```matlab
function [f,g,fdot,gdot] = LagrangeCoeffZ( r1m, r2m, dTheta, z, mu )

% Compute the Lagrange coefficients in terms of universal variable z
%
%   Inputs:
%     r1m     Magnitude of position vector r1
%     r2m     Magnitude of position vector r2
%     dTheta  Angle between vector r1 and r2
%     z       Universal variable "z"
%     mu      Gravitational constant
%
%  Outputs:
%     f
%     g
%     fdot
%     gdot
%


C      = stumpC(z);
S      = stumpS(z);
A      = sin(dTheta)*sqrt(r1m*r2m/(1-cos(dTheta)));
y      = r1m+r2m+A*( z*S-1 )/sqrt(C);
f      = 1-y/r1m;
g      = A*sqrt(y/mu);
fdot   = sqrt(mu)/(r1m*r2m)*sqrt(y/C)*(z*S-1);
gdot   = 1-y/r2m;
```

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