

Commutators on the power series spaces

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Session: 17. Functional Analysis: relations to Complex Analysis and PDE

A commutator of a pair of elements A and B in the algebra $\mathcal{L}(X)$ of linear, continuous operators on a locally convex space X is given by $[A, B] := AB - BA$. The natural question is: for a given space X which operators in $\mathcal{L}(X)$ are commutators? We indicate some classes of Fréchet spaces on which *every* operator is a commutator. In particular, we show that on the space of holomorphic functions on the unit polydisc, entire functions of several variables, smooth functions on the compact smooth manifolds or continuous functions on the real line every operator is a commutator. We also show limits of the applicability of our methods.