

סמינר מדעי היסוד
יום שני 6.5.2013 בשעה 14:00-15:00 בפיקוס 207

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Discrimination between one and two nearby inclusions with Time-Reversed Absorbing Conditions (TRAC)

תקציר

The time-reversed absorbing conditions (TRAC) method introduced in a (Inverse Problems, Vol. 27, 2011) enables one to “recreate the past” without knowing the source which has emitted the signals that are back-propagated. It has been applied to inverse problems for the determination of the location and volume of an unknown inclusion from boundary measurements, and can also be applied for the reduction of the computational domain size. The method does not rely on any a priori knowledge of the physical properties of the inclusion.

We propose an extension of the method applied to the discrimination between a single and two nearby inclusions. Numerical results illustrate the possibilities of the method, which is in particular rather insensitive to noise in the data.

This work was made in collaboration with Frederic Nataf (UPMC Universite Paris-06, Laboratoire J.L. Lions, France) and Marie Kray (Mathematisches Institut, Universitat Basel, Switzerland).

מתאמים : פרופ' י. גולדמן, ד"ר ש. מיברג, פרופ' י. סטאנצ'סקו
ופרופ' ד. פישלוב

אפקה - המכללה האקדמית להנדסה בתל-אביב, מבצע קדש 38, תל-אביב