

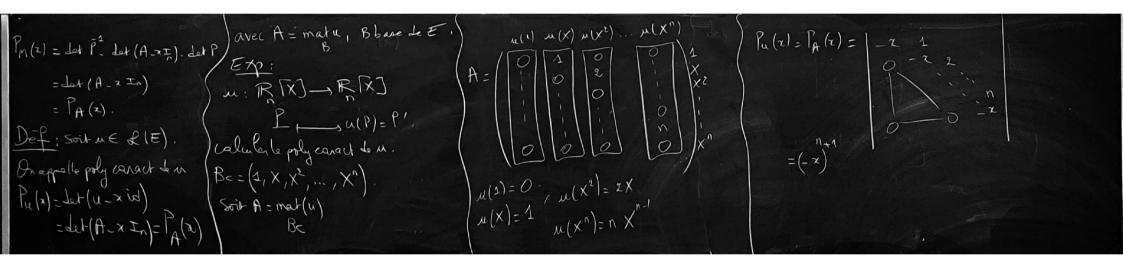
 $\frac{\log \beta_{A} = 2}{\ln A} = \frac{1}{2}$ $\frac{\log$

Alono FPE M(K) une The (x) = Let (tA- xIn) PA(2) = (-1) x + (-1). trA. x -1 + ... + det A. matrice invenible to $= \det \left(t \left(t_{A-x} I_n \right) \right)$ $= \det \left(A_{-x} I_n \right)$ Theo, FACK(K) Pap: M=P-1 A.P. 2) Une matrice et se transposée ont m poly caract. 2) Deux matrices semblables out m polycanact. Pm (x) = Let (M- x In) oeff Loninant de PA est (-1).

seff le 2-1 dans PA est (-1)-1 to A

terme CSt est der A. = PA(x).

2) Soit A, M ∈ M(K) Leux matrics. = det (P-1. A.P. x In) Dém: - det (P-2 (AP-xP) 1) Soil AEM (K) semblable.



2 Valeuro papales - Vecteus propies
Def 1: Soit u e & IE). u: E > E

(i) Un scalaire de K est dit valeur

propro de u (d v. pde u) s'il existe

Unvect a E E a to E q u(a) = 1 a

(ii) Un vect b de E est dit vecteur

propre de u (b) = 16.

on dil que best un vect propre de la associé

a' la v.pd.

(iii) foit d'une v.pde l.

Aloro le bieiv Ken (u-did) = { x EE to (u-did)(i)=0}

= { x EE to u(a) = dx }

est non réduit à { o}, il est appelé sous espa co propre

de u associé à la v.pd et noté E / lu).

Exp:

= \{zee, u(z) = dx\}

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(iv) spectre de Ast l'ens de pes 10. plu (-) Pu(-1)=0 $E \times P$: $A = \begin{pmatrix} 0 & -1 \\ 1 & 0 \end{pmatrix}$ A.X = -1 X Sp(A)= {dekteduiplea}. (ii) Un vect colonne $X \in \mathcal{M}(K)$ at Lib vectour propre)

de A 80' $X \neq 0$ et $\exists \lambda \in K$ to $\exists X = \lambda X$. (=) (-1)n+1=0 Sp(u)= 202. (iii) Soit de Kune U. p. de A Théo: lar, ple A sont la Def; Soit AEM (K) le sous exp propre de Aassoné à la r, p 1 racing de son poly canact. ki)Unscalare dek est dit vatur est Ex(A) = Ker(A-dIn) Sp(A)= } leRtplu.pda Propodo A (Av. pdo A) s'il existe Aubra ()=0. ={XEM (x) to AX= 1X unvertwolonne XEM(K), X+0 to

$$\begin{aligned} & = \sum_{i=1}^{n} \frac{1}{i} \\ & = \sum_{i=1}^{n$$

 $E_{3}(u) = ke_{3}(u - 1id)$ $E_{3}(u) = ke_{4}(u - 1id)$ $= ke_{5}(u) = ke_{4}(u)$ $= ke_{5}(u) = ke_{5}(u)$ $= ke_{5}(u) = ke_{5}(u) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z)$ $= ke_{5}(u) = ke_{5}(u) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z)$ $= ke_{5}(u) = ke_{5}(u) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z)$ $= ke_{5}(u) = ke_{5}(u) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z) = 3(x_{1}y_{1}z)$ $= ke_{5}(u) = ke_{5}(u) = 3(x_{1}y_{1}z) =$