Class Hour 10 Sympy

September 13, 2017

Numerical Solution of Colebrook Equation using Sympy nsolve

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In [5]: from sympy import *
        init_session()
        init_printing()

IPython console for SymPy 0.7.6.1 (Python 3.5.2-64-bit) (ground types: python)

These commands were executed:
>>> from __future__ import division
>>> from sympy import *
>>> x, y, z, t = symbols('x y z t')
>>> k, m, n = symbols('k m n', integer=True)
>>> f, g, h = symbols('f g h', cls=Function)
>>> init_printing()

Documentation can be found at http://www.sympy.org


In [6]: colebrook_smooth=1/sqrt(x)+2*log(2.51/(4.6*10**5*sqrt(x)),10)

In [7]: nsolve(colebrook_smooth,x,0.013)

Out[7]: mpf('0.013358967413112795')
```