Aitken Solver roots and one recursion

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- *From*: Pino <beltenebroso@xxxxxxxx>
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Hi ,
I have two problems

1)I am implementing a nonlinear solver in c++
Now I am using Aitken (seems to be the faster ie wr to Steffenson)
i would like a suggenstion from you.
What is now the most accurate and fast method that does not need of
derivatives?
....the function is quite smooth..

2) I would like to speed up the following recursion.THere is a sort of
alg. that you can suggest to me?
Is this recursion famous??

thanks !!

```
{ int j=0;

Vector <double> pr(m);
Vector <double> cdp(n);




Array2D < double> ptk(n+1,n+1);
ptk[0][0]=1.0;

for (int i=1;i<n+1;i++) {
ptk[0][i]=ptk[0][i−1]*(1.0−cdp[i−1]);
for (j=1;j<=i−1;j++) {
ptk[j][i]=ptk[j][i−1]*(1.0−cdp[i−1])+ptk[j−1][i−1]*cdp[i−1];
}
ptk[i][i]=ptk[i−1][i−1]*cdp[i−1];
}


for (int i=0;i<m;i++) pr[i]=ptk[i][n];
```

return pr;

}

thanks!

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