Exact and asymptotic enumeration results for combinatorial objects

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When studying enumerative parameters in combinatorial structures it is often the case that suitably introduced generating functions satisfy certain (systems of) differential or functional equations. Interestingly, for many concrete examples the equations appearing have closed-form solutions. Such expressions are of interest itself, but in particular they are useful to describe the asymptotic behaviour of the parameters considered.

In this talk we give several examples as results for parking functions, network models, lattice paths, urn models and algorithms analysis.