

סמינר מדעי היסוד

יום רביעי 24.11.2010 בשעה 14:00-15:00 בפיקוס 208

פרופ' יעקב יעקובוב
אוניברסיטת תל-אביב

**Completeness of a System of Root Functions
for Various Boundary Value Problems**

תקציר

In a Hilbert space H , we consider boundary value problems for second order elliptic differential-operator equations with a spectral parameter when boundary conditions also contain the spectral parameter or one of the boundary conditions, in the principal part, contains a linear unbounded operator in H . A theorem of a unique solvability for such problems is proved and an appropriate estimate of the solution with respect to the space variable and the spectral parameter is obtained. Moreover, discreteness of the spectrum and completeness of a system of root functions corresponding to the homogeneous problems are established. We are planning, in the talk, to concentrate on applications of obtained abstract results to nonlocal boundary value problems for elliptic partial differential equations with a parameter in non-smooth domains.

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

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