



EuroConference on CAE Integration

Tools, Trends and Technologies

Supported by the European Commission, Research DG,
Human Potential Programme,
High-Level Scientific Conferences, HPCF-CT-2000-00118.

In cooperation with the
Society for Industrial and Applied Mathematics (SIAM).

29 March 2001 - 1 April 2001
New Hall, University of Cambridge, England

www.fluxus-engineering.com/ecittt.htm



The chaining of engineering design and engineering analysis into one process often introduces data exchange problems, both inside organisations and across supplier/customer boundaries: This leads to expensive time wastage and indirectly hinders the introduction of new advanced methods and practices. The aim of ECITTT is to define these issues and suggest methods of improvement, encompassing special tools as well as work procedures and guidelines.

ECITTT will also report on highly efficient mathematics in geometric modelling, in CAM, and in CAE, and on fracture analysis guidelines and tools, each of which will become relevant in the immediate future.

The ECITTT conference will:

- explain practical data exchange issues.
- suggest how data exchange can be improved.
- suggest how to link different CAE systems together.
- report on progress in emerging technologies.
- report on best practice application of CAE technologies, and draw attention to pitfalls.

Who should come:

- Engineering Analysis Specialists
- CAE/CAD/CAM/PDM Application Programmers
- Engineering Information Technology Managers
- System Integration Planners, Developers and Managers

Funding for Conference Participants:

EU-funding is available to help researchers attend. Conference fees, accommodation cost and travel cost can be covered by the funding. Eligibility criteria for funding are age and nationality. **Funds still available for up to 22 delegates (on 9 March 2001).**

This conference flyer is also available on the ECITTT website as a PDF-Document (Acrobat Reader).



Call for Poster Presentations:

Researchers are invited to hold poster presentations. The poster stands will be set up on the first day for the duration of the conference, the poster session will be introduced, and abstracts will be included on the website and the final summary report. A prize of EUR300 will be awarded to the best poster presentation by a young researcher. For guidelines, see website.

Scientific Committee:

M Forster (Fluxus Technology Ltd, UK) (Chairman)
 Z Andjelic (ABB AG, D)
 M Bonnet (CNRS and Ecole Polytechnique, F)
 R Bronsart (Universität Rostock, D)
 G Butlin (FECS Ltd, UK)
 R T Farouki (University of California, Davis, USA)
 J Gustafsson (Ericsson Saab Avionics AB, S)
 B L Karihaloo (University of Wales, Cardiff, UK)
 J Rudolph (Universität Dortmund, D)
 M Sabin (Numerical Geometry Ltd, UK)
 J O Watson (University of New South Wales, AU)

Prof Z Andjelic heads EM modelling and simulation at ABB Heidelberg Research Center and teaches at ETH Zürich.
 Prof M Bonnet is a Research Director of CNRS.
 Prof R Bronsart has contributed to STEP in shipbuilding.
 Dr G Butlin is a Member of the NAFEMS Council.
 Prof R T Farouki represents SIAM.
 He chaired the SIAM-Workshop CAD/CFD 1999 and chairs the SIAM Activity Group CAD-Geometry.
 Prof B L Karihaloo is chairman of the IUTAM Symposium on Fracture, June 2001.
 Dr M Sabin has shaped geometric modelling for over 30 years.
 Dr J O Watson is known for efficient boundary element code.

Organisers:

Fluxus Technology Ltd, Cambridge, UK, VAT-No. GB 740 626 544.
Address any questions to M Forster, crackman@compuserve.com
or Tel +49 431 690 830.

FECS Ltd, Cambridge, UK and New Hall, University of Cambridge are local organisers assisting Fluxus Technology Ltd.





ECITTT

Thursday 29 March 2001

10.30 - 11.15 Registration and Reception

A coffee and tea refreshment will also be provided.

11.15 - 12.45 Opening Session

Introduction

M Forster (Fluxus Technology Ltd, UK)

3D Simulation Based Design

Z Andjelic (ABB AG, Heidelberg, D)

Geometry Problems and Possibilities in CAE

G Butlin (FEGS Ltd, Cambridge, UK)

12.45 - 14.15 Lunch break

14.15 - 16.45 Safety awareness and fracture

Accurate determination of stress intensity factors and higher order coefficients

B L Karihaloo, Q Z Xiao (University of Wales, Cardiff, UK)

R-Code Basic - An Interpreted Language for Integrating

Analytic Solutions into a Fracture Assessment Package

M Fox (British Energy Generation Ltd, Gloucester, UK)

On the way from problem definition to presentation of results

L Hodulak (Fraunhofer Institut IWM, Freiburg, D)

16.45 - 18.15 Poster Session

Tea and coffee will be provided in morning and afternoon breaks.



ECITTT

Friday 30 March 2001

9.30 - 12.30: New Emerging Technologies

Efficient tools for detailed modelling and analysis of welded pressure vessel joints according to local fatigue approaches
J Rudolph, E Weiß, M Forster (Universität Dortmund, D)

Practical aspects of development and use of boundary element methods

J O Watson (University of New South Wales, Sydney, AU)

Some recent advances in symmetric Galerkin boundary element methods and their coupling with finite elements
M Bonnet (CNRS and Ecole Polytechnique, Palaiseau, F)

Advanced mathematical methods for seamless integration of CAD and CNC

R T Farouki (University of California, Davis, USA)

12.30 - 13.45 Lunch break

13.45 - 17.00 Integrating CAE

CAE Integration as Basis of Collaborative Work in the Shipbuilding Industry

R Bronsart (Universität Rostock, D)

Data Exchange and CAE-Integration in Design and Development Process

P G Fisch (Bodenseewerk Gerätetechnik GmbH, Überlingen, D)

Hybrid meshing and applications in Computational Electromagnetics

J Gustafsson (Ericsson Saab Avionics AB, Linköping, S)

The use of CADfix to process CAD data for general Finite Element pre-processors

T Ing (DAMT Ltd, Cambridge, UK)

19.00 Conference Dinner



ECITTT

Saturday 31 March 2001

10.00 - 11.30 Geometry mathematics background and progress

Beyond NURBS - new free-form surface representations for the new century

M Sabin (Numerical Geometry Ltd, Cambridge, UK)

Approximate Implicitization for surface intersection and self-intersection

T Dokken (SINTEF Applied Mathematics, Oslo, NO)

11.30 - 13.00 Tools for Data Exchange and CAE Integration

The CADfix interoperability solution

A Chinn (FEGS Ltd, Cambridge, UK)

Engineering Application Integration Using a Python-Based Scripting Approach

D Cheney (ITI, Milford, Ohio, USA)

Saturday afternoon: Guided tour of Cambridge

Sunday 1 April 2001

10.00 - 12.30 Closing session and Prize Awards

FEA as carried out by Designers not Analysts:

Common Problems and Pitfalls

R P Johnson (DAMT Ltd, Newport Pagnell, UK)

Virtual Prototyping of Electromagnetic Effects on Electronic Systems

R Perala (Electro Magnetic Applications, Inc., Denver, CO USA)

PKG - A process chain generator

K-H Grote, A Tenbusch (Universität Magdeburg, D)



ECITTT-REGISTRATION

(New Hall accommodation cannot be guaranteed after 7 March 2001. For hotel accommodation contact local organiser Mrs. Tracey Upshaw on Tel +44 1223 237 111 or e-mail t.upshaw@fegs.co.uk)

Please return your late registration to local organiser Dr. Peter Forster, New Hall, Cambridge University, UK. Fluxus Technology Ltd, Cambridge, UK (VAT-No. GB 740 626 544, registered office: 4 Market Hill, Clare, Suffolk CO10 8 NN, UK) is the legal body organising this EuroConference. All payments should be made after you receive the invoice to the Barclays bank account of Fluxus Technology Ltd, Cambridge, UK.

Dr. Peter Forster
 FAX (from within UK): 01223 339 285
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ECITTT Conference Fee

- EUR 0 (young researchers)
- EUR 240 (academic institutions)
- EUR 240 (commercial organisations < 25 people)
- EUR 390 (commercial organisations up to 500 people)
- EUR 540 (commercial organisations > 500 people) excluding 17.5% UK value added tax (VAT)

<h3>ECITTT Conference Registration</h3> <p>Name:</p> <p>Organisation:</p> <p>Dept./Inst.:</p> <p>Street:</p> <p>Zip/Town:</p> <p>Country:</p> <p>VAT-No. (if EU):</p> <p>Tel.:</p> <p>Fax:</p> <p>E-Mail:</p>	<h3>Funding Application for Young Participants</h3> <p>(You are eligible to apply for funding if you are a European National and younger than 36 years on 29 March 2001. The extent of funding is the sole decision of the ECITTT chairman.)</p> <p>Nationality:</p> <p>Country and Town of work:</p> <p>Birthday (DD/MM/YYYY):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Conference Fee <input type="checkbox"/> Travel funding for EU nationals living in Europe (max 250 euros) <input type="checkbox"/> Travel funding for EU nationals outside Europe (max 1000 euros) <input type="checkbox"/> Accommodation funding (max 290 euros)
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<h3>College Accommodation at New Hall</h3> <p>Arrival on (DD/MM/YYYY):</p> <p><input type="checkbox"/> morning <input type="checkbox"/> evening</p> <p>Leave on (DD/MM/YYYY):</p> <p><input type="checkbox"/> morning <input type="checkbox"/> evening</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP 33.60 per night (single economy, bed & breakfast) <input type="checkbox"/> GBP 48.30 per night (single en suite, bed & breakfast) <input type="checkbox"/> GBP 50.40 per night (twin economy, bed & breakfast) <input type="checkbox"/> GBP 72.45 per night (twin en suite, bed & breakfast) <p>(We have kept 20 rooms free for you - this number is current on 9 March 2001)</p> <p>Prices exclude 17.5% UK value added tax (VAT)</p>	<h3>Meals</h3> <p>Lunch Thursday, 29 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 New Hall cafe <p>Dinner Thursday, 29 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 Indian restaurant <input type="checkbox"/> GBP16.50 New Hall restaurant <p>Lunch Friday, 30 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 New Hall cafe <p>Conference Dinner Friday, 30 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP16.50 <p>Lunch Saturday, 31 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 New Hall cafe <p>Dinner Saturday, 31 March 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 Indian restaurant <input type="checkbox"/> GBP16.50 New Hall restaurant <p>Lunch Sunday, 1 April 2001</p> <ul style="list-style-type: none"> <input type="checkbox"/> GBP8.00 New Hall cafe <p>Prices exclude 17.5% UK value added tax (VAT)</p>
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UK 17.5% VAT: Please note that 17.5% UK value added tax (VAT) will be added to conference fees, accommodation and meal prices, except if your institute or organisation is based outside the UK and has a European VAT registration number (e.g. GB 123 456 789 or DE 123 456 789) which must be entered on the registration form.

Funding for Young Participants: For travel funding, the cheapest class of travel must be taken (e.g. economy flights, 2nd class train, bus, NO TAXIS!). After the application has been evaluated and the applicant has been informed of the extent of travel funding, the applicant must submit a photocopy of the tickets as proof to the claim. For accommodation funding, economy accommodation is a prerequisite. After the applicant has been informed of the extent of accommodation funding, New Hall accommodation must be booked (unless already booked) or alternatively proof of other economy accommodation cost (e.g. hotel booking) must be submitted.