

**WAVES'05**  
**ACCEPTED PAPERS**

**I – AEROACOUSTICS (21, AE)**

**AE1-27** -- CONTROL OF AERO-ACOUSTIC PROPAGATIONS WITH WALL IMPEDANCE BOUNDARY CONDITIONS : APPLICATION TO A POROUS MATERIAL MODEL -- Y. VENTRIBOUT, P.A. MAZET

**AE2-30** -- STABILIZATION OF KELVIN-HELMHOLTZ INSTABILITIES IN THREE-DIMENSIONAL LINEARIZED EULER EQUATIONS USING A NON-DISSIPATIVE TIME-DOMAIN DISCONTINUOUS GALERKIN METHOD -- M. BERNACKI, S. LANTERI, S. PIPERNO

**AE3-36** -- HIGH FREQUENCY AND NUMERICAL EULERIAN METHODS FOR AERO-ACOUSTIC PROBLEMS -- OLIVIER LAFITTE, YOUNESS NOUMIR

**AE4-56** -- GENERALIZED IMPEDANCE BOUNDARY CONDITIONS IN ACOUSTICS WITH FLOW -- E. LUNEVILLE, J.F. MERCIER

**AE5-60** -- NUMERICAL SIMULATION OF ACOUSTIC PROPAGATION IN A SHEAR FLOW IN THE FREQUENCY DOMAIN -- A.-S. BONNET-BEN DHIA, E.-M. DUCLAIROIR, J.-F. MERCIER

**AE6-75** -- STUDY OF THE AERO-ACOUSTICAL PHENOMENA BY USE OF A HIGH FREQUENCY PARAMETRIX -- P.J. DELORME

**AE7-74** -- A DISCONTINUOUS GALERKIN METHOD FOR AERO-ACOUSTICAL APPLICATIONS -- P.J. DELORME P.A. MAZET C.PEYRET Y. VENTRIBOUT

**AE8-78** -- A DISCONTINUOUS GALERKIN METHOD WITH QR SPECTRAL ELEMENTS FOR AEROACOUSTICS -- N. CASTEL ; G. COHEN

**AE9-114** -- NUMERICAL ANALYSIS OF TIME-DEPENDENT GALBRUN EQUATION IN AN INFINITE DUCT -- K. BERRIRI, A.S BONNET-BENDHIA, P. JOLY

**II – ARTIFICIAL BOUNDARY CONDITIONS (2, ABC)**

**ABC1-22** -- PERFECTLY MATCHED LAYERS FOR TIME-HARMONIC ACOUSTICS IN THE PRESENCE OF A UNIFORM FLOW -- ELIANE BECACHE, ANNE-SOPHIE BONNET-BEN DHIA, GUILLAUME LEGENDRE

**ABC2-81** -- NEW CONSTRUCTIONS OF PERFECTLY MATCHED LAYERS FOR THE LINEARIZED EULER EQUATIONS -- F. NATAF

**ABC3-127** -- ON THE CONSTRUCTION AND THE ANALYSIS OF PML MODELS FOR THE LINEARIZED EULER EQUATION -- ADIB N. RAHMOUNI

**ABC4-76** -- TRANSPARENT BOUNDARY CONDITIONS FOR COMPUTING RESONANCES -- THORSTEN HOHAGE

**ABC5-62** -- SOLVING SCATTERING PROBLEMS FOR MAXWELL'S EQUATION USING POLYGONAL ARTIFICIAL BOUNDARIES -- D.A.R.JUSTO, T. WARBURTON, T. HAGSTROM

**ABC6-96** -- AN ABSORBING LAYER FOR THE NONLINEAR KLEIN-GORDON EQUATION -- GUNILLA KREISS

**ABC7-82** -- DIRICHLET TO NEUMANN MAP FOR DOMAINS WITH CORNERS AND APPROXIMATE BOUNDARY CONDITIONS -- LAURENCE HALPERN, OLIVIER LAFITTE

**ABC8-104** -- TIME DOMAIN ERROR ESTIMATES FOR ABSORBING BOUNDARY CONDITIONS AND PERFECTLY MATCHED LAYERS. -- JULIEN DIAZ, PATRICK JOLY

**ABC9-50** -- ON PROPERTIES OF HYPERBOLIC EQUATIONS AND NONREFLECTING BOUNDARY CONDITIONS -- ADI DITKOWSKI, MICHAEL SEVER

**ABC10-54** -- STABILITY, CONVERGENCE, AND PARAMETER SELECTION FOR HIGH-ORDER LOCAL RADIATION BOUNDARY CONDITIONS -- MANUELA DE CASTRO AND THOMAS HAGSTROM

**ABC11-64** -- ADAPTIVE FINITE-ELEMENT IMPLEMENTATION OF ARBITRARY ORDER RADIATION BOUNDARY CONDITIONS ON RECTANGULAR DOMAINS -- T. HAGSTROM, D. GIVOLI, AND I. PATLASHENKO

**ABC12-68** -- A NEW PERFECTLY MATCHED LAYER MODEL FOR THE PROPAGATION OF ELECTROMAGNETIC WAVES IN 3D: MATHEMATICAL ASPECTS -- H. BARUCQ, M. FONTES

**ABC13-39** -- ANALYSIS OF A FINITE PML APPROXIMATION TO A MAXWELL'S SCATTERING PROBLEM -- J.H. BRAMBLE AND J.E. PASCIAK

**ABC14-6** -- OPTIMAL UNSPLIT PERFECTLY MATCHED LAYER (PML) FOR 2D ELASTICITY -- VADIM LISITSA

**ABC15-44** -- A NEW PML FOR THE SIMULATION OF ELASTIC WAVES IN ANISOTROPIC MEDIA -- DANIEL APPELÖ

**ABC16-67** -- OPTIMIZATION OF A PML MODEL FOR ELASTODYNAMICS -- H. BARUCQ, M. FONTES, D. KOMATITSCH

### **III – ASYMPTOTIC ANALYSIS (3, AA)**

**AA1-103** -- ASYMPTOTIC MODELS FOR ELECTROMAGNETIC SCATTERING FROM STRONGLY ABSORBING OBSTACLES -- M. DURUFLE, H. HADDAR, P. JOLY

**AA2-21** -- ASYMPTOTIC ESTIMATES OF THE ELECTRIC FIELD IN A BIOLOGICAL CELL AT LOW FREQUENCIES -- CLAIR POIGNARD

**AA3-59** -- EMP PROPAGATION IN THE COLE-COLE DIELECTRIC MODEL: ASYMPTOTICS AND NUMERICS -- PETER G. PETROPOULOS

**AA4-90** -- MATCHING OF ASYMPTOTIC EXPANSIONS FOR THE WAVE PROPAGATION IN MEDIA WITH THIN SLOT -- P. JOLY, S. TORDEUX

**AA5-108** -- HIGH-FREQUENCY ASYMPTOTICS OF WAVES TRAPPED BY AN UNDERWATER RIDGE -- A.M.MARIN,R.D.ORTIZ,P.ZHEVANDROV

#### **IV – DIRECT SCATTERING (4, DS)**

**DS1-79** -- HIGH-ORDER-HIGH-FREQUENCY SOLVERS FOR ROUGH-SURFACE ACOUSTIC AND ELECTROMAGNETIC SCATTERING PROBLEMS -- CATALIN TURC, FERNANDO REITICH

**DS2-84** -- ACOUSTIC SCATTERING BY AN UNBOUNDED ROUGH SURFACE WITH FINITE SURFACE IMPEDANCE -- S.N.CHANDLER-WILDE AND M.THOMAS

**DS3-11** -- TIME DEPENDENT SCATTERING BY ARRAYS OF ELLIPTIC CYLINDERS – M. NIGSCH

**DS4-52** -- SCATTERING BY BI-PERIODIC GRATINGS: THE INTEGRAL EQUATION APPROACH -- TILO ARENS

**DS5-57** -- A LONG-WAVE MULTIPLE SCATTERING THEORY -- C M LINTON, P A MARTIN AND I THOMPSON

**DS6-32** -- WELL-CONDITIONED INTEGRAL EQUATIONS FOR THE ITERATIVE SOLUTION OF 3D ACOUSTIC AND ELECTROMAGNETIC SCATTERING PROBLEMS IN THE HIGH-FREQUENCY SPECTRUM -- X. ANTOINE AND M. DARBAS

**DS7-86** -- A HIGH-FREQUENCY INTEGRAL EQUATION METHOD FOR ELECTROMAGNETIC AND ACOUSTIC SCATTERING SIMULATIONS: RATE OF CONVERGENCE OF MULTIPLE SCATTERING ITERATIONS -- FATIH ECEVIT, FERNANDO

**DS8-99** -- APPROXIMATION OF LOGARITHMIC DERIVATIVE OF HANKEL FUNCTION WITH APPLICATIONS TO HIGH FREQUENCY WAVE PROPAGATION -- A. ATLE, B. ENGQUIST

**DS9-119** -- A BOUNDARY ELEMENT METHOD FOR HIGH FREQUENCY SCATTERING BY CONVEX POLYGONS -- S.N. CHANDLER-WILDE, S. LANGDON

**DS10-129** -- A SPECTRAL BOUNDARY ELEMENT METHOD FOR MEDIUM AND HIGH FREQUENCY SCATTERING -- JOHANNES TAUSCH

**DS11-117** -- APPROXIMATION OF HIGH FREQUENCY ACOUSTIC WAVE SURFACE INTEGRALS -- S. LANGDON, M. GANESH, I.H. SLOAN

**DS12-123** -- AN IMPROVED MODE MATCHING METHOD FOR LARGE CAVITIES -- GANG BAO AND WEIWEI ZHANG

**DS13-120** -- ERROR ANALYSIS OF A COUPLED FINITE ELEMENT/DTN MAP ALGORITHM ON GENERAL DOMAINS FOR 2D EXTERIOR SCATTERING PROBLEMS -- DAVID P. NICHOLLS, NILIMA NIGAM

**DS14-136** -- SCATTERING CROSS SECTION OF NON-SMOOTH CYLINDRICAL OBSTACLES OF ARBITRARY SHAPE -- VIANEY VILLAMIZAR AND MATT WEBER

**DS15-132** -- PERFORMANCE ASSESSMENT OF THE BGT CONDITION FOR LOW FREQUENCY ACOUSTIC SCATTERING PROBLEMS WITH ELLIPTICAL-SHAPED SCATTERERS -- R. C. REINER JR., R. DJELLOULI

**DS16-41** -- ON THE T-MATRIX FOR SCATTERING BY A SMALL OBSTACLE -- P. A. MARTIN -- JOSE A. CARRILLO, SIMON LABRUNIE

**DS17-53** -- THE 1-D KINETIC MODEL FOR LASER-PLASMA INTERACTION AND RAMAN SCATTERING REITICH

**DS18-37** -- DIFFRACTION OF AN ELECTROMAGNETIC WAVE BY A WEDGE WITH AN IMPEDANCE BOUNDARY CONDITION -- JEANNE-MARIE CARON, OLIVIER LAFITTE)

## **V – DOMAIN DECOMPOSITION METHODS (4, DDM)**

**DDM1-33** -- MULTI-DOMAIN DECOMPOSTION FOR TRANSIENT ELECTROMAGNETIC SCENES IN 3D HOMOGENEOUS MEDIA USING VOLUMIC METHODS -- V. MOUYSSSET, P.A. MAZET, P. BORDERIES

**DDM2-40** -- A COUPLING BEM-FEM METHOD USING A FETI-LIKE DOMAIN DECOMPOSITION METHOD -- Y. BOUBENDIR, A. BENDALI, M. FARES

**DDM3-72** -- DOMAIN DECOMPOSITION METHOD FOR ELECTROMAGNETIC SCATTERING BY ELECTRICALLY DEEP CAVITIES -- N.BALIN, F.MILLOT AND N.ZERBIB

**DDM4-116** -- A DOMAIN DECOMPOSITION METHOD FOR TIME-HARMONIC ACOUSTIC SCATTERING BY ELASTIC OBJECTS IN SEDIMENT -- KAZUFUMI ITO, JARI TOIVANEN

**DDM5-142** -- A DOMAIN DECOMPOSITION METHOD FOR THE SOLUTION OF LARGE ELECTROMAGNETIC PROBLEMS USING A MASSIVELY PARALLEL HYBRID FINITE ELEMENT - INTEGRAL EQUATION MLFMA -- D. GOUDIN, M. MANDALLENA, K. MER-NKONGA, B. STUPFEL

## **VI – ELASTIC WAVES (7, EW)**

**EW1-7** -- ON WAVE PROPAGATION IN A RANDOM GRANULAR ELASTIC MEDIUM  
– GAYATRI CHATTOPADHYAY, R. K. BHATTACHARYYA

**EW2-14** -- ANISOTROPIC ELASTODYNAMICS IN HALF SPACE: ANALYTIC  
METHOD FOR POLYNOMIAL DATA -- V.G. YAKHNO, H.K. AKMAZ

**EW3-85** -- COUPLING FINITE ELEMENTS AND INTEGRAL EQUATIONS IN TIME-  
DOMAIN VIBROACOUSTICS. -- PATRICK JOLY PASCAL GROB

**EW4-100** -- MODELING OF 1D ELASTIC P-WAVES IN A FRACTURED ROCK WITH  
HYPERBOLIC JUMP CONDITIONS -- B. LOMBARD - J. PIRAUX

**EW5-12** -- ON SH-WAVE PROPAGATION IN Laterally HETEROGENEOUS  
ELASTIC MEDIA -- A.ROY, M.MITRA, R.K.BHATTACHARYYA

**EW6-20** -- THE ELASTIC WAVE FRONT SHAPE GENERATED BY A CIRCULAR  
SOURCE IN PIEZOELECTRIC MEDIUM OF CRYSTAL CLASS 6MM -- CARLOS  
HENRIQUE DAROS

**EW7-91** -- MIXED HIGHER ORDER SPECTRAL ELEMENTS FOR VIBROACOUSTIS  
IN TIME DOMAIN -- P.GROB G.COHEN

**EW8-47** -- PARALLEL COMPUTATION OF ELASTIC-PLASTIC WAVES PROPAGA-  
TION IN GRANULAR MATERIAL -- SADOVSKII VLADIMIR M. & SADOVSKAYA  
OXANA V.

## **VII – ELECTROMAGNETISM (8, EM)**

**EM1-26** -- SIMULATION OF LASER PROPAGATION IN A PLASMA WITH A  
FREQUENCY MAXWELL EQUATION -- SENTIS R, DESROZIER S, NATAF F

**EM2-55** -- NODAL FINITE ELEMENTS FOR THE AXISYMMETRIC MAXWELL  
EQUATIONS -- SIMON LABRUNIE

**EM3-66** -- FINITE ELEMENT MODEL FOR SCATTERING AND RADIATION  
PROBLEMS OF OPTICS -- X. WEI, A.J.H. WACHTERS AND H.P. URBACH

**EM4-113** -- COMPARISON OF HIGHER-ORDER FINITE ELEMENT METHODS FOR  
THE 2-D MAXWELL'S EQUATIONS IN FREQUENCY DOMAIN -- G. COHEN, M.  
DURUFLE

**EM5-112** -- STAGGERED GRID DISCONTINUOUS GALERKIN METHODS FOR  
MAXWELL'S EQUATIONS -- ERIC T. CHUNG AND BJORN ENGQUIST

**EM6-109** -- HEXAHEDRAL DISCONTINUOUS GALERKIN METHODS FOR MAXWELL'S EQUATIONS IN TIME DOMAIN -- G. COHEN, X. FERRIERES, S. PERNET

**EM7-77** -- ON A QUASILINEAR ZAKHAROV SYSTEM DESCRIBING LANDAU DAMPING -- R. BELAOUAR, T. COLIN, G. GALLICE, C. GALUSINSKI

**EM8-80** -- COMBINING FEM AND PADE APPROXIMATION FOR BROADBAND ANALYSIS OF RADIATING STRUCTURES -- BRAHIM ESSAKHI, LIONEL PICHON

**EM9-92** -- A VARIATIONAL APPROACH FOR WAVE TRANSMISSION BETWEEN MEDIA WITH OPPOSITE SIGN DIELECTRIC CONSTANTS -- A. S. BONNET-BENDHIA, P. CIARLET JR., C. M. ZWÖLF

**EM10-35** -- REALISTIC NUMERICAL MODELING OF HUMAN HEAD TISSUES EXPOSURE TO ELECTROMAGNETIC WAVES FROM MOBILES PHONES -- G. SCARELLA, O. CLATZ, S. LANTERI, G. BEAUME, S. OUDOT, J.-P. PONS, S. PIPERNO, P. JOLY, J. WIART

## **VIII – GUIDED WAVES AND RESONANCE (10, GW)**

**GWR1-88** -- EXACT BOUNDARY CONDITIONS FOR PERIODIC WAVEGUIDES -- S. FLISS, P. JOLY, J.-R. LI

**GWR2-89** -- GUIDED WAVES IN PHOTONIC FIBERS -- SOFIANE SOUSSI

**GWR3-121** -- A DIFFUSION ANALYSIS APPROACH FOR MULTIMODE RANDOM OPTICAL WAVEGUIDES -- EMMANUEL PERREY-DEBAIN, DAVID ABRAHAMS

**GWR4-19** -- INFLUENCE OF THE COUPLING OF AN ELASTIC PLATE WITH A CONFINED FLOW ON RESONANCES -- A.-S. BONNET-BEN DHIA AND J.-F. MERCIER

**GWR5-94** -- WAVES IN A 1-D MEDIUM WITH TWO RESISTIVE TERMINATIONS: COMPLETENESS OF THE MODES -- J.KERGOMARD, D.MATIGNON, V. DEBUT

## **IX – HYDRODYNAMICS AND GRAVITY WAVES (11, HGW)**

**HGW1-31** -- AN IMPLICIT DISCONTINUOUS GALERKIN FINITE ELEMENT METHOD FOR WATER WAVES -- J.J.W. VAN DER VEGT, V.R. AMBATI AND O. BOKHOVE

**HGW2-51** -- SPACE-TIME DISCONTINUOUS GALERKIN METHOD FOR ROTATING SHALLOW WATER FLOWS -- V. R. AMBATI, O. BOKHOVE

**HGW3-87** -- ON SPLITTING-BASED MASS AND TOTAL ENERGY CONSERVING SHALLOW-WATER SCHEMES -- YU.N. SKIBA, D.M. FILATOV

**HGW4-3** -- SINGULARITY EXPANSION METHOD APPLIED TO THE MOTIONS OF A FLOATING ELASTIC PLATE -- CHRISTOPHE HAZARD AND FRANÇOIS LORET

## **X – INVERSE PROBLEMS AND IMAGING (12, IP)**

**IPI1-16** -- THEORY OF ACOUSTIC WAVE PHASE CONJUGATION IN ACTIVE MEDIA – ALAIN MERLEN, ZHANG QI

**IPI2-73** -- MATHEMATICAL AND NUMERICAL STUDY OF A TIME REVERSAL MIRROR -- CHOKRI BEN AMAR, NABIL GMATI, CHRISTOPHE HAZARD AND KARIM RAMDANI

**IPI3-69** -- PARAMETER DETERMINATION IN DIFFUSIVE MEDIA VIA THERMAL -- T. HOHAGE, M.L. RAPUN, F.J. SAYAS, M.L. SEIN-ECHALUCE

**IPI4-93** -- INVERSE METHOD FOR IDENTIFICATION OF ACOUSTIC SOURCES AT LAUNCH VEHICLE LIFT-OFF -- S.ALESTRA, V.SRITHAMMAVANH, I.TERRASSE, S.JEANJEAN, B.TROCLET

**IPI5-111** -- ACOUSTICAL CHARACTERIZATION OF 1-D NON-HOMOGENEOUS LOSSLESS POROUS MATERIALS -- L. DE RYCK, Z.E.A. FELLAH, W. LAURIKS, A. WIRGIN, C. DEPOLLIER

**IPI6-128** -- ADAPTIVE IMAGING IN CLUTTER -- L. BORCEA AND G. PAPANICOLAOU AND C. TSOGKA

**IPI7-95** -- TIME-REVERSAL FOR TEMPORAL COMPRESSION AND SPATIAL FOCUSING OF ACOUSTIC WAVES IN ENCLOSURES -- DEBORAH BERECHICHEZ AND GEORGE PAPANICOLAOU

**IPI8-141** -- DETECTION AND IMAGING IN A STRONGLY CLUTTERED ENVIRONMENT -- S. HOU, K. SOLNA, H. ZHAO SCHENKER

**IPI9-25** -- ONE WAY OF ORGANIZING N-TAP CO-PHASED WEIGHTED MEDIAN FILTERS FOR PROCESSING OF PERIODIC SIGNALS -- V. I. ZNAK, A. P. GRIGORUK

**IPI10-139** -- SMALL-INCLUSION ASYMPTOTIC FOR INVERSE PROBLEMS IN ACOUSTICS -- BOJAN B. GUZINA AND MARC BONNET

## **XI – INVERSE SCATTERING (13, IS)**

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**IS2-106** -- ON THE USE OF THE RECIPROCITY GAP FUNCTIONAL IN INVERSE SCATTERING FROM PLANAR IMPEDANCE CRACKS -- FABRICE DELBARY

**IS3-15** -- A NEW COMPUTATIONAL APPROACH FOR INVERSE MEDIUM SCATTERING AT A FIXED FREQUENCY -- GANG BAO AND PEIJUN LI

**IS4-97** -- ON THE MULTI WAVE NO RESPONSE TEST ANF ITS RELATION TO OTHER SAMPLING METHODS. -- GEN. NAKAMURA, ROLAND. POTTHAST AND MOURAD. SINI.

**IS5-101** -- INVERSE ACOUSTIC SCATTERING BY SMALL-OBSTACLE EXPANSION OF MISFIT FUNCTION -- M. BONNET

**IS6-110** -- THE INVERSE ELECTROMAGNETIC SCATTERING PROBLEM FOR A PARTIALLY COATED DIELECTRIC -- FIORALBA CAKONI, DAVID COLTON AND PETER MONK

**IS7-18** -- LOCATING AN OBSTACLE IN A 3D WAVEGUIDE USING THE CONVEX SCATTERING SUPPORT -- L. BOURGEOIS, S. KUSIAK, C. CHAMBEYRON

**IS8-23** -- A LINEAR SAMPLING METHOD FOR INVERSE SCATTERING PROBLEMS IN LAYERED ELASTIC MEDIA -- BOJAN B. GUZINA AND ANDREW MADYAROV

**IS9-71** -- IMAGING BURIED OBJECTS FROM ELECTROMAGNETIC MEASUREMENTS -- F. CAKONI, M'B MBAREK, H. HADDAR

## **XII – MULTIPOLE METHODS AND FAST SOLVERS (14, MMFS)**

**MMFS1-83** -- COUPLING OF ULTRA-WEAK VARIATIONAL FORMULATION AND INTEGRAL REPRESENTATION USING A FAST MULTIPOLE METHOD IN ELECTROMAGNETISM -- DARRIGRAND ERIC AND MONK PETER

**MMFS2-105** -- NEW BOUNDARY INTEGRAL EQUATIONS FOR ELECTROMAGNETIC SCATTERING PROBLEMS -- SOPHIE BOREL, DAVID P. LEVADOUX, FRANCOIS ALOUGES, BAS L. MICHIELSEN

**MMFS3-118** -- NUMERICAL ANALYSIS OF PSEUDODIFFERENTIAL PRECONDITIONERS FOR THE CFIE EQUATION OF ELECTROMAGNETISM -- DAVID P. LEVADOUX

**MMFS4-133** -- ON HIDDEN FACE REMOVAL IN BOUNDARY INTEGRAL EQUATIONS -- B. L. MICHIELSEN

## **XIII – NONLINEAR WAVES (15, NLW)**

**NLW1-48** -- AN IMPLICIT MULTI-DOMAIN WENO FINITE DIFFERENCE METHOD -- S. GOTTLIEB AND K. SEBASTIAN

**NLW2-126** -- HYBRID MULTI-DOMAIN SPECTRAL-WENO METHODS FOR HYPERBOLIC EQUATIONS -- WAI SUN DON, BRUNO COSTA

**NLW3-131** -- LONG RANGE NUMERICAL PROPAGATION OF SHORT WAVES AS NONLINEAR SOLITARY WAVES -- J. STEINHOFF, N. LYNN, L. WANG

**NLW4-13** -- SIMULATION OF STANDING WAVES USING MOVING-GRID TECHNIQUES WITH SPECTRAL ELEMENT METHODS -- ROLAND BOUFFANAIS AND MICHEL O. DEVILLE

**NLW5-24** -- NONLINEAR WATER-WAVE PROBLEM: A CONSISTENT COUPLED-MODE REFORMULATION AND ITS APPLICATION TO NUMERICAL INVESTIGATION OF TRAVELLING WAVE SOLUTIONS -- G.A. ATHANASSOULIS AND K.A. BELIBASSAKIS

**NLW6-29** -- NUMERICAL SOLUTION OF THE NONLINEAR HELMHOLTZ EQUATION USING NONORTHOGONAL EXPANSIONS -- GADI FIBICH AND SEMYON TSYNKOV

**NLW7-122** -- A 3D FINITE ELEMENT MODEL OF MARTENSITIC TRANSFORMATION DYNAMICS USING A CONSISTENT MICROSCOPIC ENERGY REPRESENTATION -- RVN MELNIK AND DR MAHAPATRA

#### **XIV – NUMERICAL METHODS (16, NM)**

**NM1-46** -- A FREE LAGRANGE MULTIPLIER SPACE-TIME MESH REFINEMENT METHOD FOR WAVE PROPAGATION PROBLEMS -- E. BECACHE, P. JOLY, J. RODRIGUEZ

**NM2-63** -- HIGH-ORDER SINGLE-STEP METHODS FOR SIMULATING WAVES – THOMAS HAGSTROM

**NM3-65** -- HIGH ORDER FINITE DIFFERENCE METHODS FOR WAVE PROPAGATION IN DISCONTINUOUS MEDIA -- KEN MATTSSON, JAN NORDSTRÖM

**NM4-42** -- AN ALGORITHM FOR LONG RANGE WAVE PROPAGATION -- KAI HUANG, GEORGE PAPANICOLAOU, KNUT SOLNA, CHRYSOULA TSOGKA, AND HONGKAI ZHAO

**NM5-43** -- A WAVELET-PACKET TRANSFORMATION FOR THE FAST SOLUTION OF OSCILLATORY INTEGRAL EQUATIONS -- DAAN HUYBRECHS AND STEFAN VANDEWALLE

**NM6-34** -- FULLY EXPLICIT DGTD METHODS FOR WAVES PROPAGATION ON TIME-AND-SPACE LOCALLY REFINED GRIDS -- SERGE PIPERNO

**NM7-45** -- SPURIOUS SOLUTIONS AND THE DISCONTINUOUS GALERKIN METHODS ON NONCONFORMING MESHES -- T. WARBURTON

**NM8-130** -- INTERIOR PENALTY DG-FEM FOR SECOND ORDER WAVE EQUATIONS – MARCUS J. GROTE, ANNA SCHNEEBELI, AND DOMONIK SCHOETZAU

**NM9-140** -- A DISCONTINUOUS GALERKIN METHOD BASED ON OSCILLATED FINITE ELEMENTS AND LAGRANGE MULTIPLIERS FOR SOLVING HELMHOLTZ PROBLEMS -- A.GILLMAN, R. DJELLOULI, AND M. AMARA

**NM10-58** -- NUMERICAL COMPUTATION OF WAVE MOTION THROUGH DYNAMIC MATERIALS -- SUZANNE L. WEEKES

**NM11-107** -- MULTI-MODE APPROXIMATIONS TO WAVE MOTION -- P. G. CHAMBERLAIN AND D. PORTER

**NM12-49** -- KRYLOV SUBSPACE ITERATIVE METHODS ACCELERATED WITH MULTIGRID FOR THE 3D HETEROGENEOUS HELMHOLTZ EQUATION -- Y.A. ERLANGGA, C. VUIK, C.W. OOSTERLEE

**NM13-124** -- ASYMPTOTICALLY DERIVED BOUNDARY ELEMENT METHOD FOR THE HELMHOLTZ EQUATION -- ELDAR GILADI

**NM14-135** -- CONTROLLABILITY METHOD FOR THE HELMHOLTZ EQUATION WITH SPECTRAL ELEMENTS -- ERKKI HEIKKOLA, SANNA MÖNKÖLÄ, ANSSI PENNANEN, TUOMO ROSSI

**NM15-134** -- A NEW IMPLEMENTATION OF FULLY-AUTOMATIC HP-ADAPTIVITY FOR ACOUSTIC AND ELECTROMAGNETIC SCATTERING IN 3D -- JASON KURTZ AND LESZEK DEMKOWICZ