

Conference Programme
International Conference on
Boundary Element and Meshless
Techniques XV

BeTeq 2014

Conference Venue: Grand Hotel
Baglioni
Piazza Unità Italiana 6, Firenze Italia





Located in the heart of Florence, the hotel is just a few hundred metres from the cathedral and from the Congress Centre, the city's main shopping streets, monuments and museums. The airport is just 15 minutes away by taxi and the central railway station is 200 metres away.

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By train

The Grand Hotel Baglioni is in Piazza dell'Unità d'Italia which is about 200 metres from the central Santa Maria Novella railway station. You can also get to the hotel by taking the underpass from inside the station to the square.

By plane

Florence's Amerigo Vespucci airport is about five kilometres away. It is easy to reach the hotel with the shuttle bus which stops at the Sant Maria Novella central railway station (200 metres away), or with taxi. It takes about 20/30 minutes to get to the hotel from the airport. If you are arriving at Pisa or Bologna airports we advise taking the train to Florence's central Santa Maria Novella.

Day 1: 15th July 2014

8.00	Registration
9.00	Welcome address
9.10	Keynote paper: Advanced Beam Element for the Analysis of Engineering Structures <i>E.J. Sapountzakis and I.C. Dikaros</i>
Session 2	Chair: V Mallardo
9.40	Development of the Boundary Element Method for 3D General Anisotropic Thermoelasticity <i>Y.C. Shiah and C.L. Tan</i>
10.00	A two-scale three-dimensional boundary element framework for degradation and failure in polycrystalline materials <i>I. Benedetti, M.H. Aliabadi</i>
10.20	A new interface damage model with frictional contact. An SGBEM formulation and implementation <i>Jozef Kšiňan, Vladislav Mantič, Roman Vodička</i>
10.40	Break
Session 3	Chair: A Sellier
11.00	Slow gravity-driven migration and interaction of a bubble and a solid particle near a free surface <i>M. Guémas, A. Sellier and F. Pigeonneau</i>
11.20	Comparison of Green element solutions for inverse heat conduction problems using the time-dependent and logarithmic fundamental solutions <i>Akpofure E. Taigbenu</i>
11.40	MHD Flow in Rectangular Ducts of Partly Conducting Walls under an Inclined Magnetic Field <i>Canan Bozkaya and M. Tezer-Sezgin</i>
12.00	Using Eulerlets to give a Boundary Integral formulation in Euler flow <i>Edmund Chadwick and Apostolis Kapoulas</i>
12.40	Lunch
Session 4	Chair: C LTan
14.00	A symmetric BEM approach to strain gradient elasticity for 2D static boundary-value problems <i>Panzeca T, Terravecchia S. and Polizzotto C</i>
14.20	Analysis of elastic problems by the fast multipole boundary element method <i>A. F. Dias, Jr, E. L. Albuquerque</i>
14.40	Sensitivity analysis by the fast multipole boundary element method <i>V. Mallardo, M. H. Aliabadi</i>
15.00	Auxiliary Relations for the Corners in Coupled Stretching-Bending Boundary Elements <i>Chyanbin Hwu and H.W. Chang</i>
15.20	Three-dimensional linear elastic boundary element method with direct evaluation of singular integrals <i>Cristiano J. Brizzi Ubessi and Rogério José Marczak</i>
15.40	Break
Session 4	Chair: N Dumont
16.00	An iterative coupling based on Green's function to solve embedded crack problems <i>E.F. Fontes Jr., J.A.F. Santiago and J.C.F. Telles</i>
16.20	The Regularized Method of Fundamental Solutions Applied to Interface Problems of Potential Equations <i>Csaba Gáspár</i>
16.40	Meshfree Modelling of Elastodynamic Response of Woven Fabric Composites. <i>Y. H. Chen, M.H. Aliabadi, and P. H. Wen</i>
17.00	Boundary element method applied for folded thick plates <i>D. I. G. Costa, E. L. Albuquerque, P. M. Baiz</i>
17.20	Polycrystalline materials with pores: effective properties through a boundary element homogenization scheme. <i>F. Trentacoste, I. Benedetti and M.H. Aliabadi</i>
17.40	End of Day One

Day 2: 16th July 2014

Session 5	Chair: J.C.F. Telles
9.00	Analysis of wear on fiber-reinforced composites using boundary elements <i>L. Rodríguez-Tembleque and M.H. Aliabadi</i>
9.20	The Method of Fundamental Solutions coupled with a Genetic Algorithm to Optimize Cathodic Protection Systems in Infinite Regions <i>W. J. Santos, J. A. F. Santiago and J. C. F. Telles</i>
9.40	Half-space Fundamental Solution for harmonic wave propagation <i>E.Puertas and R Gallego</i>
10.00	Radon-Stroh formalism for 3D theory of anisotropic elasticity <i>Federico C. Buroni and Mitsunori Denda</i>
10.20	Direct Volume-to-Surface Integral Transformation for 2D BEM Analysis of Anisotropic Thermoelasticity <i>H Y.C. Shiah, Chung-Lei Hsu, and Chyanbin Hwu</i>
10.40	Break
Session 6	Chair: M Denda
11.00	Vertical Vibration of Rigid and Flexible Foundations Presenting Inertia Properties and Interacting with Transversely Isotropic Layered Media <i>Josue Labaki and Euclides Mesquita</i>
11.20	A 2D BEM-FEM model of thin structures for time harmonic fluid-soil-structure interaction analysis including poroelastic media <i>J.D.R. Bordón, J.J. Aznárez and O. Maeso</i>
11.40	Voxel-Based Analysis of Electrostatic Fields in Virtual-Human Model Duke using Indirect Boundary Element Method with Fast Multipole Method <i>Shoji Hamada</i>
12.00	Investigations of dynamic interface crack problems in active biomaterials <i>Felipe García-Sánchez, Michael Wünsche, Andrés Sáez and Chuanzeng Zhang</i>
12.20	Fracture with nonlocal elasticity: analytical approaches <i>P.H. Wen, X.J. Huang and M.H. Aliabadi</i>
12.40	Lunch
Session 7	Chair: Akpofure E. Taigbenu
14.00	A new boundary approach for the 2D slow viscous MHD flow of a conducting liquid about a solid particle <i>A. Sellier, M. Tezer-Sezgin and S. H. Aydin</i>
14.20	Biomagnetic fluid flow in a channel under the effect of a uniform localized magnetic field <i>Ö. Türk, Canan Bozkaya and M. Tezer-Sezgin</i>
14.40	BEM Solution of MHD Pipe Flow Around a Conducting Cylindrical Solid and Inside an Insulating or Conducting Medium <i>M. Tezer-Sezgin and S. Han Aydin</i>
15.00	Study on the Water Coning Phenomenon in Oil Wells Using the Boundary Element Method <i>G. S. V. Gontijo, E. L. Albuquerque, E. L. F. Fortaleza</i>
15.20	Stabilized FEM-BEM Solutions of MHD Flow in an Annular Pipe <i>S. Han Aydin</i>
15.40	Break
Session 8	Chair: I Benedetti
16.00	Generalized Warping Analysis of Composite Beams of Arbitrary Cross Section by BEM <i>I.C. Dikaros and E.J. Sapountzakis</i>
16.20	Analysis of crack onset and propagation at elastic interfaces by using Finite Fracture Mechanics <i>M. Muñoz-Reja, L. Távara, V. Mantič, P. Cornetti</i>
16.40	Fracture Analysis of Viscoelastic Nonhomogeneous Media Using Boundary Element Method <i>Hugo Luiz Oliveira and Edson Denner Leonel</i>
17.00	Boundary Element Analysis of Fibre-Reinforced Composites and Adhesion Joints with Bridged Cracks <i>Mikhail Perelmuter</i>
17.20	Analysis of 3D anisotropic solids using fundamental solutions based on Fourier series and the Adaptive Cross Approximation method <i>R. Q. Rodríguez, C. L. Tan, P. Sollero and E. L.</i>

	<i>Albuquerque</i>
17.40	Torsional Vibration Analysis of Bars Including Secondary Torsional Shear Deformation Effect by BEM <i>E.J. Sapountzakis, V.J. Tspiras and A.K. Argyridi</i>
18.00	End of Day 2

Day 3: 17th July 2014	
Session 9	Chair: E Sapountzakis
9.00	Multidomain BEM for crack analysis in stiffened anisotropic plates <i>D. Flauto, I. Benedetti, A. Milazzo</i>
9.20	Simplified Assessment and Evaluation Procedure of Finite-Part Hypersingular Integrals <i>Ney Augusto Dumont</i>
9.40	Analysis of Damped Waves Using Energetic BEM-FEM Coupling <i>Aimi, L. Desiderio, M. Diligenti, C. Guardasoni</i>
10.00	A Fast 2D-3D BEM Approach to Dynamic Ride-Sharing <i>A. Brancati and S.M. Siniscalchi</i>
10.20	An ACA accelerated isogeometric Boundary Element analysis for two-dimensional potential problems <i>L. S. Campos, E.L. Albuquerque and L. C. Wrobel</i>
10.40	Break
Session 10	Chair: A Milazzo
11.00	Solution of time-domain problems using Convolution Quadrature methods and BEM++ <i>T.Betcke, N.Salles, W.Smigaj</i>
11.20	Boundary Element analysis of Mild Slope Equation problems with a monotonic bed profile <i>A. Cerrato, J.A. González, L. Rodríguez-Tembleque</i>
11.40	Isotropic-BEM coupled with strong form Local radial point interpolation for the solution of 3D geometrically nonlinear elasticity problems <i>Richard Kouitat Njiwa</i>
12.00	A topological optimization procedure applied to multiple region problems <i>Carla Anflor, Éder L. Albuquerque and Luiz C. Wrobel</i>
12.20	A Boundary Element - Response Matrix method for 3D neutron diffusion and transport problems <i>V.Giusti, B.Montagnini</i>
12.40	Lunch
Session 11	Chair: R Gallego
14.00	Enriched BEM for fracture in anisotropic materials <i>G.Hattori, A. Sáez, J. Trevelyan and F. García-Sánchez</i>
14.20	Coupling of Boundary and Finite Elements for the Problems of Multiple Polygon-like Holes <i>Chyanbin Hwu, C.C. Li and Shao-Tzu Huang</i>
14.40	Elastostatic analysis by a BEM-NURBS approach <i>V. Mallardo, V. Minutolo, E. Ruocco</i>
15.00	A Dual Boundary Element Method for Measurement of Electromechanical Impedance <i>Fangxin Zou, M. H. Aliabadi</i>
15.20	A (constrained) microstretch approach in living tissue modelling: a numerical investigation by the local point interpolation – boundary element method. <i>Jean-Philippe Jehl, Richard Kouitat Njiwa</i>
15.40	Break
16.00	Time Dependent Fracture Non-Linear Problems with the Boundary Element Method <i>E. Pineda León, A. Rodríguez-Castellanos, M.H. Aliabadi</i>

16.20	Direct Interpolation Technique using Radial Basis Functions Applied to the Helmholtz Problem <i>C. F. Loeffler, P. V. M. Pereira, H. M. Barcelos</i>
	End of the Conference