

Ingo Lieb

### On the Compactness of the Neumann Operator

It is well known that subelliptic estimates for the Cauchy-Riemann equations imply compactness of the corresponding Neumann operator. In recent years the question of compactness of the Neumann operator has also been studied in cases where subelliptic estimates are not easily available. The most important results in that field are mainly due to E. Straube and his friends: they invoke the complex geometry of the boundary. In this talk I will only point out a fact which turns out to be useful in the case of non-smooth boundaries: the existence of compact solution operators to the Cauchy-Riemann equations implies compactness of the Neumann operator; even a compact "approximate" solution operator suffices (Hefer/Lieb).