Cxxxstrxxucture Coxxxtérisés par Imagerie

Xxxxx YYY

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Objective of This Work

- unbiased mean values of homogenized properties
- smaller dispersions than classical homog extraction
  - much tighter bounds ($[S_\Sigma^{app^{-1}}(\mathrm{SUBC}), C_E^{app}(\mathrm{KUBC})]$)
  - for the case PERIODIC is not easy or impossible to to be applied
  - a cheaper computational cost than classical homogenization extraction but more accurate

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Three-scale Strategies

Outline of Presentation

Boundary Value Problem

Various Numerical Strategies

X-FEM/Levelset Modeling

Meshing Strategies

Calculation of Levelset

Image Segmentation

Model Assessment via Effective Properties

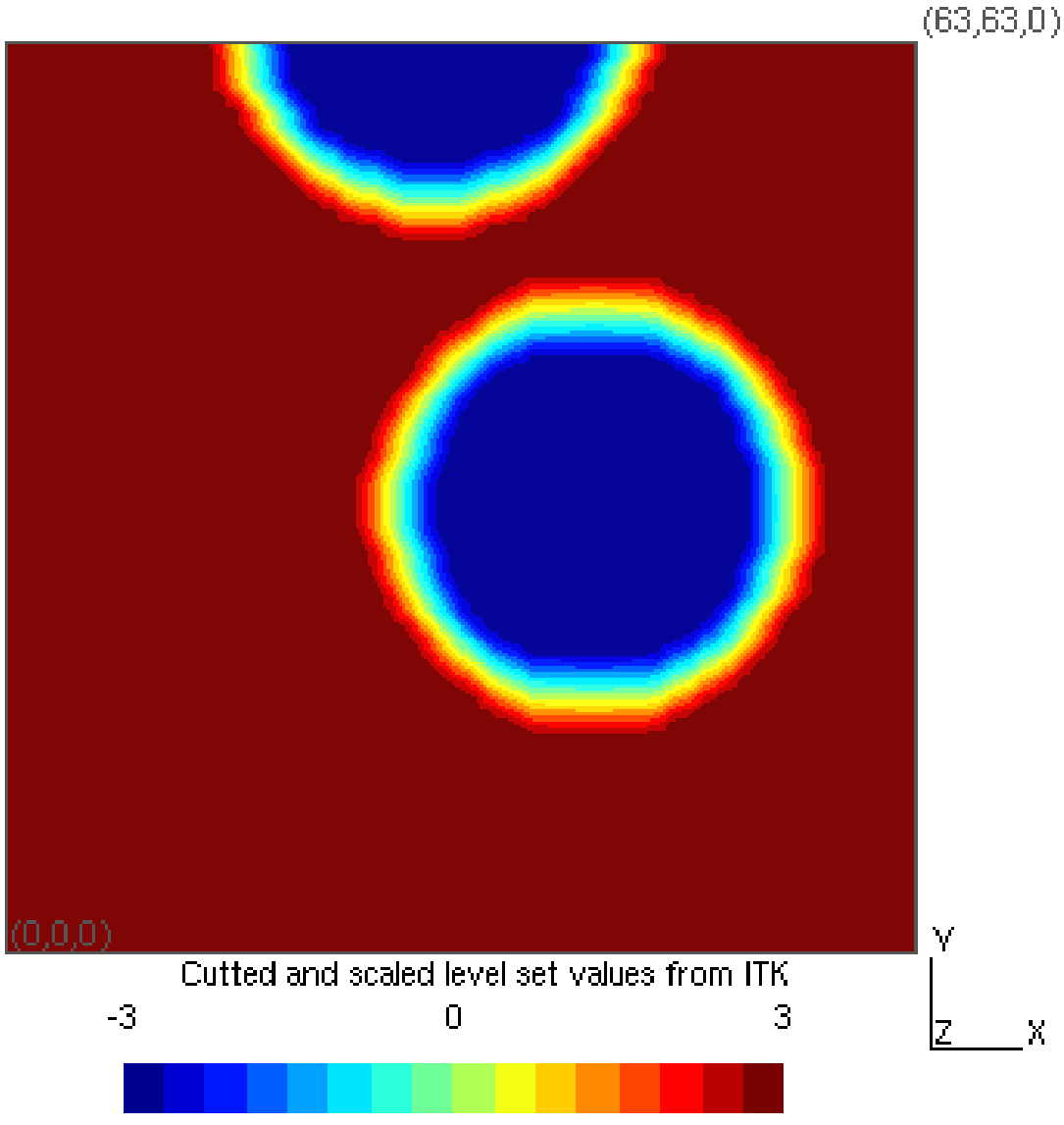
Model Assessment via Analysis of Local Quantities

A Ceramic-metallic Composite Material

{

dfadsf}
dfasdfsdaf
dfsdafsda
dfasfsda

A Cereal Solid Food



Concluding Remarks

Random Subsampling Homogenization

- dfasdsa
- odfasdfsda

Sample Numbers

sdfsdf

- sdfsadf
- dfsadfsa

1. dfdasfsa
2. dfasdf

Apparent Properties

Definition

sdfsdfsdf

sdfsaf

Edge Effects

Subdomain Extraction Process

Determination of Edge Effects Region

Matrix-Fiber Example for $E_f/E_m = 100$

Matrix-Fiber Example for $E_f/E_m = 0.01$

Random Checkerboard

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Conclusions et Perspectives

Conclusions

The remarkable advantage of subdomain extraction

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Perspectives

Thanks for Your Attention.