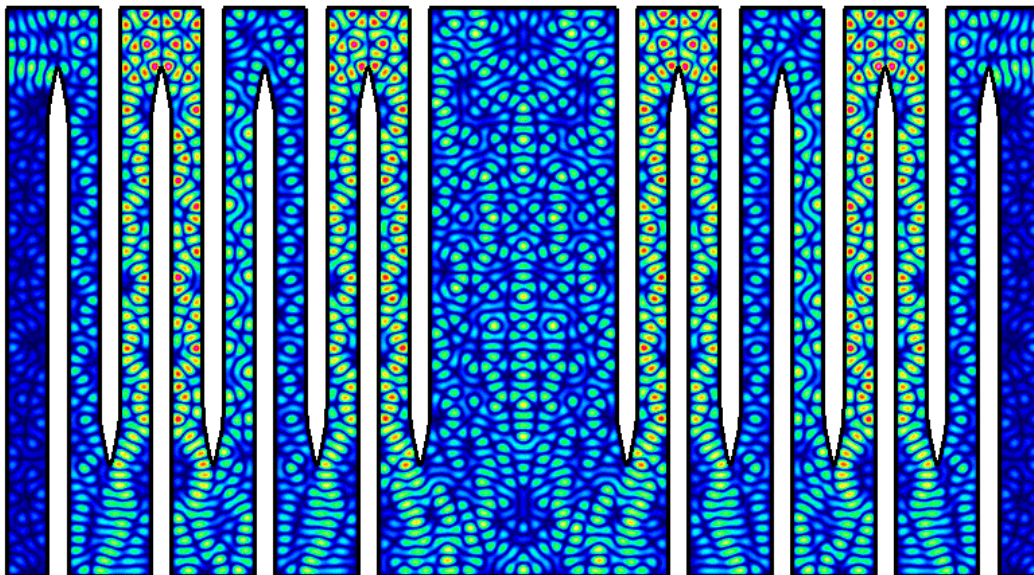


# Waves 2026 - Program

## The 17th International Conference on Mathematical and Numerical Aspects of Wave Propagation

John Molson school of business Concordia University in Montreal

Canada, June 22-26 2026



**Monday - Tuesday**

**Registration open (08:00-)**

# Monday

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Welcome · 08:30-09:00

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## Plenary: Guillaume Bal

09:00-10:00 MB-1.210 · Session Chair: Chrysoula Tsogka

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Coffee 10:00-10:30

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## Block A · 10:30–12:30

**MB-1.210 — Boundary Element Methods & Integral Equations #1 Session - Chair: Marc Bonnet**

Time	Title	Authors
10:30	Efficient evaluation of the two-layered acoustic Green's function	<b>Stefan A. Sauter</b> , Laura Depedrini, Benedikt Grässle, J. Markus Melenk
11:00	Fast high-order solvers for the Lippmann-Schwinger equation in piecewise-smooth heterogeneous media	<b>Thomas G. Anderson</b> , Juan Burbano-Gallegos, Luiz M. Faria, Carlos Pérez-Arancibia
11:30	A fast direct solver based on FEM-BEM coupling for time-harmonic electromagnetic scattering	<b>Johann Bourhis</b> , Emanuele Arcese, Francis Collino
12:00	Truncated kernel windowed Fourier projection: a fast algorithm for the 3D free-space wave equation	<b>Nour G. Al Hassanieh</b> , Alex H. Barnett, Leslie Greengard

**MB-9.A — Helmholtz #1 Session - Chair: Joseph Coyle**

Time	Title	Authors
10:30	Convergence of the WaveHoltz iteration on $\mathbb{R}^d$	<b>Elliot Backman</b> , Olof Runborg
11:00	Effective models for Helmholtz's equation in a corner with a thin layer	<b>Cédric Baudet</b> , Sonia Fliss, Patrick Joly
11:30	The largest ever Helmholtz simulations in inhomogeneous media	<b>Max Cubillos</b> , Edwin Jimenez
12:00	Nonlinear acoustic inverse problem with cross-correlation data for passive imaging	<b>Jean Dutheil</b> , Florian Faucher

**MB-9.B – Acoustic Wave Propagation & Scattering #1 Session - Chair: Christophe Hazard**

Time	Title	Authors
10:30	Time dependent acoustic scattering from penetrable objects with nonlinearities	<b>Paschalis Angelidis</b> , Alexander Rieder
11:00	Analysis of the geometric spectral properties of electromagnetic waveguides	Philippe Briet, <b>Maxence Cassier</b> , Thomas Ourmières-Bonafos, Michele Zaccaron
11:30	Rendering disordered waveguides transparent to waves	<b>Matthieu Davy</b> , Isam Ben Soltane, Daniel Lenz, Stefan Rotter
12:00	Spectral properties of a kinetic equation coupled with the linear wave system	<b>Bruno Després</b>

**MB-9.C – Inverse Problems & Imaging #1 - Session Chair: Shixu Meng**

Time	Title	Authors
10:30	Recovery of acoustic properties in the Westervelt equation using high-frequency large-amplitude waves	<b>Sebastian Acosta</b> , Benjamin Palacios
11:00	A neural operator framework for solving inverse scattering problems	<b>Victor Chenu</b> , Housseem Haddar, Hadrien Montanelli
11:30	A deep learning approach for optical cloaking device design	<b>Elsie Cortes</b> , Camille Carvalho, Symeon Papadimitropoulos, Chrysoula Tsogka
12:00	A Factorization Method Approach to the Biharmonic Transmission Problem in Absorbing Media	<b>General Ozochiawaeze</b> , Rafael Ceja Ayala, Isaac Harris

**MB-9.D – Absorbing Boundary Conditions #1 - Session Chair: Maryna Kachanovska**

Time	Title	Authors
10:30	Revisiting Artificial Boundary Conditions Through Modal Expansion	<b>Hélène Barucq</b> , Florian Faucher, Olivier Lafitte, Ha Pham
11:00	Transparent boundary conditions in heterogeneous electromagnetic waveguides	<b>Anne-Sophie Bonnet-Ben Dhia</b> , Lucas Chesnel, Sonia Fliss, Eric Lunéville, Aurélien Parigaux
11:30	Domain Truncation for Quasilinear Wave Equations	<b>Thomas Hagstrom</b>
12:00	Finite element discretizations of hyperboloidal compactification layers for unbounded time-domain wave problems	<b>Markus Wess</b> , Anil Zenginoğlu

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**Lunch 12:30-14:00**

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## Plenary: Christophe Hazard

14:00-15:00 MB-1.210 · Session Chair: Anne-Sophie Bonnet-Ben Dhia

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## Coffee 15:00-15:30

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## Block B · 15:30–17:30

**MB-1.210 – Elastic Waves & Elastodynamics #1 - Session Chair: Stephanie Chaillat**

Time	Title	Authors
15:30	Mathematical and numerical modelling of elastic wave propagation with smooth nonlinear contact conditions	<b>Alexandre Imperiale</b> , Bruno Lombard, Sébastien Imperiale
16:00	Green tensor for strain gradient elastodynamics	<b>Marc Bonnet</b>
16:30	Reconstruction of the Shear Modulus in Nearly Incompressible Media via Adaptive Spectral Inversion	<b>Nagham Chibli</b> , Martin Genet, Sébastien Imperiale
17:00	Spectral properties of waves in high-contrast media	Yuri A. Godin, Leonid Korolov, <b>Boris Vainberg</b>

**MB-9.A – Electromagnetic Waves & Maxwell Equations #1 - Session Chair: Carlos Perez-Arancibia**

Time	Title	Authors
15:30	Optimization of EM-Chiral Scatterers	<b>Tilo Arens</b> , Marvin Knöller, Raphael Schurr
16:00	Domain derivative based shape reconstruction for time-dependent Maxwell's equations	<b>Marvin Knöller</b>
16:30	Towards fast conservative methods for the numerical resolution of Maxwell's equations in multipatch domains	<b>Ángel Pita-da-Veiga</b> , Jerónimo Rodríguez, Rafael Vázquez
17:00	The Hermite-Taylor Discrete Correction Function Method for Surface-Driven Electromagnetic Problems	<b>Yann-Meing Law</b>

**MB-9.B – Helioseismology & Astrophysics Session Chair: Raphael Terrine**

Time	Title	Authors
15:30	Reconstructing inertial-mode flows from the correlation function of acoustic modes	Hélène Barucq, Florian Faucher, <b>Damien Fournier</b> , Laurent Gizon, Zhi-Chao Liang, Ha Pham
16:00	Uniqueness results in time-harmonic passive imaging with applications to helioseismology	<b>Thorsten Hohage</b> , Björn Müller
16:30	Asymptotic Solutions to the Radial Wave Equation in Kerr Spacetime	<b>John Levis</b> , Thomas Hagstrom
17:00	Stability of a passive inverse parameter problem with applications to helioseismology	<b>Björn Müller</b> , Thorsten Hohage

**MB-9.C – Nonlinear Waves, Solitons & Dynamical Systems - Session Chair: Behrooz Yousefzadeh**

Time	Title	Authors
15:30	Localized Time-Periodic Patterns in a 1D Lattice	<b>Jason J. Bramburger</b> , Eric Berglund, Björn Sandstede
16:00	Bistability of travelling waves and mesa states in a mass-conserved reaction-diffusion system	<b>Jack M. Hughes</b> , Saar O. Modai, Leah Edelstein-Keshet, Arik Yochelis
16:30	Leafnet algorithm for N-dimensional nonlinear hyperbolic systems	<b>Emmanuel Lorin</b> , Arian Novruzi
17:00	Exploring Explicit Formulas and Multi-solitons for Integrable Systems	<b>Ruoci Sun</b>

**MB-9.D – Water Waves & Wave-Structure Interaction #1 - Session Chair: Olivier Lafitte**

Time	Title	Authors
15:30	Continuous and discrete stability of dispersive perturbation of hyperbolic initial boundary value problems	<b>Geoffrey Beck</b> , Nicolas Crouseilles, Ludovic Martaud
16:00	The return to the equilibrium of a floating cylinder in the Boussinesq regime	Geoffrey Beck, <b>Ewan Contentin</b> , Ludovic Martaud
16:30	A Theory for Three-Dimensional Wave Breaking Based on Crest Instability of Short-Crested Stokes Waves	<b>Frédéric Dias</b> , Ayoub Mansar, Matt Turner, Tom Bridges
17:00	Wave-Based Stability Analysis of Couette and Gravity-Driven Bilayer Film Flows	<b>M. Al Ahmadi Hammou</b> , M. Scholle, P. H. Gaskell

## Tuesday

### Plenary: Barbara Romanowicz

09:00-10:00 MB-1.210 · Session Chair: Serge Prudhomme

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### Coffee 10:00-10:30

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### Block A · 10:30–12:30

MB-1.210 — Helmholtz #2 - Session Chair: Thomas Anderson

Time	Title	Authors
10:30	The Helmholtz boundary element method suffers from the pollution effect	<b>María Ignacia Fierro</b> , Jeffrey Galkowski, Manas Rachh, Euan Spence
11:00	A Trefftz Continuous Galerkin method for Helmholtz problems	<b>Nicola Galante</b> , Bruno Després, Emile Parolin
11:30	High-order frequency derivatives of Helmholtz BIE solutions: fast computation and applications	<b>Hiroshi Isakari</b>
12:00	A Helmholtz Solver for Open Domains with Complex Geometry using WaveHoltz and Overset Grids	Jeffrey Banks, William Henshaw, <b>Ngan Le</b> , Donald Schwendeman

MB-9.A — Boundary Element Methods & Integral Equations #2 - Session Chair: Stefan Sauter

Time	Title	Authors
10:30	Efficient 3D elastodynamic multiple scattering using the Method of Reflections	<b>Stéphanie Chaillat</b> , Marion Darbas
11:00	Fast Singular-Kernel Convolution on General Non-Smooth Domains via Truncated Fourier Filtering	<b>Jinghao Cao</b> , Oscar Bruno
11:30	Convergence analysis for Numerical Steepest Descent contour deformation methods	<b>Thomas Caussade</b> , David P. Hewett
12:00	Space-time BEM based coupling strategies for the analysis of infrastructures solicited by seismic waves	<b>Giulia Di Credico</b> , Alessandra Aimi, Heiko Gimperlein, Chiara Guardasoni, Francesco Freddi, Roberto Valentino

**MB-9.B – Acoustic Wave Propagation & Scattering #2 - Session Chair: Frederic Dias**

Time	Title	Authors
10:30	Scattering problems in junctions of stratified media	Sarah Al Humaikani, Anne-Sophie Bonnet-Ben Dhia, <b>Sonia Fliss</b>
11:00	Spectral analysis of a closed perturbed waveguide filled with a hyperbolic medium	Maryna Kachanovska, <b>Dylan Machado</b>
11:30	Exceptional Points and Defective Resonances in a Sound-Soft Scattering Problem	<b>Kei Matsushima</b>
12:00	Flow Rate Measurement in a Heterogeneous Fluid with Acoustic Waves	<b>Alexander McSweeney-Davis</b> , Lorenzo Audibert, Housseem Haddar

**MB-9.C – Inverse Problems & Imaging #2 - Session Chair: Max Cubillos**

Time	Title	Authors
10:30	Explicit inverse scattering for the one-dimensional Schrödinger equation	<b>Peter Gibson</b>
11:00	On the role of regularisation parameters in Adaptive Eigenspace Inversion	<b>Marie Graff</b> , Nasrin Nikbakht, Melissa Tacy
11:30	The Inverse Elasto-Acoustic Problem	<b>Patrick Grice</b> , Yassine Boubendir, Zoi-Heleni Michalopoulou
12:00	Adapting Full-Waveform Inversion for Subsurface CO <sub>2</sub> Sequestration	<b>Alison Malcolm</b> , Vahid Entezaar-Saadat, Xingda Jiang, Abolfazl Khan Mohammadi, Colin Farquharson

**MB-9.D – Absorbing Boundary Conditions #2 - Session chair: Thorsten Hohage**

Time	Title	Authors
10:30	Transparent boundary conditions for the stellar oscillation equations without Cowling approximation	<b>Janosch Preuss</b> , H�el�ene Barucq, Florian Faucher, Ha Pham, S�ebastien Tordeux
11:00	Interfacial Radiation Boundary Conditions for Topologically Protected Edge Modes	<b>Mason McCallum</b> , Thomas Hagstrom
11:30	Complex scaling for the homogeneous wave equation with scaling direction non-normal to the transparent boundary	<b>Lothar Nannen</b> , Constantin Pierer, Markus Wess
12:00	A potential theory on weighted graphs	<b>Fernando Guevara Vasquez</b> , Trent DeGiovanni

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## Lunch 12:30-14:00

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## Plenary: Isaac Harris

14:00-15:00 MB-1.210 · Session Chair: Behrooz Yousefzadeh

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## Coffee 15:00-15:30

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## Tue · Block B · 15:30–17:30

**MB-1.210 – Elastic Waves & Elastodynamics #2 - Session Chair: Barbara Romanowicz**

Time	Title	Authors
15:30	Comparison of numerical coupling strategies in time-harmonic elasto-acoustic simulations	<b>Pierre Dubois</b> , H�el�ene Barucq, Florian Faucher, Isabelle Rami�ere, Rapha�el Prat
16:00	A well-posed effective strain-gradient model for elastic waves in arbitrary periodic media	<b>Nicolas Auffray</b> , Marc Bonnet, R�emi Cornaggia, Giuseppe Rosi
16:30	Mathematical models for wave propagation phenomena generated by landslides	Juliette Dubois, Natacha Guegan-Fau, <b>S�ebastien Imperiale</b> , Anne Mangeney, Jacques Sainte-Marie
17:00	High-order Simulation of Elasto-Acoustic Wave Propagation Using Hybrid Nonconforming Methods (HHO)	<b>Romain Mottier</b> , Alexandre Ern, Laurent Guillot

**MB-9.A – Electromagnetic Waves & Maxwell Equations #2 - Session Chair: Tilo Arens**

Time	Title	Authors
15:30	A Stochastic Boundary Element Method for Electromagnetic Scattering in Random Media	<b>Titouan Marquaille</b> , Thomas Bonnafont, Arnaud Coatanhay
16:00	A Discontinuous Petrov–Galerkin Framework for Time-Harmonic Maxwell Equations in Microwave-Heated Flows	<b>Oreste Marquis</b> , Bruno Blais, Matthias Maier
16:30	Computational spectral geometry for the Maxwell cavity problem	<b>Nilima Nigam</b> , Kewen Bu, Jayda Grant, Rodrigo Stehling
17:00	A Hermite-Taylor Compact Discrete Correction Function Method for Maxwell's Equations	<b>Seth Malonson</b> , Yann-Meing Law, Jean-Christophe Nave

**MB-9.C – Stochastic Propagation - Session Chair: Emmanuel Lorin**

Time	Title	Authors
15:30	Effective attenuation and Gaussian statistics of the speckle for the paraxial wave equation	<b>Christophe Gomez</b> , Olivier Pinaud
16:00	Multiscale analysis of wave propagation in the branched flow regime	Josselin Garnier, <b>Natacha Guegan-Fau</b> , Sébastien Imperiale
16:30	Optical wave reconstruction in highly turbulent random media	<b>Kevin Luna</b> , Max Cubillos
17:00	Destabilization of traveling waves in a nonlinear lattice with nonreciprocal coupling	Andrus Giraldo, Stefan Ruschel, <b>Behrooz Yousefzadeh</b>

**MB-9.B – Periodic Media, Metamaterials & Homogenization #1 - Session Chair: Olof Runborg**

Time	Title	Authors
15:30	Diffraction by a rough thin layer on an arbitrary shaped object: the periodic and random cases	<b>Pierre Boulogne</b> , Sonia Fliss, Laure Giovangigli, Justine Labat
16:00	High-order stochastic homogenization of the Helmholtz transmission problem	<b>Laure Giovangigli</b>
16:30	Wave propagation and gaps in three-dimensional periodic media	<b>Yuri Godin</b> , Boris Vainberg
17:00	On the surface Bloch waves in truncated periodic media	<b>Bojan B Guzina</b> , Shixu Meng, Prasanna Salasiya, Long Nguyen

**MB-9.D – Time-Domain Methods & A Posteriori Estimation #1 - Session Chair: Marcus Grote**

Time	Title	Authors
15:30	A note on the discrete Unmapped Tent Pitching for the heterogeneous wave equation	<b>Marcella Bonazzoli</b> , Gabriele Ciaramella, Ilario Mazzieri
16:00	Decoupling Wave-Heat-Type Problems	<b>Julian Dörner</b> , Benjamin Dörich
16:30	Mixed Precision Implicit Runge–Kutta and Explicit Two-Derivative Runge–Kutta Methods	<b>Sigal Gottlieb</b> , Zachary J. Grant, César Herrera
17:00	Recovery-Based Error Indicator for Finite Difference Methods	<b>Ferhat Sindy</b> , Annalisa Buffa, Marco Picasso

**Reception - 17:30-20:30**

# Wednesday

Social day

## Thursday

### Plenary: Andrea Moiola

09:00-10:00 MB-1.210 · Session Chair Lise-Marie Imbert-Gerard

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### Coffee 10:00-10:30

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### Thu · Block A · 10:30–12:30

MB-1.210 – Helmholtz #3 - Session Chair: Sonia Fliss

Time	Title	Authors
10:30	The hp-FEM Does Not Suffer from the Pollution Effect When Applied to the Helmholtz Equation with Piecewise Gevrey Coefficients	Jeffrey Galkowski, <b>Mostafa Meliani</b> , Euan Spence
11:00	High-order Wavelet Galerkin Methods for Scattering Problems	<b>Michelle Michelle</b> , Bin Han
11:30	A HDG method with transmission variables for time-harmonic wave propagation problems	<b>Simone Pescuma</b> , Gwénaél Gabard, Théophile Chaumont-Frelet, Axel Modave
12:00	Scalable WaveHoltz in MFEM	<b>Amit Rotem</b> , Daniel Appelö, Will Pazner

MB-9.A – Boundary Element Methods & Integral Equations #3 - Session Chair: Johannes Tausch

Time	Title	Authors
10:30	A posteriori estimates and adaptive boundary elements for the wave equation	<b>Heiko Gimperlein</b>
11:00	Towards kernel-free boundary integral methods for variable coefficients	<b>Benedikt Gräßle</b> , Stefan A. Sauter
11:30	Geometry-conforming Galerkin methods for the Lippmann-Schwinger equation on fractal domains	<b>David P. Hewett</b> , Joshua Bannister, Andrew Gibbs
12:00	An Unconditionally Stable Energetic Galerkin Scheme for Acoustic Penetrable Objects Using Time-Domain Surface Integral Equations	<b>Junze Shao</b> , Rui Chen, Hakan Bagci

**MB-9.B – Acoustic Wave Propagation & Scattering #3 - Session Chair: Lothar Nannen**

Time	Title	Authors
10:30	Imaging in two-dimensional waveguides with complex geometry	<b>Gregory Mwamba</b> , Chrysoula Tsogka, Symeon Papadimitropoulos
11:00	The cut-off resolvent can grow arbitrarily fast in obstacle scattering	<b>Siavash Sadeghi</b> , Simon N. Chandler-Wilde
11:30	Application of the multivariate Loewner Framework to the modelling of acoustic propagation in rigid-frame porous materials	<b>Lucie Schwoebel</b> , Charles Poussot-Vassal, Denis Matignon, Rémi Roncen, Estelle Piot, Pierre Vuillemin
12:00	Optimization-based transionospheric SAR autofocus with screen projection precursor	Mikhail Gilman, <b>Semyon Tsynkov</b>

**MB-9.C – Inverse Problems & Imaging #3 - Session Chair: Isaac Harris**

Time	Title	Authors
10:30	Transmission eigenvalues for biharmonic plate scattering: existence, discreteness, far-field recovery, and numerical computation	<b>Andreas Kleefeld</b> , Isaac Harris, Heejin Lee
11:00	Characterizing the Imaging Indicator of the Linear Sampling Method for the Inverse Medium Scattering Problem	Lorenzo Audibert, <b>Shixu Meng</b>
11:30	Spectrally characterizing subsurface targets with GPR-SAR	Arnold D. Kim, Symeon Papadimitropoulos, <b>Joseph Simpson</b> , Chrysoula Tsogka
12:00	Identifying defective units in infinite periodic arrays of point sources	<b>Dinh-Liem Nguyen</b> , Nhung H. Nguyen, Thi-Phong Nguyen

**MB-9.D – Trefftz & Plane Wave Methods - Session Chair: Bruno Despres**

Time	Title	Authors
10:30	A Model Reduction Approach for Wave Phenomena using dG-Trefftz Methods	<b>Tobias Born</b> , Karsten Urban
11:00	Preconditioning for the DG plane wave method	<b>Joseph Coyle</b> , Nilima Nigam
11:30	Polynomial quasi-Trefftz spaces for scalar linear equations	<b>Lise-Marie Imbert-Gérard</b>
12:00	Quasi-Trefftz spaces for time-harmonic Maxwell's equations	<b>Ilaria Fontana</b> , Lise-Marie Imbert-Gérard

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**Lunch 12:30-14:00**


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## Plenary: Lilia Krivodonova

14:00 – 15:00 MB-1.210 · Session Chair: Tom Hagstrom

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## Coffee 14:00-15:30

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## Thu · Block B · 15:30 – 17:30

MB-1.210 – Periodic Media, Metamaterials & Homogenization #2 - Session Chair: Sebastien

### Imperiale

Time	Title	Authors
15:30	Analysis of Wave Propagation in Time-Dependent Media	<b>Patrick Joly</b> , Marie Touboul
16:00	Homogenization of wave equations and dispersive profiles for ring solutions	<b>Ben Schweizer</b> , Grégoire Allaire, Agnes Lamacz
16:30	Radiation Boundary Conditions with Rational Function Approximations	<b>Steve Li</b> , Thomas Hagstrom
17:00	Error Estimation for a Homogenized Model of a Space-Time Modulated Metamaterial	<b>Jean-Francois Mercier</b> , Marie Touboul

MB-9.A – Time-Domain Methods & A Posteriori Estimation #2 - Session Chair: Daniel Appelo

Time	Title	Authors
15:30	Adaptive FEM with explicit time integration for the wave equation	<b>Marcus J. Grote</b> , Omar Lakkis, Carina S. Santos
16:00	High-order contour-integral methods for strongly continuous semigroups	<b>Andrew Horning</b> , Adam R. Gerlach
16:30	Reliable and locally space-time efficient a posteriori estimates for the transient wave equation	<b>Nicolas Hugot</b> , Alexandre Imperiale, Martin Vohralík
17:00	A parallel space-time p-adaptive discontinuous Galerkin method for nonlinear acoustics	<b>Pascal Lehner</b> , Christian Wieners, Danielle Corallo

**MB-9.B – Water Waves & Wave-Structure Interaction #2 - Session Chair: Helene Barucq**

Time	Title	Authors
15:30	Waves and transport in a circular water wave resonator: experiments and simulations	<b>Uwe Harlander</b> , Franz-Theo Schön, Ion D. Borcia, Rodica Borcia, Seymen Ilke Kaykanat, Michael Bestehorn
16:00	Propagation of the heave in a harbor: geometrical optics approach	<b>Olivier Lafitte</b> , Emmanuel Audusse, Catherine Sulem
16:30	Interactions between water waves and floating structures, a numerical method	Geoffrey Beck, <b>Alan Riquier</b>
17:00	Viscoelastic gravity wave force on a circular cylinder in open channel	<b>Boyuan Yu</b> , Vincent H. Chu

**MB-9.C – Helmholtz / Trefftz / BEM Solver Extensions - Session Chair: Andrea Moiola**

Time	Title	Authors
15:30	Infinity as a finite boundary for Helmholtz equations	<b>Anil Zenginoğlu</b> , Markus Wess
16:00	Quasi-Trefftz Discontinuous Galerkin Method for the Convected Helmholtz Equation with Smooth Coefficients	<b>Andréa Lagardère</b> , Lise-Marie Imbert-Gerard, Guillaume Sylvand, Sébastien Tordeux
16:30	Variational Quasi-Trefftz Method for Time-Harmonic First-Order Wave Propagation Systems	Matthias Rivet, Sébastien Pernet, <b>Sébastien Tordeux</b>
17:00	Fast 3D Time Domain Boundary Element Approach for Elastodynamics based on Multivariate Adaptive Cross Approximation	Vibudha Lakshmi Keshava, <b>Martin Schanz</b>

**MB-9.D – Electromagnetic Waves & Maxwell Equations #3 - Session Chair: Daniel Appelo**

Time	Title	Authors
15:30	Broken-FEEC on multipatch domains with local refinements	<b>Frederik Schnack</b> , Martin Campos Pinto
16:00	Topological solutions and accelerated waves in electromagnetic theory	Radmila Sazdanovic, Paul Spears, <b>Semyon Tsynkov</b>
16:30	Energy-preserving simulation of electromagnetic waves at oblique incidence using Split-Field FETD method	<b>Valentin Wasquel</b> , Paula Aguilera, Michel Fournié, Denis Matignon
17:00	Derivation of polarization dependent interface conditions for Maxwell's equations	<b>David Wiedemann</b> , Ben Schweizer, Bérangère Delourme

**Conference Banquet 18:30 -**

## Friday

### Plenary: Leonardo Zepeda-Núñez

09:00-10:00 MB-1.210 · Session Chair: Daniel Appelo

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### Coffee 10:00-10:30

### Fri · Block A · 10:30 – 12:30

MB-1.210 – Integral / DD / ABC - Session Chair: Nilima Nigam

Time	Title	Authors
10:30	Quadrature for Space-Time Galerkin BEM of the Wave Equation	<b>Johannes Tausch</b>
11:00	Transcranial Ultrasound Simulations using Volume-Surface Integral Equations	<b>Elwin van 't Wout</b> , Alberto Almuna-Morales, Danilo Aballay, Ignacio Labarca-Figueroa, Pierre Gélât, Reza Haqshenas
11:30	Optimized Schwarz methods in time for discrete transport control	Duc Quang Bui, Bérangère Delourme, Laurence Halpern, <b>Felix Kwok</b>
12:00	A Multi-domain/Multi-method Preconditioner for the Electric Field Integral Equation	<b>Timothée Galtier</b> , David Levadoux

MB-9.A – Boundary Element Methods & Integral Equations #4 - Session Chair: David Hewitt

Time	Title	Authors
10:30	Maxwell à la Helmholtz: Frequency-Robust Direct Boundary Integral Equations for 3D PEC Scattering	<b>Carlos Pérez-Arancibia</b> , Catalin Turc
11:00	Fast assembly of H-matrix and FMM-based boundary operators for time-harmonic Maxwell equations	<b>Clément Aumonier</b> , David Levadoux
11:30	High-order Nyström method for scattering by penetrable inhomogeneous media with discontinuous refractive index	<b>Ambuj Pandey</b> , Krishna Yamanappa Poojara
12:00	Model reduction for a wave propagation problem in a slotted structure	<b>Augustin Leclerc</b> , Pierre Benjamin, Luc Giraud, Sofiane Haddad, Paul Mycek, Guillaume Sylvand, Isabelle Terrasse

**MB-9.B – Acoustic Wave Propagation & Scattering #4 - Session Chair: Lilia Krivodonova**

Time	Title	Authors
10:30	Passivity enforcing multipole based method for time domain modelling of acoustic wave propagation in rigid frame porous media	<b>Lucie Schwoebel</b> , Denis Matignon, Remi Roncen, Estelle Piot
11:00	Quantitative ultrasound imaging in layered media	Josselin Garnier, Laure Giovangigli, Pierre Millien, <b>Sofia Suarez Casabiell</b>
11:30	Addressing Seismic Acquisition Repeatability in CO <sub>2</sub> Storage Monitoring Using Machine Learning	<b>Manon Sarrouilhe</b> , Mauricio Araya-Polo, H�el�ene Barucq, Henri Calandra, Stefano Frambati
12:00	Towards a Scale-Bridging Time Discretization Scheme for the Acoustic Wave Equation	<b>Dustin M�uhlh�user</b> , Roland Maier

**MB-9.C – Inverse Problems & Imaging #4 - Session Chair: Andreas Kleefeld**

Time	Title	Authors
10:30	Some approaches for the field extrapolation in the context of inverse magnetisation problem	<b>Dmitry Ponomarev</b>
11:00	A tsunami inverse problem in the time domain: numerical analysis of an optimal control approach	Laurent Bourgeois, Philippe Moireau, <b>Rapha�el Terrine</b>
11:30	Inversion-free binary segmentation for computed tomography and inverse scattering	<b>Jacob D. Rezac</b> , Zachary J. Grey, Newell H. Moser, Jason P. Killgore
12:00	Direct reconstruction for acoustic inverse Born scattering	<b>Lisa Sch�atzle</b> , Nuutti Hyv�onen

**MB-9.D – Elastic Waves & Elastodynamics #3 - Session Chair: Semyon Tsynkov**

Time	Title	Authors
10:30	Boundary determination in anisotropic elasticity	Joonas Ilmavirta, Mikko Salo, <b>Hj�ordis Schl�uter</b> , Daniel Windisch
11:00	Seismic Reflection of Three-Dimensional Plane Waves in Functionally Graded Triclinic Media with Interfacial Imperfections	<b>Akanksha Srivastava</b> , Federico J Sabina
11:30	An inverse problem for estimating effective parameters in asymptotic elastodynamics with non-periodic roughness	<b>Rodrigo Zelada</b> , Alexandre Imperiale, Philippe Moireau
12:00	Exponential and harmonic regimes of anti-plane shear wave in a piezoelectric thin layer over half-space	<b>Anna Zemlyanova</b> , Gennadi Mikhasev, Arindam Nath, Jia Fei

## Lunch 12:30-14:00

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### Fri · Block B · 14:00 – 16:00

#### MB-9.A – Domain Decomposition & Preconditioning - Session Chair: Lise-Marie Imbert-Gerard

Time	Title	Authors
14:00	Substructured Optimized Schwarz Domain Decomposition Solver on Multiple GPUs for Helmholtz Problems	<b>R. Greffe</b> , A. Chabib, A. Modave, C. Geuzaine
14:30	Domain Decomposition for Elastic Waves in Spatial Networks	<b>Joseph Holten</b> , Moritz Hauck
15:00	A Flux-Based Domain Decomposition Method for Time-Harmonic Wave Problems	<b>Nawfel Benatia</b> , Christophe Geuzaine
15:30	Accelerating WaveHoltz with Deflation	<b>Daniel Appelo</b> , William Henshaw

#### MB-9.B – Full Waveform Inversion & Geophysical Applications - Session Chair: Allison Malcolm

Time	Title	Authors
14:00	Full Waveform Inversion Using Second Order Optimizers and Domain Decomposition with Spectral Coarse Space	<b>Boris Martin</b> , Christophe Geuzaine
14:30	An efficient numerical solver for non-periodic scattering problems in locally perturbed periodic structures	<b>Nasim Shafieeabyaneh</b> , Tilo Arens, Ruming Zhang
15:00	A Robust Model Order Reduction Method to Accelerate Full Waveform Inversion via Fréchet Derivatives	<b>Julien Besset</b> , H�el�ene Barucq, Victor Martins Gomes

**MB-9.C – Plasma & Mathematical Foundations - Session Chair: Yann-Meing Law**

Time	Title	Authors
14:00	Finite Element Formulation with Integral Dielectric Kernel for ICRH Plasma Heating on Non-Field-Aligned Meshes	<b>Jules Zaleski</b> , Bernard Reman, Philippe Lamalle, Christophe Geuzaine
14:30	Geometry-dependent well-posedness and finite elements for shear Alfvén waves	<b>M. Renoldner</b> , A. Buffa, T. Miehl, M. Picasso
15:00	A discontinuous Galerkin approach for the radiative transfer approximation of high-frequency vibrational energy flow on curved surfaces	<b>Robert J. Lockett</b> , David J. Chappell
15:30	Analysis and Simulation of 2D Maxwell's equations in Cold Plasma	<b>Manaswinee Bezbaruah<sup>1</sup></b> , Patrick Ciarlet, Maryna Kachanovska

**MB-9.D – Time Integration & Nonlinear Waves - Session Chair: Tom Hagstrom**

Time	Title	Authors
14:00	A Posteriori Estimates for Space Discretizations of the Wave Equation with Dynamic Meshes	Théophile Chaumont-Frelet, <b>Sumit Mahajan</b> , Martin Vohralík
14:30	Preserving multiple conserved quantities for the Korteweg-de Vries equation	Andy T.S. Wan, <b>Tareq Uz Zaman</b>
15:00	Nonlinear Acoustic Model Equations resulting from Non-Relativistic and Relativistic Lagrangian Pairing	<b>Markus Scholle</b> , Philip H. Gaskell, Meriem Al Ahmadi Hammou
15:30	A tsunami inverse problem in the time domain: numerical analysis of an optimal control approach	Laurent Bourgeois, <b>Philippe Moireau</b> , Raphaël Terrine