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## **Abstract**

### Uncertainty principles generated by Lie-groups

Abstract: For unbounded operators  $A, B$  and  $C$  in general, the commutation relation  $[A, B] = C$  does not lead to the uncertainty relation  $\|Au\|\|Bu\| \geq \frac{1}{2}|\langle \overline{C}u, u \rangle|$ . If  $A, B$  and  $C$  are part of the generators of a unitary representation of a Lie group then the uncertainty principle above holds.