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**Title:** Is every (multi-parameter) semigroup of completely positive maps “a part of” a semigroup of \*-endomorphisms?

**Abstract:** Is every multi-parameter semigroup of completely positive maps “a part of” a semigroup of \*-endomorphisms? In this talk I will survey a strategy for proving that the answer to the above question is “yes” (at least in some interesting cases). Or, in technical terms: I will describe a tentative general framework for constructing an E-dilation of a multiparameter CP-semigroup. I will overview the positive results obtained by following this strategy, which exist mainly in the two-parameter case. I will also discuss the difficulties in solving the general case, ideas to overcome these difficulties, and state some concrete open problems. The talk is based on parts of my PhD. thesis, done under the supervision of Baruch Solel.