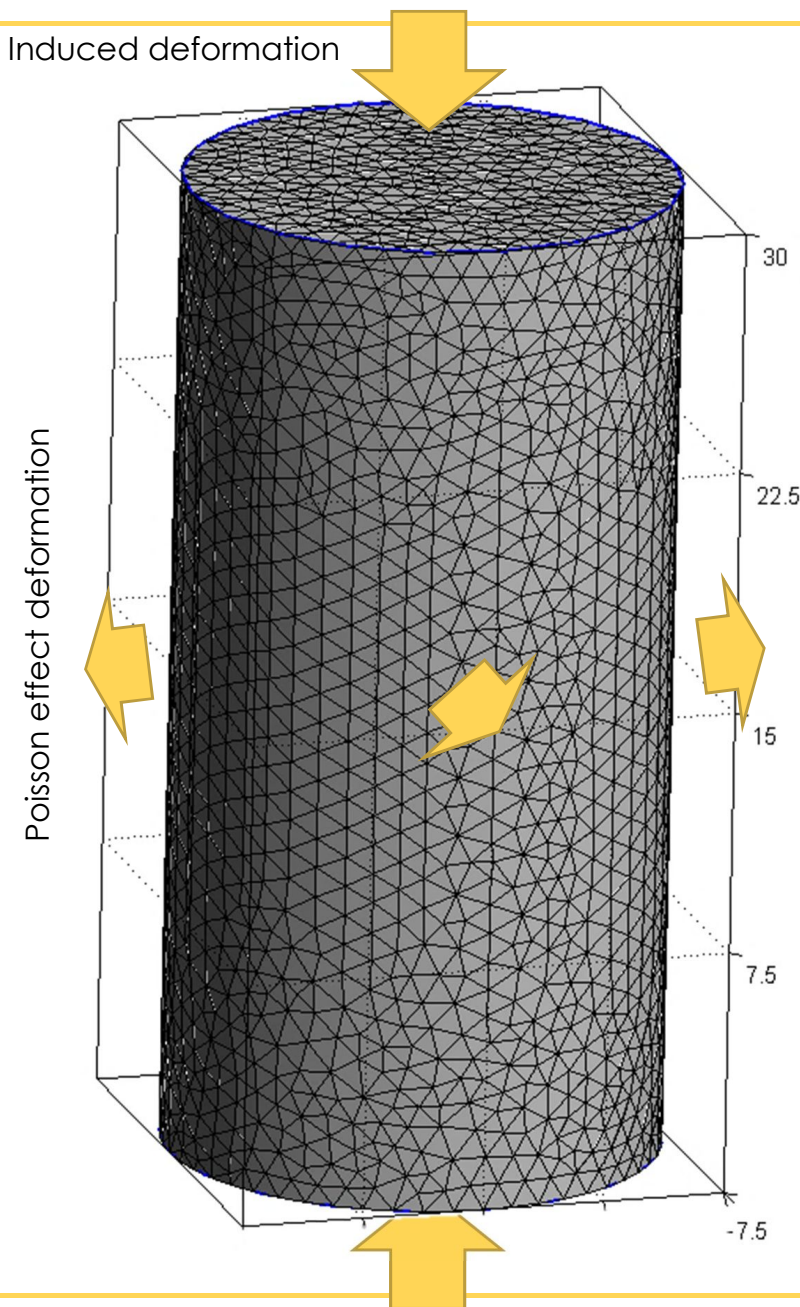


INCORPORATING POISSON EFFECT INTO RBSM

WHAT IS RBSM?

The idea of Rigid Body Spring Model (RBSM) is based on the concept of rigid blocks and springs in Discrete Element Method (DEM). The combination of rigid blocks' movements and springs' deformation will resemble the material which is aimed to be simulated.



HOW RBSM IS USEFUL?

In construction industry, concrete is a fundamental material therefore understanding and predicting its behavior is of interest for researchers who conduct researches in this field. Rigid Body Spring Model (RBSM) is one of the methods that has been utilized to predict behavior of concrete under environmental factors.

- The effect of confinement on behavior of concrete is associated with Poisson effect.
- At high strain-rate simulations, Poisson effect greatly affects the strength enhancement of concrete specimen.

One of the research topics being conducted in 'laboratory of Engineering for Maintenance System', is the development of RBSM to improve its capability or accuracy. More specifically focus of my research is on Poisson effect in RBSM simulations. This improvement can make RBSM applicable to simulations in which accurate Poisson effect is critical to the accuracy of analysis outcome.