Polyadic Approximations and Intersection Types
(*Invited Talk*)

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In his paper introducing linear logic, Girard briefly mentioned how full linear logic could be seen, in an informal sense, as the limit of its purely linear fragment. Several ways of expanding and formalizing this idea have been developed through the years, including what I call polyadic approximations. In this talk, I will show how these are deeply related to intersection type systems, via a general construction that is sufficiently broad to allow recovering every well known intersection type system and their normalization properties, as well as introducing new type systems in wildly disparate contexts, with applications ranging from deadlock-freedom in the pi-calculus to a type-theoretic proof of the Cook-Levin theorem.

(Part of this work was developed jointly with Luc Pellissier and Pierre Vial).