

```
%  
% t=tinv(p,nu)  
%  
function t=tinv(p,nu)  
%  
% Special cases.  
%  
if (p >= 1.0),  
    t=+Inf;  
    return;  
end  
if (p<=0.0),  
    t=-Inf;  
    return;  
end  
%  
% First, figure out whether t>1/2 or t<1/2.  
%  
if (p<0.5),  
    t=-tinv(1-p,nu);  
    return;  
else  
    l=0.0;  
    r=1.0;  
    while (tcdf(r,nu) < p)  
        l=r;  
        r=r*2;  
    end  
%  
% Now, we've got a bracket around t.  
%  
    while (((r-l)/r) > 1.0e-5)  
        m=(l+r)/2;  
        if (tcdf(m,nu) > p)  
            r=m;  
        else  
            l=m;  
        end  
    end  
end  
t=(l+r)/2;
```