

orthogonal polynomials relative to measures with mass point

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- *From:* Gert Van den Eynde <gvdeynde@xxxxxxxxxxx>
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Hi all,

I'm studying a class of orthogonal polynomials that are orthogonal relative to a weight function on $[-1,+1]$ complemented with a finite number of discrete mass points (Dirac impulses). Is there some general theory written down in a paper (I have Nevai's book and a paper by Nevai and Chihara, but I'm looking for something more practical, not so theoretical)? What I would like to know is whether there is an elegant and stable way to evaluate the polynomials (for low and very high order) in the mass point located that is furthest away from the origin without knowing the location of this point exactly (I have the three-term recurrence at my disposition). I can calculate this point, but only up to machine precision and it is the latter fact that starts annoying the calculations for higher orders....

Thanks for any pointers,
gert

- *Follow-Ups:*
 - ◆ ***Re: orthogonal polynomials relative to measures with mass point***
 - ◇ *From:* carlos
- Prev by Date: ***Re: Pade Approximants***
- Next by Date: ***Inverse Neumann boundary condition***
- Previous by thread: ***Workshop on Optimisation, Stochastic Programming and Decision Making under Uncertainty***
- Next by thread: ***Re: orthogonal polynomials relative to measures with mass point***
- Index(es):
 - ◆ ***Date***
 - ◆ ***Thread***