

EPFL

SEMESTER PROJECT

Internodes garbage

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1 INTRODUCTION

[1]

2 EXPERIMENTS

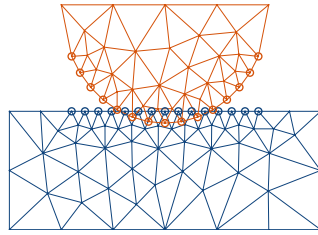
3 DISCUSSION

Flaws when same nodes that were dumped are added back in (no convergence)

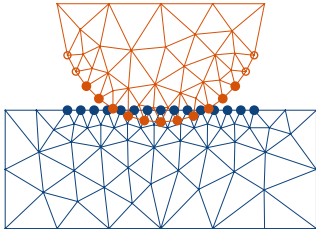
Usually interpenetrating nodes won't be considered part of interface in next iteration

REFERENCES

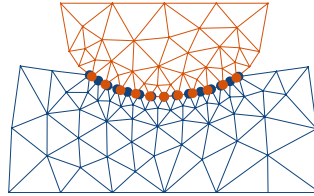
- [1] Simone Deparis, Davide Forti, and Alfio Quarteroni. A rescaled localized radial basis function interpolation on non-cartesian and nonconforming grids. *SIAM Journal on Scientific Computing*, 36(6):A2745–A2762, 2014. doi: 10.1137/130947179.



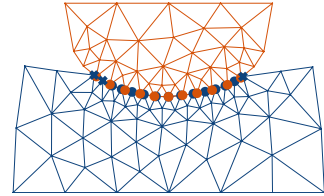
(A) Initial configuration



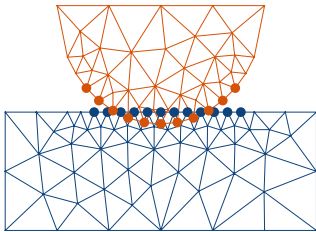
(B) Iteration 1: Find interface



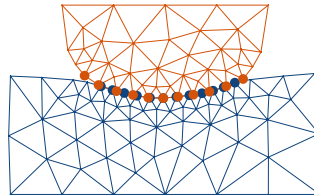
(C) Iteration 1: Solve system



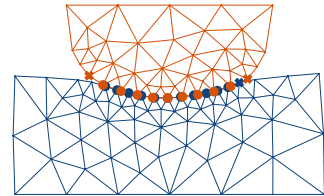
(D) Iteration 1: Update interface



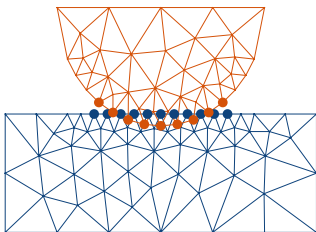
(E) Iteration 2: Find interface



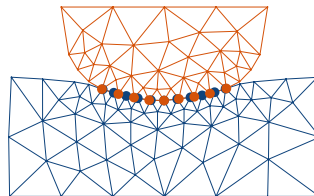
(F) Iteration 2: Solve system



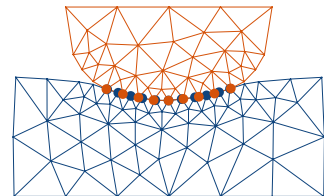
(G) Iteration 2: Update interface



(H) Iteration 3: Find interface



(I) Iteration 3: Solve system



(J) Iteration 3: Update interface

FIGURE 1.1 – First iteration

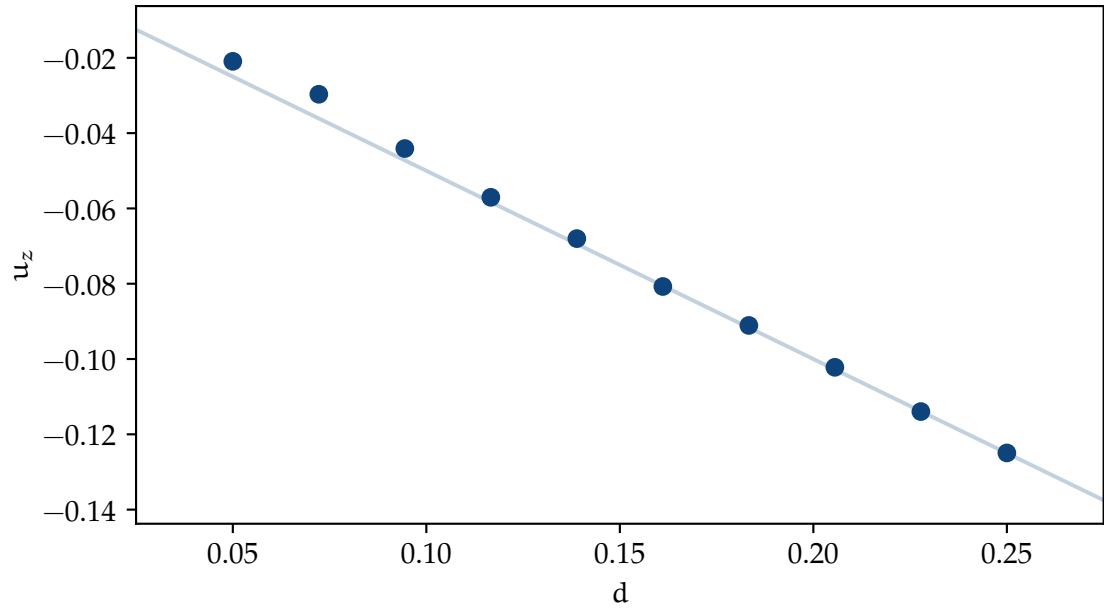


FIGURE 2.1 – Normal displacements

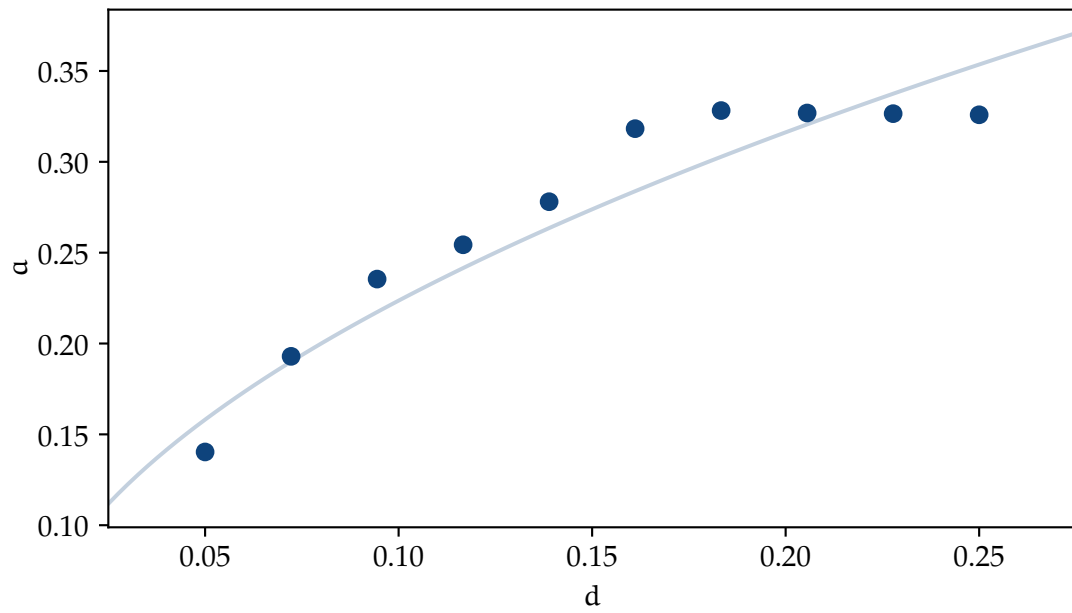


FIGURE 2.2 – Contact radius