

Cavitation wave propagation : a numerical model

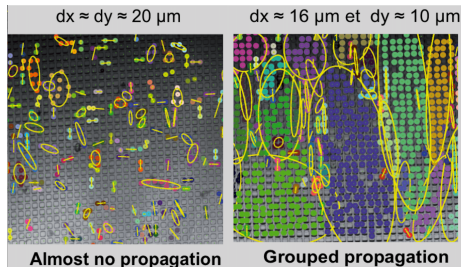
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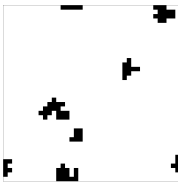
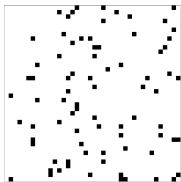
Thematics of my work

- A device of biomimetic experiment used to understand the fern spores ejection mechanism
- Hydrogel composed by micro-cavities filled with water
- The change of geometry brings three behaviors out :



Figures taken from the thesis of Mathieu Pellegrin (2015). Nucleation and dynamic of cavitation bubble into confined liquids under tension : Experiment in microfabricated systems and molecular dynamic simulation.

Ideas of my work



Our numerical model to provoke propagation :

$$\lambda = (N_v \beta_s + 1) \lambda_0$$

$$\tau < t - t_{ij}$$

- *Problem* : How does this model allow the cavitation wave propagation ?
- We give some leads to explain the formation of clusters.

Merci de votre Attention