Dear Tiago,  
  
I use a numerical approximation on the wave number k (k = 2 Pi / L) that was written many years ago by George Voulgaris  
  
function y=wavenum(f,h);  
%WAVENUM  Caculate the wave number from the wave frequency and water depth  
%  
% y=wavenum(f,h): FUNCTION for the calculation of the wavenumber.  
%                   The dispersion relation is solved using a  
%                   polynomial approximation.  
%                   f, wave frequency; f=1/T.  
%                   h, water depth (in m).  
%  
%       George Voulgaris, SUDO, 1992  
w=2\*pi\*f;  
dum1=(w.^2).\*h/9.81;  
dum2=dum1+(1.0+0.6522\*dum1+0.4622\*dum1.^2+0.0864\*dum1.^4+0.0675\*dum1.^5).^(-1);  
dum3=sqrt(9.81\*h.\*dum2.^(-1))./f;  
y=2\*pi\*dum3.^(-1);  
  
Regards  
  
Urs  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
Urs Neumeier  
Professeur en géologie marine  
Institut des sciences de la mer de Rimouski (ISMER)  
Université du Québec à Rimouski  
310, allée des Ursulines  
C.P. 3300  
Rimouski QC   G5L 3A1  
Canada  
Tél.: +1 - 418 - 723 - 1986 poste 1278  
Fax: +1 - 418 - 724 - 1842  
E-mail: [urs\_neumeier@uqar.ca](mailto:urs_neumeier@uqar.ca)  
<http://www.ismer.ca/>  
  
  
Le 13/02/17 à 06:09, Tiago Fazeres Ferradosa a écrit :

Dear all,  
  
I was trying to compute the wave length in Matlab. I have used an approximation to compute L(j). Does someone have the a matlab code to solve L(j) equation in an iterative manner?  
  
% for j=1:length (Hm0\_1000)  
%     L0(j)=g.\*(T(j).^2)./(2.\*pi)  
%     a(j)=d./L0(j)  
%     if a(j)<=0.10  
%         k(j)=1.052  
%     elseif 0.10<a(j) & a(j)<=0.15  
%         k(j)=1.049  
%     else  
%         k(j)=1.041  
%     end  
% L(j)=((2\*pi\*d./(L0(j))).^0.5)\*(1-k(j).\*(d./(L0(j)))).\*(L0(j))  
% end  
%  
  
Thank you all,  
Tiago Fazeres Ferradosa