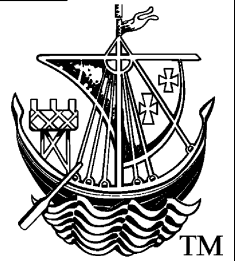


CONFERENCE PROGRAMME



The 39th International Conference on
Boundary Elements and other Mesh
Reduction Methods



BEM 2016

NOTES TO CHAIRMEN AND PRESENTERS

Chairmen must be in their respective rooms 10 minutes before the start of their session to meet with the presenting authors.

Authors must meet with the Chairman of their session
10 minutes before the start of the session.

Authors must keep strictly to the time allocated for their presentation
to ensure the smooth running of the programme.

This programme is subject to last-minute alterations, please refer to the
conference noticeboard for the most up-to-date information.

20 – 22 September 2016

Siena, Italy

Organised by:

Wessex Institute, UK
University of Mississippi, USA

Supported by:

WIT Transactions on the Engineering Sciences
International Journal of Computational Methods and Experimental Measurements
International Journal of Engineering Analysis with Boundary Elements



CONFERENCE PROGRAMME



BEM 2016

20 – 22 September 2016, Siena, Italy

Tuesday, 20th September 2016

08.00 Registration
09.00 Opening Address

Session 1:

Chairman: C. Brebbia

- 09.20 **Invited:**
A novel fast-multipole implementation of boundary element methods:
computational features and performance assessments
N.A. Dumont & H. de Farias Costa Peixoto
- 09.45 **Invited:**
Is ill-conditioning associated with C^∞ basis functions a disaster?
E. Kansa
- 10.10 **Invited:**
Parallelisation techniques for the dual reciprocity and time-dependent Boundary
Element Method algorithms
T. Bashford, K. Donne, A. Marotin & A. Al-Hussany
- 10.35 **Invited:**
Convergence studies for an adaptive meshless least-squares collocation method
K. Chun Cheung & L. Ling

REFRESHMENT BREAK

Session 2:

Chairman: N. Dumont

- 11.30 **Invited:**
On solvability of the BVP formulated in terms of displacement orientations on
the interface between dissimilar elastic materials
A.N. Galybin
- 11.55 **Invited:**
Deterministic-stochastic boundary element modeling of the brain and eye
exposed to high frequency radiation
D. Poljak, M. Cvetkovic, H. Dodig, S. Lallechere, K. El Khamlichi Drissi &
P. Bonnet
- 12.20 **Invited:**
Acoustic fluid-structure interaction of ships by coupled fast BE-FE
approaches
L. Gaul, D. Brunner & M. Junge

LUNCH

Session 3:

Chairman: L. Skerget

14.30

Invited:

Green's functions for dissimilar or homogeneous materials containing interfacial crack, under axisymmetric singular loading sources
D.G. Pavlou

14.55

Invited:

On implementation of the boundary integral equation method
Y. Dong, J. Zhang, L. Han, G. Xie & R. He

15.20

Invited:

A boundary element formulation for crack analyses incorporating a cohesive zone model
P.C. Goncalves, L. Palermo Jr. & S.P.B Proenca

REFRESHMENT BREAK

Session 4:

Chairman: D.G. Pavlou

16.15

Invited:

A coupled localized RBF meshless/DRBEM formulation for accurate modelling of incompressible fluid flows
L. Bueno, E. Divo & A. Kassab

16.40

Invited:

BEM and FEM analysis of the fluid-structure interaction in tanks with baffles
V. Gnitko, K. Degtyarev, V. Naumenko & E. Strelnikova

17.05

Stability analysis of a meshless method in irregular nodal distributions for flow problems
G. Kosec

18.30 *Concert at Certosa di Pontignano Church*
END OF DAY 2

Wednesday, 21st September 2016

Joint Session with HPSM and MARAS

Session 5

Chairman: C. Brebbia

09.00 Opening Address
 Presentation of the George Green Medal to Professor Alex Cheng

09.30 **Keynote Address by A.Cheng**
 From BEM, Green's Function, to meshless method– Personal reminiscence

10:00 **Keynote by S. Hernandez**
 International space stations: A successful history of mobile and deployable structures

REFRESHMENT BREAK

Session 6

Chairman: A. Cheng

11.00 Weight and cost multi-objective optimization of hybrid composite sandwich structures
 A.I. Salem & S.L. Donaldson

11.25 Sizing optimization for industrial applications and best practice design process
 N. Gerzen, P.M. Clausen & C.B.W. Pedersen

11.50 Study of optimum shape and strength design of redesigned Zig-Zag chair
 T. Mori, Y. Ohbuchi, H. Iida, K. Tsukamoto, Y. Nakamura & H. Sakamoto

12.15 A bio-inspired graphene composite material
 A. Cheng

LUNCH

Wednesday, 21st September 2016

Session 7

Session Chairman: A.N. Galybin

- 14:30 **Invited:**
An RBF interpolation blending scheme for effective shock-capturing
M. Harris, A. Kassab & E. Divo
- 14:55 **Invited:**
Implementation of the Rosseland and the radiation models in the system
of Navier-Stokes equations with the boundary element method
P. Crnjac, L. Skerget, J. Ravnik & M. Hribersek
- 15.20 **Invited:**
Stochastic post-processing of the deterministic boundary element modelling
of the transient electric field from GPR dipole antenna propagating through
lower half-space
D. Poljak, S. Sesnic, S. Lallechere & K. El Khamlichi Drissi

AFTERNOON GUIDED VISIT TO SIENA

16.00 Bus departs to Siena

We have arranged for a guide to show you around the medieval city of Siena including the spectacular Piazza del Campo, its fan-like shape fits the natural slope of the ground and is surrounded by renaissance buildings and local restaurants. This provides a splendid backdrop for the Corsa del Palio, a fast and furious bareback horse race held twice yearly, which dates back to the 15th century and a tradition representing neighbourhood pride which is taken very seriously by the Sienese.

Also included is a visit to the Duomo di Siena (Siena Cathedral) which dates back to the 12th century. The impressive mosaic marble floor which covers the entire floor of the cathedral is uncovered during September. It is thought that approximately 40 artists assisted in the creation of the mosaic floor which is one of the most ornate to be found in Italy.

END OF DAY 2

CONFERENCE DINNER— *Speak to the Conference Coordinator for details*

Thursday, 22nd September 2016

Session 8:

Chairman: A. Cheng

- 09.00 **Invited:**
Solution of the transient thermal diffusion equation using the time dependent boundary element method
K.E. Donne, A. Marotin & T. Bashford
- 09.25 **Invited:**
Solution of energy transport equation with variable material properties by BEM
J. Ravník, L. Skerget, J. Tibaut & B.W. Yeigh
- 09.50 **Invited:**
Simulations of coupling effects in vibration of FGM plates by mesh-free methods
V. Sladek, L. Sator & J. Sladek
- 10.15 The three-dimensional quasi-periodic boundary element method: Implementation, evaluation, and use cases
H. Ziegelwanger, P. Reiter & M. Conter

REFRESHMENT BREAK

Session 9:

Chairman: C. Brebbia

- 11.10 Electrostatic Corrosion Analysis with Damaged Passive Film Model of Stainless Steel
O. Kuwazuru, M. Yamada, K. Ode & W. Liu
- 11.35 Application of the sparse cardinal sine decomposition to 3D stokes flows
F. Alouges, M. Aussal, A. Lefebvre-Lepot, F. Pigeonneau & A. Sellier
- 12.00 Prediction of CP interference using BEM simulation
R. Adey, C. Perata & J. Baynham

END OF BEM 2016

We hope you have enjoyed the conference and look forward to seeing you at the next meeting in the series, have a safe and pleasant journey home.