TunWaterFlow V 1.0

Software to estimate the groundwater seepage during drilling and calibrate the hydrogeological parameters (*K*, *Ss*) with an observed flow in a tunnel

Luis Camilo Suescún [1]

[1] Universidad Nacional de Colombia, Water Resources Engineering Research Group, Bogotá DC, Colombia, lcsuescunc@unal.edu.co

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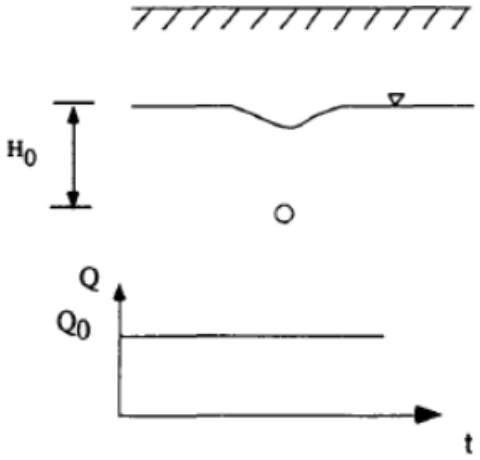
Corum Conference Center

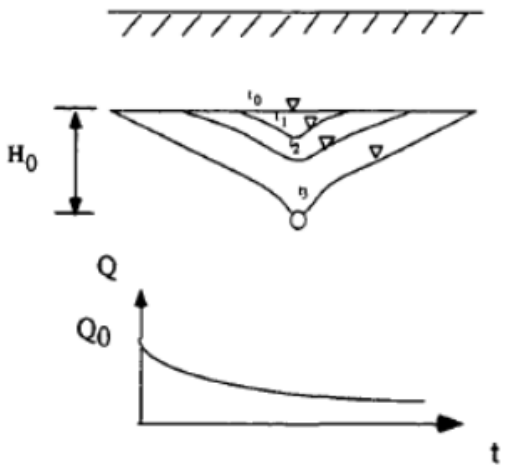
Typical approach in underground works:

Steady State



$t \rightarrow \infty$

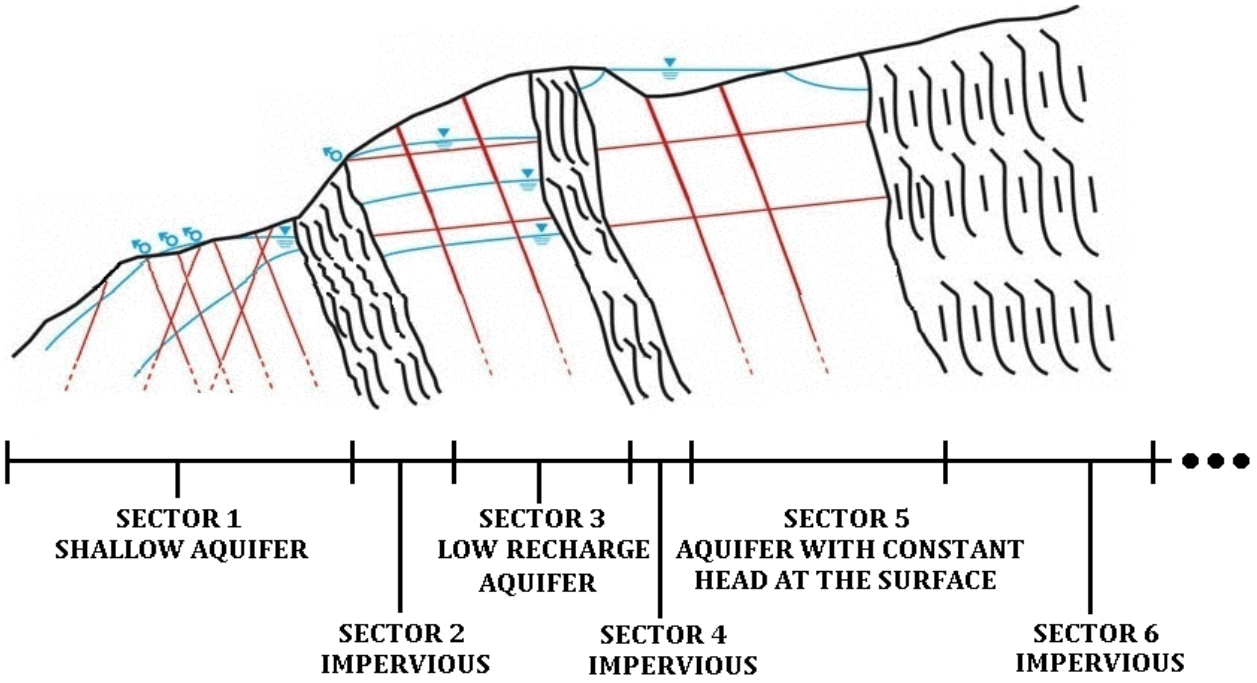
Transient State



$t \rightarrow t_0, t_1, \ldots, t_n$

(Freeze and Cherry, 1979)

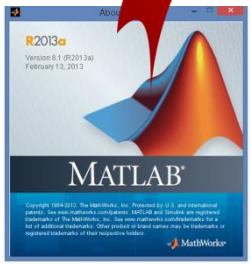
What is reality and how can represent it?

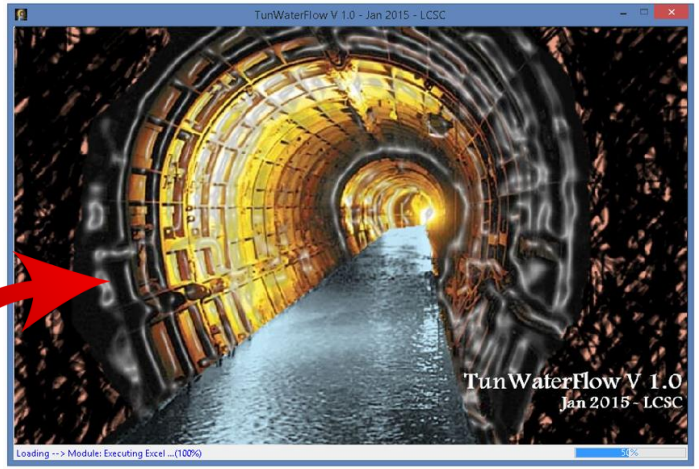


"CONCEPTUAL MODEL"

Modified from Preisig et al. [2013]

But is the direct problem … and the inverse problem ?





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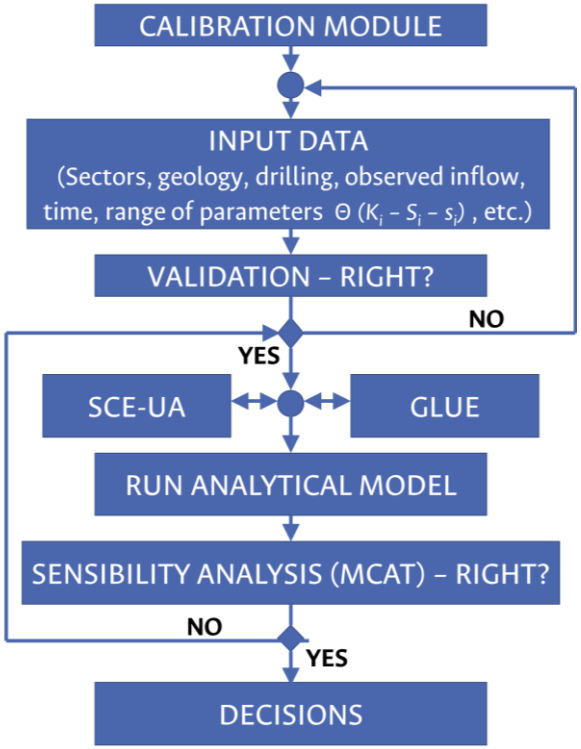
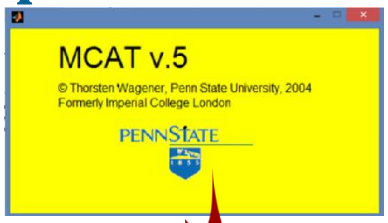
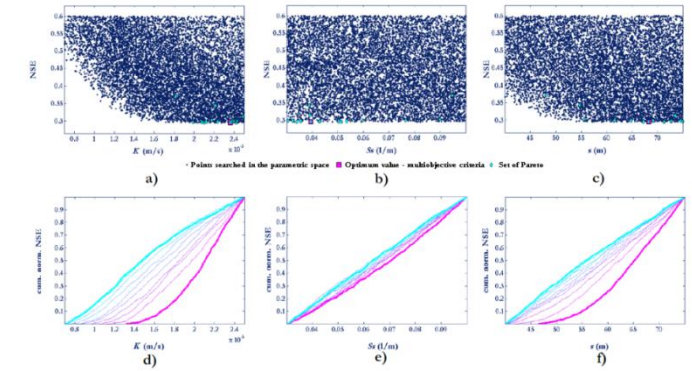
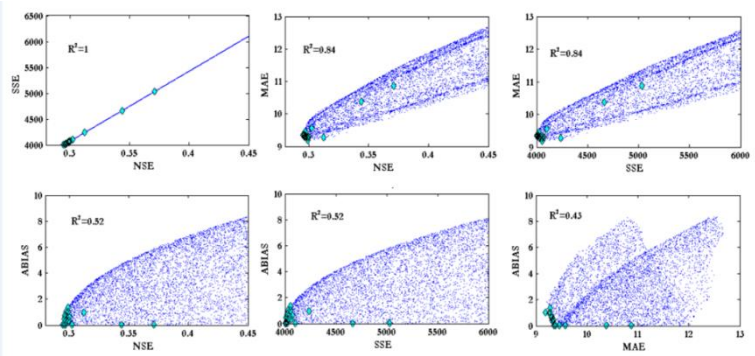


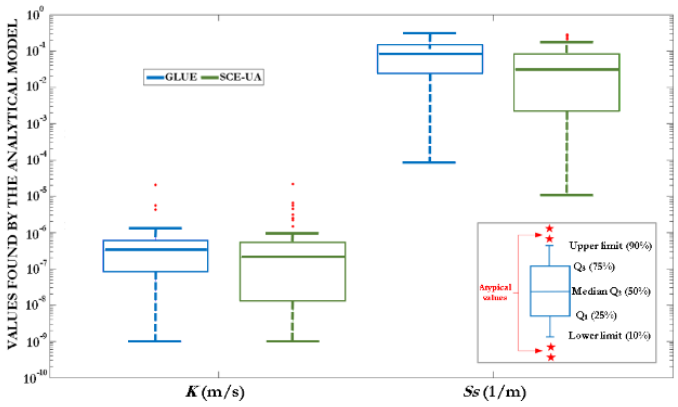
See more in YouTube TunWaterFlow

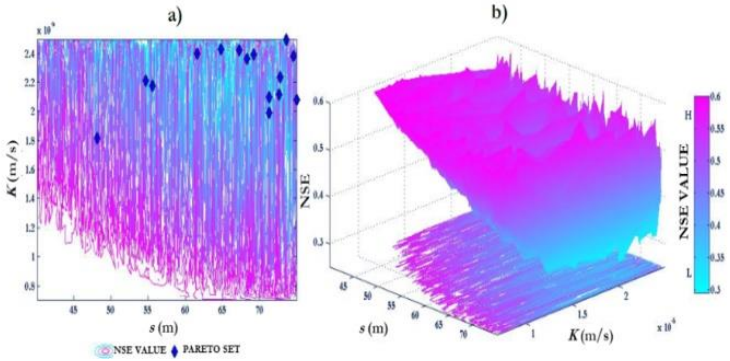
Uncertainty analysis for the parameters is possible…



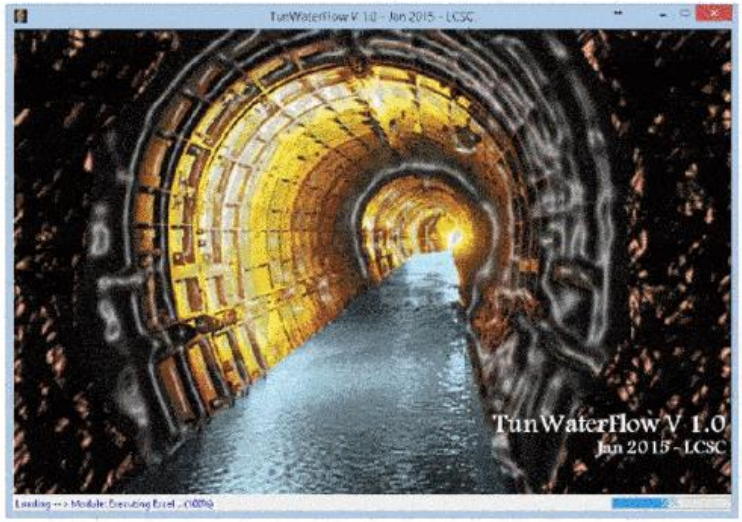




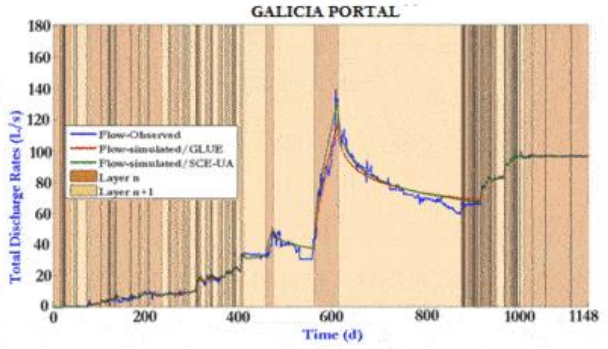


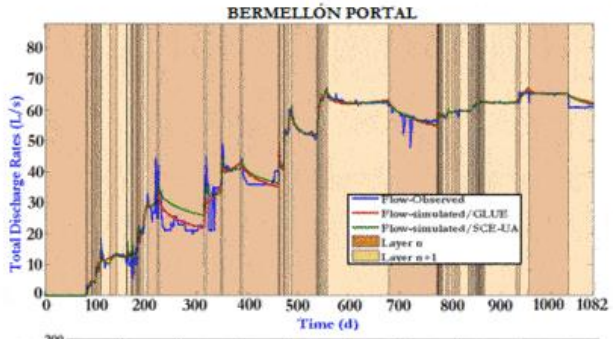


Applications ...

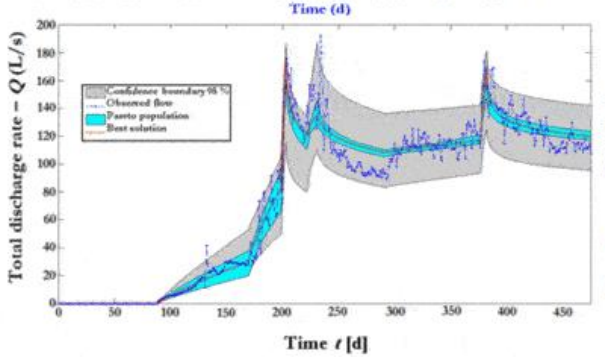


TUNWATERFLOW





LA LÍNEA TUNNEL



MODANE TUNNEL

Merci !