

IMSE2010 PROGRAMME

Monday 12th July

9:00 – 10:45 Registration, Tea & Coffee

10:45 – 11:00 Conference opening, Sallis Benney Theatre

11:00 – 12:00 Invited Speaker: Prof Ke. Chen, University of Liverpool, Sallis Benney Theatre.

Chair: P. J. Harris.

12:00 -1:00 Contributed papers.

	Sallis Benney Theatre <i>Chair: P. J. Harris</i>	Room 202 <i>Chair:</i>
12:00 - 12:30	Solutions to model equations of cancer growth. B. Zubik-Kowal.	Spectra and pseudospectra of convection-diffusion operator H. Guebbai
12:30 – 1:00	A self-consistent Monte-Carlo validation procedure for Hadron cancer therapy simulation. L. N. Burgio, D. Hadjimichef and B. E. J. Bodmann.	Pseudo differential equations in domains with boundary singularities. V. B. Vasilyev.

1:00 – 2:00 : Buffet Lunch

2:00 – 3:30 Contributed Papers.

	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
2:00 – 2:30	Optimising water quality in a river section. M. A. Vilar	Collocation method for Cauchy integral equations using trigonometric polynomials in Hölder spaces. M. Ahues and A. Mennouni
2:30 – 3:00	Transient mechanistic model for slug damper/gas-liquid cylindrical cyclone (GICC [®]) compact separator system. E. Pereyra, L. Gomez, R. Mohan and O. Shoham	Error estimation using Richardson extrapolation with boundary element results in a Dirichlet problem for the Laplace equation. S. Pomeranz
3:00 – 3:30	Boundary integral equations for shells of arbitrary geometry. V. Zozulya	

3:30 – 4:00 Tea and coffee.

4:00 – 5:00 Contributed papers.

	Sallis Benney Theatre <i>Chair:</i>	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
4:00 – 4:30	Solution of nonlinear Abel type integral equation modelling crack propagation under creep and fatigue. L. Hakim and S. E. Mikhailov	An overlapping domain decomposition for the method of fundamental solution. K. Shanazari, N. Mohammadi and N. Rabie.	Computation of the spectrum for some elliptic operators on periodic waveguides. S. Nazarov, K. Ruotsalainen and J. Taskinen.
4:30 – 5:00	Exact 3-D Galerkin integrals for planar cracks. M. Maischak.	Convergence of a discretization scheme based on characteristics method for a fluid-rigid system with variable density. J. San Martin, J.-F. Scheid and L. Smaranda.	The dynamical behaviour of drilling masts during the hook load variations. S. Chergui

5:00 Reception.

6:30 – 7:00 Fish and Chip Supper, Brighton Pier.

Tuesday 13th July.

9:00 – 10:30 Contributed papers.

	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
9:00 – 9:30	A theoretical study of the stratified atmospheric boundary layer through perturbation techniques. C. C. Pellegrini, M. T. Vilhena and B. E. J. Bodmann.	Localised segregated boundary domain integral equations formulation for transmission problems. O. Chkadua, S. E. Mikhailov and D. Natroshvili.
9:30 – 10:00	Bubble behaviour near a two fluid interface. G. A. Curtiss, D. M. Leppinen, Q. X. Wang and J. R. Blake.	Localised segregated boundary domain integral equations formulation for mixed type boundary value problems. O. Chkadua, S. E. Mikhailov and D. Natroshvili.
10:00 – 10:30	A necessary and sufficient condition for the existence of absolute minimizers of invariant energy functionals. S. M. Haidar	Analysis of segregated boundary-domain integral equations for variable-coefficient BVPs in exterior domains. O. Chakadua, S. E. Mikhailov and D. Natroshvili.

10:30 – 11:00 Tea and coffee.

11:00 – 12:00 Invited Speaker: Prof Al Reynolds, University of Tulsa, Sallis Benney Theatre
Chair:

12:00 – 1:00 Contributed papers.

	Sallis Benney Theatre <i>Chair:</i>	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
12:00 – 12:30	Some thoughts on methods for evaluating a class of highly oscillatory integrals. P. J. Harris	Domain decomposition with Lagrangian multipliers for hypersingular integral equations. M. Healey and N. Heuer	On the robustness of the GITT solution for the 2-D neutron diffusion equation in Cartesian geometry. M. Schramm, C. Z. Petersen, B. E. J. Bodmann and M. T. Vilhena.
12:30 – 1:00	Integral-differential equations for the stresses analysis at the bridged zone of an interface crack. M. N. Perelmuter.	Numerical integration methods for the functions with singularities by partition integration. H. Hirayama.	On the three-dimensional solution of the advection-diffusion equation by integral transform technique. D. Buske, R. S. de Quadros, M. T. Vilhena and C. F. Segatto.

1:00 – 1:45 Buffet Lunch

1:45 – 6:00 Excursion to Battle Abbey, site of the Battle of Hastings in 1066.

Wednesday 14th July

9:00 – 10:30 Contributed papers.

	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
9:00 – 9:30	Semianalytical approach to the computation of the Laplace transform of 3-D source functions. L. G. Thompson and G.G. Zhao.	Asymptotical behaviours of elliptical quadrilateral algebraic equations with variable coefficients and aerodynamical applications. A. Nastase.
9:30 – 10:00	Limiting cases of subdiffusion J. Kemppainen	A novel method for simulating spectral nuclear reactor criticality by spatially dependent control volume size. D. Q. de Camargo, B. E. J. Bodmann, M. T. Vilhena and S. de Q. B. Leite
10:00 – 10:30	Droplet heating and evaporation in the presence of a moving boundary: Numerical analysis based on analytical solutions. I. G. Gusev, P. A. Krututskii and S. S. Sazhin	Numerical solution of the electric field integral equation on polyhedral surfaces. A. Besselov and N. Heuer.

10:30 – 11:00 Tea and coffee.

11:00 – 12:00 Invited Speaker: Prof Andreas Kirsch, Karlsruhe Institute of Technology (KIT), Sallis Benney Theatre
Chair:

12:00 – 1:00 Contributed papers.

	Sallis Benney Theatre <i>Chair:</i>	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
12:00 – 12:30	Interface cracks under harmonic loading: effect of crack faces contact interaction. M. V. Menshykova, O. V. Menshykov and I. A. Gus	Generalized Particle Filter: PDF with undefined statistical moments. H. F. de Campos Velho and H. C. M. Furtado	On the quasimodes in certain vibrating systems. M. E. Pérez
12:30 – 1:00	Distributional Solutions for Boundary Integral Methods in the Theory of Bending of Thermoelastic Plates. I. Chudinovich and C. Constanda	On a new definition of the Reynolds number from the interplay of macroscopic and microscopic phenomenology. B. E. J. Bodmann, M. T. Vilhena and J. R. Zabadal.	The torsional vibrations of drill string. S. Chergui.

1:00 – 2:00 Buffet Lunch

2:00 – 3:30 Contributed Papers.

	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
2:00 – 2:30	Estimating the validity of statistical energy analysis using dynamic energy analysis. D. Chappell and G. Tanner.	Spectral stiff problems in domains with strongly oscillating boundary. D. Gómez, M. Lobo, S. A. Nazarov and E. Pérez.
2:30 – 3:00	Multiple traces boundary integral formulation for Helmholtz transmission problems. C. Jerez-Hanckes and R. Hiptmair.	Almost periodicity in new spaces: A semi-linear case. C. Corduneanu.
3:00 – 3:30	On the analytical solution of the multi-group neutron kinetic diffusion equations in one-dimensional Cartesian geometry by the integral transform technique. C. Ceolin, M. T. Vilhena, B. E. J. Bodmann and S. de Q. B. Leite.	Further analysis of two-operator boundary domain integral equations for variable-coefficient BVP. T. G. Ayele and S. E. Mikhailov.

3:30 – 4:00 Tea and coffee.

4:00 – 5:00 Contributed papers.

	Sallis Benney Theatre <i>Chair:</i>	Room 202 <i>Chair:</i>	Room 204 <i>Chair:</i>
4:00 – 4:30	A new hybrid method to predict the distribution of vibroacoustic energy in complex built-up structures. D. Maksimov and G. Tanner	Artificial neural networks for estimating the atmospheric pollutant sources. F. F. Paes, H. F. de Campos Velho, and F. M. Ramos	Numerical simulation of short waves over long distances as nonlinear solitary waves. J. Steinhoff and S. Chitta.
4:30 – 5:00	A high frequency problem of scattering by convex polygons with impedance boundary conditions. S. N. Chandler-Wilde, S. Langdon and M. Mokgolele.	Remote space-time analysis of the wave field. M. Perel and E. Gorodnitskiy.	On the determination of the Albedo boundary conditions by solving the one-speed neutron transport equation in slab-geometry with the LTS_N method. M. M. Figueredo, C. F. Segatto, M. T. Vilhena and R. C. Barros

7:00 Conference Dinner, Al Fresco Restaurant, Kings Road, Hove (approx 15 mins walk from the Thistle Hotel).