

MEPHiSTO (MEchanics and PHysics of STretchable Objects) Summer school
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Propagation of a Radial Fluid-driven Fracture in Nonlinear Solid

--around the tip of a fluid-driven fracture: process zone vs deviated fluid flow

Dong Liu & Brice Lecampion
Geo-energy laboratory, EPFL

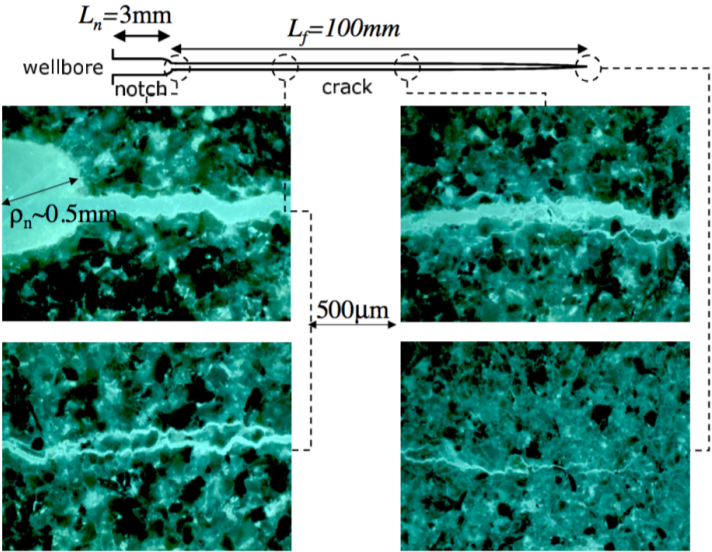


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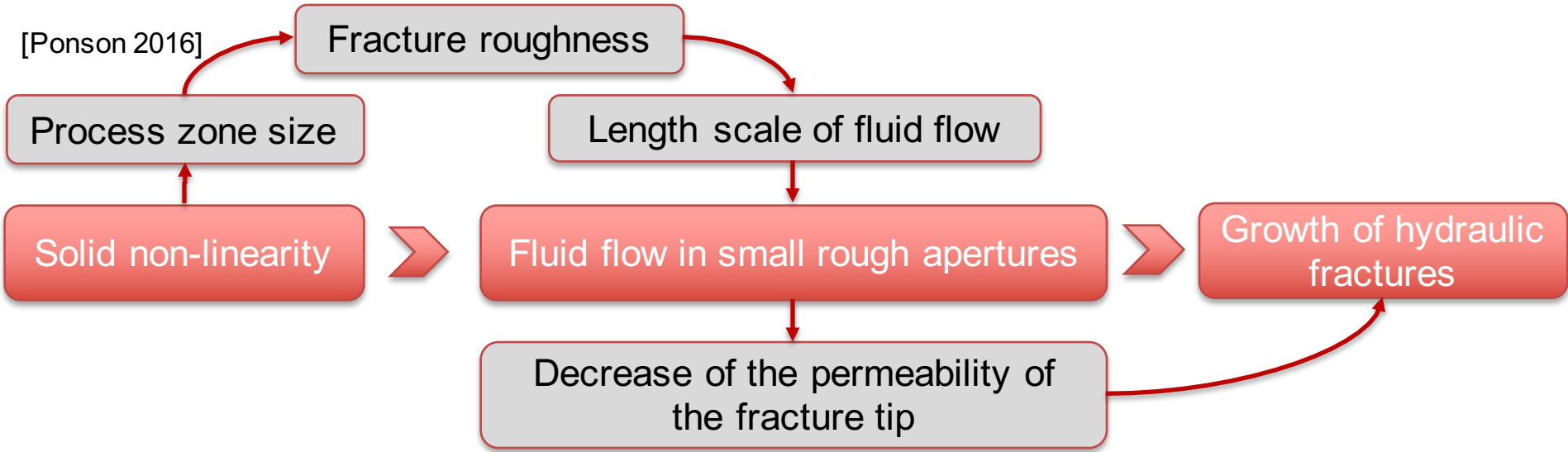
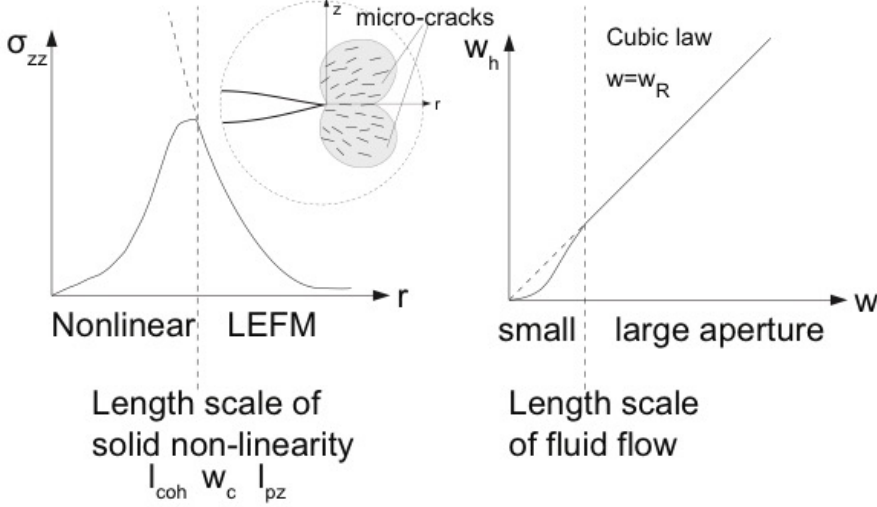


GeoEnergyLab

Solid nonlinearity vs fluid flow

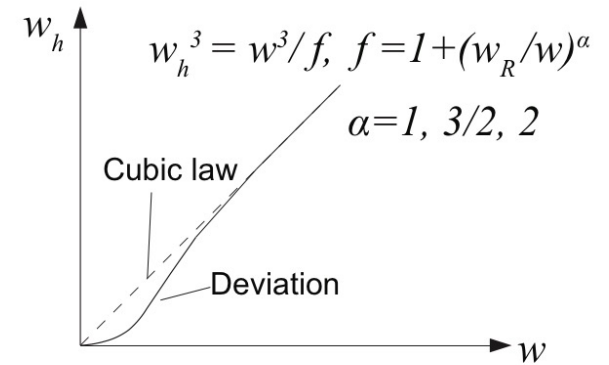
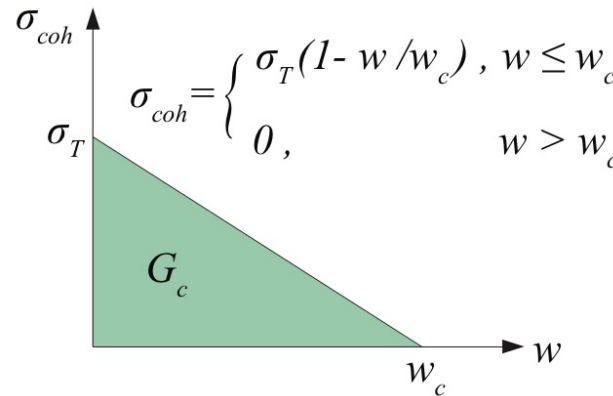


[Lhomme 2005]

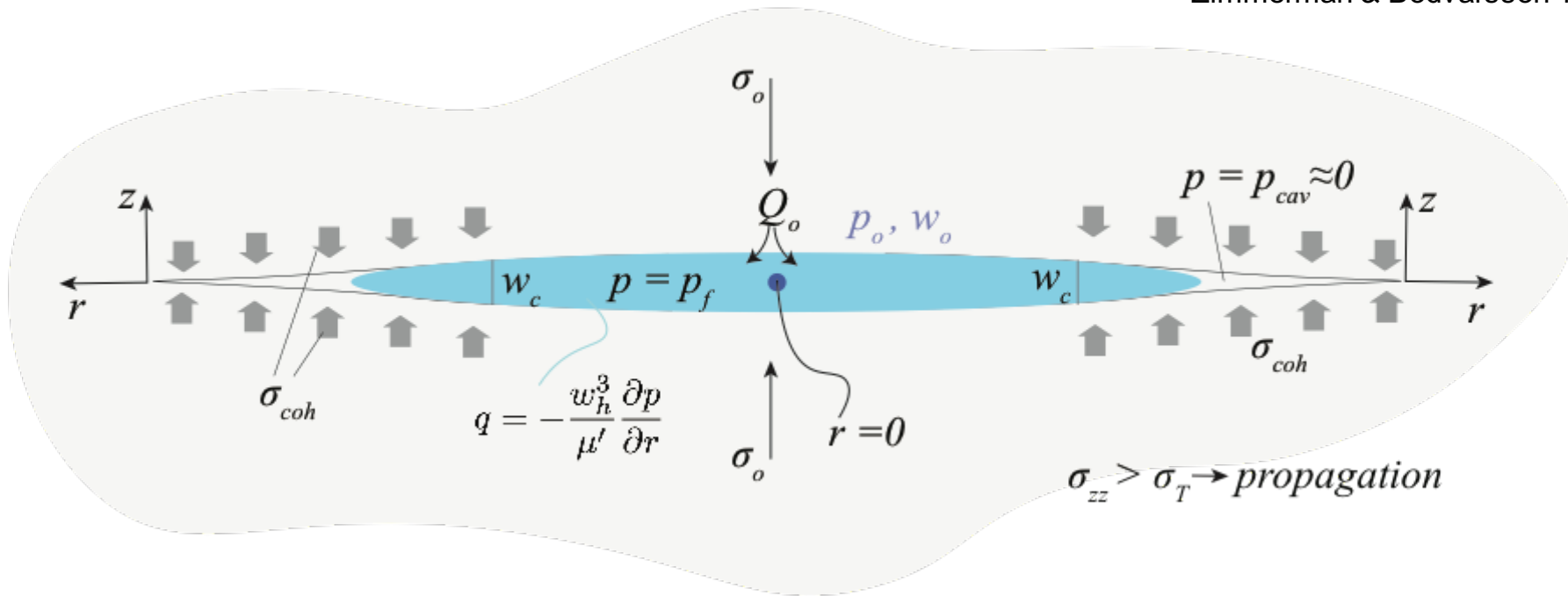


Problem description

- Axisymmetric geometry
- Zero leak-off
- Constant injection rate
- No wellbore
- No compressibility



[Lomize 1951, Gerard et al. 1996, Zimmerman & Bodvarsson 1996]



Fluid front vs Process zone

