Numerical boundary conditions, analysis and methods

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The simulation of propagative phenomena occurring in hyperbolic or dispersive models requires a particular care in order to control and/or reduce the influence of the numerical boundary treatment on the solution. Several approaches may be considered, in particular to provide the selected numerical boundary condition with convenient stability and accuracy properties. This mini-symposium will present some recent advances on this subject, among others, thanks to energy methods, summation-by-parts techniques, Laplace transforms, multidimensional problems.

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Liste des orateurs

- Thị Hoài Thuong Nguyen (IRMAR, Université de Rennes 1), Stability of numerical schemes for the hyperbolic relaxation system with boundary
- Tomas Lundquist (IMT, Toulouse 3, ANR NABUCO), Energy methods in continuous and discrete time
- Maria Kazakova (ENSTA, ParisTech) Discrete transparent boundary conditions for the linearized Green-Naghdi model
- Antoine Benoît (LMPA, Université du Littoral Côte dOpale) Stability of finite difference schemes for hyperbolic systems in a segment and/or a corner

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