

**Characterization of the first order operators which generate  
maximal ideals in  $A_2(C)$**

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**Abstract**

We give a characterization of the first order operators

$$\alpha\partial_x + \beta\partial_y + \gamma \in A_2 = C[x, y] \langle \partial_x, \partial_y \rangle$$

which generate maximal ideals in  $A_2$ .

On the contrary, we prove that, neither in  $\hat{\mathcal{D}}_2 = \hat{\mathcal{O}}_2 \langle \partial_x, \partial_y \rangle$ ,  
where  $\hat{\mathcal{O}}_2 = C\{x, y\}$ , nor in  $\mathcal{D}_2 = \mathcal{O}_2 \langle \partial_x, \partial_y \rangle$ , where  $\mathcal{O}_2 = C\{x, y\}$ ,  
there are operators of first order generating maximal ideals.