The Oliver Club

www.math.cornell.edu/~oliver/

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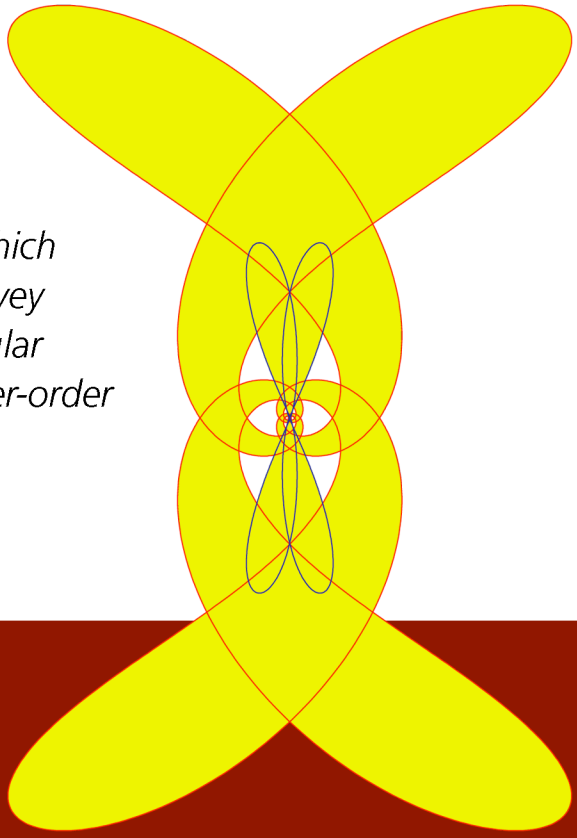
Boundary-Value Problems for Higher-Order Elliptic Operators

One of the most effective methods for solving boundary-value problems for basic equations of mathematical physics in a domain is the method of layer potentials. Its essence is to reduce the entire problem to an integral equation on the boundary of the domain, which is then solved using Fredholm theory.

Until now, this approach has been primarily used in connection with second-order operators for which a sophisticated and far-reaching theory exists. This stands in sharp contrast with the case of higher-order operators (arising for instance in plate elasticity) for which very little is known in this regard. In this talk I will survey recent results aimed at extending the method of singular integral operators (of layer potential type) to the higher-order case.



Thursday, October 30, 2008
at 4:25 PM in 406 Malott Hall

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).