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**John D. Williams\*** ([jwilliams@math.tamu.edu](mailto:jwilliams@math.tamu.edu)), Mailstop 3368, Dept. Of Mathematics, Texas A&M, Colleg Station, TX 778433368. *Infinite Divisibility and Semigroups Indexed by Completely Positive Maps in Free Probability.*

Expanding on some recent non-commutative function theoretic results, we will show that to each  $\boxplus$ -infinitely divisible  $B$ -valued distribution, one may associate a semigroup whose index set is the set of all completely positive self maps of the  $C^*$ -algebra  $B$ . This has long been expected as there are existing positive results, including a recent theorem due to Anshelevich, Belinschi, Fevrier and Nice, that pointed to this as the natural generalization of semigroups of distributions in operator-valued free probability. Time permitting, we will present recent function theoretic work on this subject. (Received September 16, 2013)