

1116-33-847

**Tom H Koornwinder\*** (t.h.koornwinder@uva.nl). *Transmutation operators acting on solutions of the system of pde's for Appell's hypergeometric  $F_2$* . Preliminary report.

Analogous to work done by the speaker for Gauss hypergeometric functions (see [1]), fractional integral type and Stieltjes type transform formulas will be presented which act as parameter changing transmutation operators on solutions of the system of pde's for Appell's hypergeometric function  $F_2$  (see solutions given in [2]). Specializations of these double integral transforms give Euler type double integral representations for the mentioned solutions. The research presented here is inspired by work in progress by Enno Diekema, and may include some of his results.

## References

- [1] T. H. Koornwinder, Fractional integral and generalized Stieltjes transforms for hypergeometric functions as transmutation operators, *SIGMA* **11** (2015), 074, 22 pp.; arXiv:1504.08144.
- [2] P. O. M. Olsson, On the integration of the differential equations of five-parametric double-hypergeometric functions of second order, *J. Math. Phys.* **18** (1977), 1285–1294.

(Received September 21, 2015)