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NUMERICAL IMPLEMENTATION OF THE ARBITRARY CRACK FRONT FOR THREE DIMENSIONAL PROBLEMS

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CONTEXT & OBJECTIVE

- ❑ Developing specific tools for three-dimensional configurations
- ❑ Consider thickness effect under variable environments for wood material
- ❑ Elliptical crack front (complexe configurations)
- ❑ Numerical development of the contour integral concept for 3D problems

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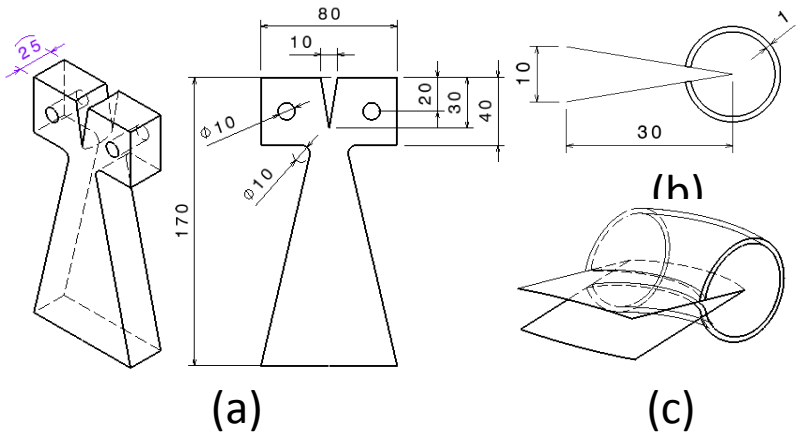
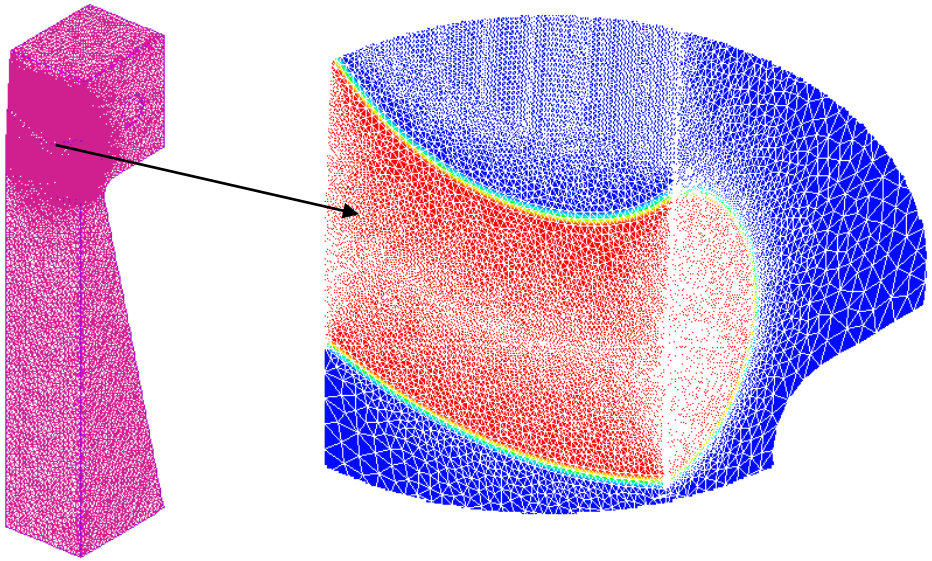
$$G_\theta^{3D} = \int_V \left((\sigma_{ij}.u_{i,k}).\theta_{k,j} - W.\theta_{k,k} \right).dV - \int_{(S_{CF_+})+(S_{CF_-})} \sigma_{ij}.u_{i,k}.n_j.\theta_k.dS - \int_{V_{in}} \left(W_{,k} - \sigma_{ij}.(\varepsilon_{ij})_{,k} \right).\theta_k.dV$$

Eprouvette bois DCB





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