

1134-47-371

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Bi-free probability was introduced by Voiculescu in 2013 as a generalization of free probability to study the joint distributions of families “left” and “right” random variables simultaneously. In this talk I will discuss a vaccine, a characterization of bi-free independence analogous to the vanishing of mixed moments characterization of free independence. From there, I will speak on some recent attempts to extend non-microstates free entropy to the bi-free setting, difficulties encountered along the way, and peculiarities arising in this more general setting which are not present in the free case. (Received September 11, 2017)