Blasting Near the Historical Caves of Tourah, Cairo, Egypt
- Measurement of Blasting Seismic Effects during the Excavation of the Frukov Krc Tunnel
- Comparison of different methods of measuring and evaluating blast vibrations in rock masses
- Ground vibration and air over pressure study during deep hole blasting for safe guarding chrome ore plant and dwellings - an Indian case study
- Close range measurement of blast vibrations from the cut phase of a small scale tunnel blast
- Advanced vibration management in quarries using a predictive blast vibration model
- Comparison of vibration levels from drill & blast work and mechanical excavation of tunnels with road headers
- Critical investigation into the drilling and blasting work done at the “Mor-mont” quarry in order to reduce blast vibrations

Blast experience

- Final breakthrough from the outside of the cooling water tunnel remote-controlled drilling and loading at 80 metres below sea level
- A study on tunnel excavation method using notch hole for vibration and overbreak control in rock mass
- Review of damage evaluation techniques for surface and underground mining
- Blasting with air decks in the bottom of blast holes
- Operational excellence in surface rock blasting
- Quarrying by explosive and diamond wire in hard dimensional stones

Demolition

- The “slicing and blasting” demolition method for civil buildings: conditions for application, design criteria and practical advices, in the light of the analysis of actual cases
- Demolition by explosives of reinforced concrete chimneys by means of steel hinges
- Explosive Demolition, Stacks & Silos at Lakeview Generating Station, Port Credit, Ontario, Canada
- Sprengabbruch eines Wohnhochhauses mit angelegten Ladungen

Explosive Demolition of Composite Steel/Concrete Framed Structures

Electronic detonators

- Electronic Initiation Technique - State of the Art and Application in Austria
- An attempt to understand the contribution of the electronic detonator to the quality of the production blast. Application to quarrying operations in Belgium.
- New DNA Blast software, (And you design a successful blast ten times faster)
- An evaluation of the use of precise short delay periods on fragmentation results in various rock types
- Electronic Blasting for road construction in urban environment: how to control the frequency content of blast vibrations with electronic detonator
- Three Gorges Cofferdam demolition using electronic initiation

Explosives

- Large Scale Testing of Ammonium Nitrate
- Research of the influence of thickener Guar M-207 over water resistance of water filled explosives with secondary smokeless powders as sensitizer
- Examination of the dependence between the detonation velocity and content of oxygen of roughly dispersed ammonites
- Cylinder test for emulsion explosive
- A numerical simulation of Davis EOS of detonation product behind two head-on colliding detonation waves
- A new reaction rate model for simulating the detonation process of the insensitive high explosives
- Adverse Effects of Dynamic Shock Waves on Emulsion Explosive Sensitizers

Health, Safety and Environment

- A new approach to design the artificial detachment of snow avalanches
- Influence of the oxygen balance over the blasting chemical reaction during the examination of explosives according to the new requirements of the EC
- Studies on Flyrock at Soapstone Quarry for safe working
- Advancing Public Relations Through Simplifying Communication
- Training criteria for engineers involved in blasting operations
- Decontamination of military ranges and battle fields - development of technologies and management toolbox
- Northern Link - Tunnel blasting in environmental sensitive surroundings
- Economical aspects on contamination levels in blasted material with SSE in tunnel operations
- European Explosives Qualifications - The EU Excert Project
- A Control Measures Based Approach to Risk Management

Please note all details are correct at time of going to press.
Registration Form:

First Name: ___________________________ Surname: ___________________________
Company: _________________________________________________________________
Address: _________________________________________________________________
Town: __________________________________ City: _____________________________
County / State: __________________________________ Phone (incl codes): __________
Post / Zip Code: ______________ Fax: ________________________________
Spouse / partner name: ____________________________ VAT Registration Number(s): __

Conference Registration | Quantity | VAT Registered Delegate | Non-VAT Registered Delegate | Total
---|---|---|---|---
Early Bird Conference registration before 14th July (incl. admission to all sessions, exhibition, copy of printed proceedings & welcome reception) | | €555 | €642 |
Full Conference registration after 14th July | | €600 | €697 |
Sunday workshop on Vibration & Demolition: | EFEE Member | €50 | €60 |
Non EFEE Member | | €100 | €120 |
Additional copy of the printed proceedings | | €80 | €80 |
CD-Rom of full proceedings | | €55 | €66 |

Special Events
Welcome reception Sunday 9th September, additional tickets (Included in Full Conference Registration Fee) | | €17 | €20 |
Gaia Dinner including 1/2 bottle wine and entertainment Monday 10th September (not included in the full registration) | | €86 | €86 |
Social and Ladies Programme, Tours
Visit to the Schönbrunn Palace | | €55 | €55 |

Full payment is required to confirm your conference registration and hotel booking

Amount Due: ____________________________

Accommodation Arrival and Departure Dates:
Arrival Date: ___________________ Departure Date: __________________________ No. of nights: __________
Accommodation must be paid to the hotel on departure. Once this reservation has been made if you decide to cancel you will be liable for cancellation charges.

Bedroom Type: Single [ ] Twin [ ] Double [ ]

Payment Information:
Full payment must be made for your registration to be processed. Payment can be made by either a cheque drawn on a UK bank and made payable to “Tyler Events Ltd” or by credit card. All amounts are in euros, an invoice will be issued once payment has been received.

Total Payment Due: ____________________________

[ ] Cheque enclosed [ ] MasterCard [ ] Visa [ ] American Express [ ] Switch / Cirrus

Name as it appears on the credit / debit card: ____________________________________________
Credit/Debit Card Number: ____________________________ Expiry Date: ______ / ______ Start Date: ______ / ______
Issue Number (if applicable): __________________ Card Security Number: CVV (last three digits on the signature strip): ________
Signature: ____________________________ Name: __________________ Date: __________________

Cancellations:
The registration fee will be refunded (with a deduction of 10% to cover the handling costs) if notification is received in writing before the 5th August 2007. No refund will be granted after this date.

Address for Information
EFEE
Hoton Hills Barn
82 Loughborough Rd
Hoton, Leics
LE12 5SF
United Kingdom

Tel: +44 (0) 1509 631 530
Fax: +44 (0) 1509 234 911
Email: efee@tylerevents.co.uk
Web: www.efee.eu

www.efee.eu