

# SEMINÁRIO DE ANÁLISE

## Continuous solutions for divergence-type equations associated to elliptic systems of complex vector fields

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**Abstract.** In this talk, we shall discuss a characterization, obtained with T.H. Picon, of all the distributions  $F \in \mathcal{D}'(\Omega)$  for which one can locally solve by a *continuous* vector field  $v$  the divergence-type equation :

$$L_1^* v_1 + \dots + L_n^* v_n = F,$$

where  $\{L_1, \dots, L_n\}$  is an elliptic system of linearly independent vector fields with smooth complex coefficients defined on  $\Omega \subset \mathbb{R}^N$ . In case where  $(L_1, \dots, L_n)$  is the usual gradient field on  $\mathbb{R}^N$ , we recover a classical result for the divergence equation, obtained previously by T. De Pauw and W.F. Pfeffer.