Minisymposium 17 - Globale Analysis

A K-theoretic proof of Boutet de Monvel's index theorem for boundary value problems

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In 1971, L. Boutet de Monvel introduced an operator algebra which contains both the classical boundary value problems and their inverses whenever these exist. As a first application he proved an index theorem analogous to that of Atiyah and Singer.

Boutet de Monvel's algebra has found a wide range of applications both in pure and applied mathematics. In this talk, I would like to sketch the basic ideas behind this algebra and to present a new and much simpler proof of Boutet de Monvel's index theorem.