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## Operator ASSE\_VECT\_GENE

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### 1 Goal

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To project the loadings on the basis of modal substructure.

Within the framework of a harmonic calculation using the methods of under-structuring, the operator ASSE\_VECT\_GENE carry out the projection of the loadings of the type `cham_no_DEPL_R` resulting from ASSE\_VECTEUR [U4.61.23], on the basis of modal substructure defined by DEFI\_BASE\_MODELE [U4.64.02]. The generalized vectors thus obtained are assembled starting from the definition of the generalized model resulting from DEFI\_MODELE\_GENE [U4.65.02]. The final assembled generalized vector is built on the classification of the generalized degrees of freedom established as a preliminary by the operator NUME\_DDL\_GENE [U4.65.03].

The concept result produced by this operator is of type `vect_asse_gene`.

## 2 Syntax

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```
vect_gene [vect_asse_gene] = ASSE_VECT_GENE (  
    ♦ NUME_DDL_GENE = nu_gene,                [nume_ddl_gene]  
    ♦ METHOD =/ 'CLASSICAL',                  [DEFECT]  
              / 'INITIAL',  
    # If METHODE=' CLASSIQUE':  
    ♦ CHAR_SOUS_STRUC = _F (  
        ♦ SOUS_STRUC = 'nom_sstruc',        [KN]  
        ♦ VECT_ASSE = vecas,                [cham_no_DEPL_R]  
    ),  
)
```

## 3 Operands

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### 3.1 Operand NUME\_DDL\_GENE

- ◆ NUME\_DDL\_GENE = nu\_gene

Name of the concept `nume_ddl_gene` resulting from the operator NUME\_DDL\_GENE [U4.65.03] which defines the classification of degrees of freedom to be used for the assembled generalized vector.

### 3.2 Operand METHOD

- ◇ METHOD = 'CLASSICAL', 'INITIAL'

Type of method used for the assembly of the matrices. Method 'INITIAL' allows to initialize a null vector of type `vect_asse_gene` that one can fill by methods python. This method was created for the development.

### 3.3 Keyword CHAR\_SOUS\_STRUC

- ◆ CHAR\_SOUS\_STRUC

Keyword factor allowing to define the loadings applied to the structure. The definition of the loading is done by the data of the assembled vector which is associated to him and of the name of under - structure to which it applies.

#### 3.3.1 Operand SOUS\_STRUC

- ◆ SOUS\_STRUC = 'nom\_sstruc'

Name of the substructure to which the loading is applied. It must have been as a preliminary defined by the operator DEFI\_MODELE\_GENE [U4.65.02].

#### 3.3.2 Operand VECT\_ASSE

- ◆ VECT\_ASSE = vecas

Name of the concept `cham_no_depl_r` resulting from ASSE\_VECTEUR [U4.61.23] which defines the space distribution of the loading applied to the substructure.